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October 12, 2022

Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
Commonwealth Keystone Building  
400 North Street, 2nd Floor  
Harrisburg, PA 17120

**VIA ELECTRONIC FILING**

**RE: Valley Energy, Inc. – Supplement No. 59 to Tariff Gas – Pa. P.U.C. No. 2;  
Docket No. R-2022-3032300**

Dear Secretary Chiavetta:

Attached please find for filing with the Pennsylvania Public Utility Commission the electronic versions of Valley Energy, Inc.'s ("Valley") Pre-Served Testimony in the above-referenced proceeding (as such Testimony has been accepted into the evidentiary record). The Testimony is as follows:

- Verification of Howard S. Gorman
- Verification of Dylan W. D'Ascendis
- Verification of Melissa Sullivan
- Verification of Edward E. Rogers
- Verification of Jamie Levering
- Verification of Cody Chapman
- Direct Testimony of Howard S. Gorman (Valley Statement No. 1)
- Direct Testimony of Dylan W. D'Ascendis (Valley Statement No. 2)
- Direct Testimony of Melissa Sullivan (Valley Statement No. 3)
- Direct Testimony of Edward E. Rogers (Valley Statement No. 4)
- Direct Testimony of Jamie Levering (Valley Statement No. 5)
- Direct Testimony of Cody Chapman (Valley Statement No. 6)
- Corrections and Updates Testimony of Howard S. Gorman (Valley Statement No. 1-CU)
- Rebuttal Testimony of Howard S. Gorman (Valley Statement No. 1-R)
- Rebuttal Testimony of Dylan W. D'Ascendis (Valley Statement No. 2-R)
- Rebuttal Testimony of Melissa Sullivan (Valley Statement No. 3-R)
- Rebuttal Testimony of Edward E. Rogers (Valley Statement No. 4-R)
- Rebuttal Testimony of Jamie Levering (Valley Statement No. 5-R)
- Rebuttal Testimony of Cody Chapman (Valley Statement No. 6-R)

Rosemary Chiavetta, Secretary  
October , 2022  
Page 2

As evidenced by the attached Certificate of Service, all parties to this proceeding are being duly served with a copy of this document. Thank you. Very truly yours,

Very truly yours,

A handwritten signature in black ink, appearing to read 'Adeolu A. Bakare', with a long horizontal flourish extending to the right.

Adeolu A. Bakare  
MCNEES WALLACE & NURICK LLC

Counsel to Valley Energy, Inc.

c: Administrative Law Judge Eranda Vero (via email)  
Administrative Law Judge Charece Z. Collins (via email)  
Certificate of Service

**CERTIFICATE OF SERVICE**

I hereby certify that I am this day serving a true copy of the foregoing document upon the participants listed below in accordance with the requirements of Section 1.54 (relating to service by a participant).

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Adeolu A. Bakare

Counsel to Valley Energy, Inc.

Dated this 12<sup>th</sup> day of October, 2022, in Harrisburg, Pennsylvania.

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
v.	:	<b>Docket Nos. R-2022-3032369</b>
	:	<b>R-2022-3032300</b>
<b>Citizens' Electric Company of Lewisburg, PA and Valley Energy Company</b>	:	
	:	

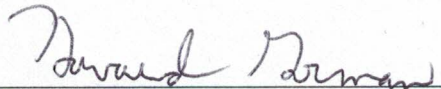
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**VERIFICATION**

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I, Howard S. Gorman, hereby state that the facts set forth in Citizens' Electric Company of Lewisburg, PA ("Citizens") Statement No. 1 (Direct Testimony), Citizens' Statement No. 1 (CU) (Corrections and Updates Testimony) and Citizens' Statement No. 1R (Rebuttal Testimony); and Valley Energy Inc. ("Valley") Statement No. 1 (Direct Testimony), Valley Statement No. 1 (CU) (Corrections and Updates Testimony) and Valley Statement No. 1R (Rebuttal Testimony); and various responses to discovery, are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Date: 2022-09-07

  
\_\_\_\_\_  
Signature



**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
v.	:	<b>Docket Nos. R-2022-3032369</b>
	:	<b>R-2022-3032300</b>
<b>Citizens' Electric Company of Lewisburg, PA and Valley Energy Company</b>	:	
	:	

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**VERIFICATION**

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I, Dylan W. D'Ascendis, hereby state that the facts set forth in Citizens' Electric Company of Lewisburg, PA ("Citizens") Statement No. 2 (Direct Testimony) and Citizens' Statement No. 2R (Rebuttal Testimony); and Valley Energy Inc. ("Valley") Statement No. 2 (Direct Testimony) and Valley Statement No. 2R (Rebuttal Testimony); and various responses to discovery, are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Date:

9/7/2022

  
\_\_\_\_\_  
Signature

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
v.	:	<b>Docket Nos. R-2022-3032369</b>
	:	<b>R-2022-3032300</b>
<b>Citizens' Electric Company of Lewisburg, PA and Valley Energy Company</b>	:	
	:	

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**VERIFICATION**

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I, Melissa Sullivan, hereby state that the facts set forth in Citizens' Electric Company of Lewisburg, PA ("Citizens") Statement No. 3 (Direct Testimony) and Citizens' Statement No. 3R (Rebuttal Testimony); and Valley Energy Inc. ("Valley") Statement No. 3 (Direct Testimony) and Valley Statement No. 3R (Rebuttal Testimony); and various responses to discovery, are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Date: September 7, 2022

Melissa Sullivan  
Signature

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:
	:
v.	: <b>Docket Nos. R-2022-3032300</b>
	:
<b>Valley Energy Company</b>	:


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**VERIFICATION**

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I, Edward E. Rogers, hereby state that the facts set forth in Valley Energy Inc. ("Valley") Statement No. 4 (Direct Testimony) and Valley Statement No. 4R (Rebuttal Testimony), and various responses to discovery, are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Date: 9/7/22

  
\_\_\_\_\_  
Signature

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission**

v.

**Valley Energy Company**

:  
:  
:  
:  
:

**Docket Nos. R-2022-3032300**

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**VERIFICATION**

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I, Jamie Levering, hereby state that the facts set forth in Valley Energy Inc. ("Valley") Statement No. 5 (Direct Testimony) and Valley Statement No. 5R (Rebuttal Testimony), and various responses to discovery, are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Date:

9/7/2022

Jamie Levering  
Signature

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission**

v.

**Valley Energy Company**

:  
:  
:  
:  
:

**: Docket No. R-2022-3032300**

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**VERIFICATION**

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I, Cody Chapman, hereby state that the facts set forth in Valley Energy Inc. ("Valley") Statement No. 6 (Direct Testimony) and Valley Statement No. 6R (Rebuttal Testimony), and various responses to discovery, are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Date: 9/7/2022



\_\_\_\_\_  
Signature



**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket No. R-2022-_____</b>
	:	
<b>Valley Energy, Inc.</b>	:	

**DIRECT TESTIMONY  
AND EXHIBITS  
OF  
HOWARD S. GORMAN**

**ON BEHALF OF  
VALLEY ENERGY, INC.**

**APRIL 29, 2022**

BEFORE

THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2022-_____
	:	
Valley Energy, Inc.	:	

DIRECT TESTIMONY OF HOWARD S. GORMAN  
ON BEHALF OF VALLEY ENERGY, INC.

1 **Q. Please state your name, occupation and business address.**

2 A. My name is Howard Gorman. I am the President of HSG Group, Inc., a consulting firm  
3 specializing in utility rate and regulatory matters, located in Great Neck, NY.

4 **Q. Please summarize your educational background and professional experience.**

5 A. My educational background, professional experience and summary of testimony are  
6 outlined in Attachment A.

7 **Q. Please state on whose behalf you are testifying and describe the purposes of your  
8 testimony.**

9 A. I am testifying on behalf of the petitioner, Valley Energy, Inc. ("Valley" or "Company").  
10 The purposes of my testimony are:

- 11 • To develop the Fully Projected Future Test Year ("FPFTY") Revenue
- 12 Requirement and Rate Base, and Future Test Year ("FTY") net income, based
- 13 on Historic Test Year ("HTY") data and appropriate adjustments; and

- To present the Company's proposed Rates and Charges that produce the overall revenue requirement, as well as the proof of revenue and bill comparisons at the proposed rates.

The rates proposed in this filing are for the FPFTY; the FPFTY Revenue Requirement and Rate Base were determined for Distribution only. Revenue and costs related to Valley's obligation as a Supplier of Last Resort have been excluded from the analysis.

**Q. What FPFTY, FTY and HTY were used?**

A. The HTY is Valley's actual results for calendar year 2021. The FTY is Valley's forecast for 2022 and the FPFTY is Valley forecast for 2023. Valley uses a calendar year for financial reporting. The supporting calculations and data for the filing are in Exhibit\_\_(HSG-1). Throughout my testimony, I will reference the various schedules within Exhibit\_\_(HSG-1) that explain the calculations and results.

**Q. Please summarize the results of your testimony regarding Valley's revenue requirement.**

A. Under its present rates, Valley is forecast to have net operating income of \$693,278 in FPFTY 2023, representing a return on rate base of 3.51%. To produce the return of 7.97% that Company witness Mr. D'Ascendis recommends would require an increase in revenue of \$1,250,125, an increase of 22.7% in Distribution revenue.

In the interest of moderating the effect on customers, Valley is requesting an increase of just under \$1,000,000 (proposed rates would produce an increase of \$999,631), an increase of 18.2%, to produce a return of 7.08% in the FPFTY.

The revenue produced by the proposed rates, \$6,496,602 (plus \$24,205 Other revenue, for total revenue of \$6,520,807) would recover the costs forecast to be incurred by Valley in

1 the FPFTY, including a return on rate base of 7.08%. To produce the total revenue  
2 requirement, the Company proposes to increase the revenue from each class, excluding  
3 customers taking service under negotiated contracts, by 21.5%. (Schedule C1).

4 Valley is proposing that the rates and charges subject to the Tariff be increased as shown  
5 on Schedule B5.

6 **Q. Please describe the approach used to develop the revenue requirement and the**  
7 **proposed rates.**

8 A. *First*, a forecast of Valley's sales and distribution revenue for the FTY and FPFTY was  
9 developed. A summary of Valley's sales and revenues for the HTY, FTY and FPFTY is  
10 presented in Schedule B.

11 For HTY 2021, sales and revenue information was obtained from Valley's accounting and  
12 financial records. This information is presented on Schedule B1, with computations on  
13 Schedule B1-1. Schedule B1-2 presents a reconciliation of HTY 2021 revenue to Valley  
14 financial statements.

15 For FTY 2022, sales and revenue information is presented on Schedule B2, with  
16 computations on Schedule B2-1. For FPFTY 2023, sales and revenue information is  
17 presented on Schedule B4. FPFTY revenue at present rates is computed on Schedule B4-  
18 1, and FPFTY revenue at proposed rates is computed on Schedule 4-2. The development  
19 of the forecasts for the number of customers and the sales volumes for the FTY and FPFTY  
20 is based on regression analyses, which are discussed below.

21 *Second*, costs were obtained for the HTY, and forecasted costs were obtained for the FTY  
22 and FPFTY. These costs, detailed by account, are presented on Schedule C1-1.

1        *Third*, the Rate Base for the HTY, FTY and FPFTY was developed, using information from  
2        Valley's HTY financial statements and projected capital expenditures for the FTY and  
3        FPFTY. Net Plant in service in the rate base reflects reductions of \$6,121,752 to remove  
4        an acquisition adjustment and related accumulated depreciation of \$3,794,332,  
5        contributions from customers and assets not subject to regulation, as discussed below. In  
6        addition, accumulated deferred income taxes, excess deferred income taxes, cash working  
7        capital allowance and other rate base components were computed. The computation of the  
8        rate base is presented on Schedule C1-6.

9        *Fourth*, the required Net Utility Operating Income was developed using the FPFTY costs  
10       and rate base, to produce an increase of just under \$1,000,000. Valley is proposing FPFTY  
11       revenue of \$6,496,602 (excluding Other revenue), an increase of \$999,631, representing  
12       an increase of 18.2% in total Distribution revenue and an increase of 21.5% excluding  
13       customers being served under long-term contracts. This revenue would produce a return  
14       on rate base of 7.08%, less than the 7.97% rate of return recommended by Mr. D'Ascendis.

15       *Finally*, proposed rates were developed that produce the required FPFTY revenue for each  
16       rate class. The Company is proposing a uniform percentage increase in revenue for classes  
17       whose rates are subject to change (*i.e.* all non-contract customers). Schedule B4-2 shows  
18       that the proposed rates produce the revenue target for each class. Schedule B5 summarizes  
19       current rates and proposed rates; the amounts that ratepayers with a different usage levels  
20       will pay under the current and proposed rates are presented on Schedule B5-1 (excluding  
21       the Gas Cost Rate ("GCR")) and Schedule B5-2 (including the GCR).



1 **Q. What are the reasons that Valley needs an increase in rates at this time?**

2 A. Schedule C1-7 presents the financial drivers for the requested rate increase by comparing  
 3 the FPFTY to the final results of Valley's prior rate case, Docket R-2019-3008209. As the  
 4 Schedule shows, Valley's requested rate increase is driven primarily by cost increases and  
 5 new utility plant.

6 **Q. What service classifications does Valley use to report sales and revenue?**

7 A. Valley reports sales and revenue using the following service classifications:

Customer Type	<u>Rate Schedule</u>
Residential	<ul style="list-style-type: none"> <li>• Rate R- Residential</li> </ul>
Commercial and Industrial Sales	<ul style="list-style-type: none"> <li>• Rate C- Commercial</li> <li>• Rate I- Large Industrial Firm</li> <li>• Rate IS- Interruptible Service</li> <li>• Rate SI- Small Industrial</li> </ul>
Transportation	<ul style="list-style-type: none"> <li>• Transport Firm</li> <li>• Transport- Contract</li> <li>• Transport Firm- DDQ</li> <li>• Transport- Interruptible</li> </ul>

8

9 **Q. Are any changes being proposed to these service classifications?**

10 A. No.

11 **Q. What types of charges are in the Tariff?**

12 A. Rate R is firm sales rate that includes a monthly customer charge and a volumetric charge  
 13 for distribution, and the volumetric "GCR".

14 Rate C is a firm sales rate that includes a monthly customer charge and a volumetric charge  
 15 for distribution, and the GCR. Transport Firm- DDQ has the same monthly customer  
 16 charge and volumetric charge for distribution as Rate C, and no GCR.

17 Rate I is a firm sales rate that includes a blocked volumetric charge for distribution, a  
 18 blocked charge for demand and the GCR.

1 Rate IS is an interruptible rate that includes a monthly customer charge and a volumetric  
2 charge for distribution, and the GCR. Transport- Interruptible has the same monthly  
3 customer charge and volumetric charge for distribution as Rate IS, and no GCR.

4 Rate SI is a firm sales rate that includes a monthly customer charge and a volumetric charge  
5 for distribution, and the GCR. Transport- Firm has the same monthly customer charge and  
6 volumetric charge for distribution as Rate SI, and no GCR.

7 Transport- Contract customers are served under their applicable contract terms, which can  
8 include a flat monthly charge and/or blocked volumetric distribution rates. All customers  
9 are billed monthly.

10 **Q. Why is the Company proposing a uniform percentage increase in revenue for non-**  
11 **contract classes?**

12 A. A uniform increase in revenue is appropriate because:

- 13 ■ The composition of ccf sales is stable. In the HTY, FTY and FPFTY, residential  
14 deliveries are 16%-18% of the total deliveries, sales classes are 26%-27%, and firm  
15 deliveries are 80%-81%.
- 16 ■ A uniform rate increase is the simplest to implement, and Valley management  
17 believes it would be the most acceptable to ratepayers.
- 18 ■ A cost of service study would be expensive and time-consuming.

19 **Q. Is the Company proposing any rate design changes?**

20 A. No, the Company is not proposing any rate design changes.

21 **HTY SALES AND REVENUE AND HTY COSTS**

22 **Q. Please identify and describe the exhibits that show HTY sales and revenue.**

1 A. Schedule B shows Valley's total revenue by rate class for HTY 2021, and distribution-only  
2 revenue for HTY 2021, FTY 2022 and FPFTY 2023. HTY total operating revenue is  
3 \$9,468,568 based on Valley's financial records (line 33). The total for the rate case is  
4 \$8,451,812 (Schedule B, line 9), which excludes timing differences for GCR over /  
5 undercollection and Unbilled revenue, rounding differences in computation, the State Tax  
6 Adjustment (STAS) and a cost recovery item which is excluded from regulated rates. The  
7 HTY Distribution-only amounts are from Schedule B1, which is supported by the detailed  
8 computations on Schedule B1-1, using present rates and HTY deliveries in ccf, and number  
9 of customer bills.

10 **Q. Please discuss the adjustment made to HTY volumes and revenue.**

11 A. Pursuant to Rate Schedule T, Valley is providing transportation contract service to a  
12 customer referenced here as "Customer A" using assets constructed and operated at the  
13 request of the customer. The amount included in HTY distribution revenue in this rate case  
14 is the contract revenue applicable to providing transportation service only, exclusive of  
15 reimbursements for construction of the assets serving Customer A. In addition, the capital  
16 costs related to the assets used to serve Customer A, and the related accumulated  
17 depreciation are not included in the rate base; in addition, the related depreciation expense  
18 is not included in the revenue requirement.

19 **Q. Please describe the HTY information regarding costs.**

20 A. Schedule C1-1 shows operating costs by account for the HTY. This exhibit is described in  
21 detail later in my testimony. The costs are carried forward to Schedule C1.

22 **Q. Please describe the HTY information regarding rate base and Rate of Return.**

1 A. Schedule C1-6 computes the rate base for the HTY. Schedule C1 shows the return on rate  
2 base for the HTY was 3.51% for Distribution-only.

3 **FTY AND FPFTY SALES AND REVENUE**

4 **Q. Please identify and describe the exhibits that show FTY and FPFTY sales and revenue**  
5 **at present rates.**

6 A. Information on sales and revenue is presented in Schedule B. Information for HTY is on  
7 Schedule B1, with computations on Schedule B1-1. Deliveries in HTY totaled  
8 approximately 34.5 million ccf.

9 The FTY and FPFTY forecasts of delivery volumes were developed as discussed below.

10 Rate R - This class consists of full-service (sales plus transportation) customers taking  
11 service under Rate R. The monthly use per customer was developed based on a regression  
12 analysis using monthly number of customers and Heating Degree Day ("HDD") data for  
13 2016-2021. The R-square was 94.9%, indicating that HDDs explain 94.9% of the variation  
14 in monthly usage per customer. The regression results were applied to the weather-normal  
15 monthly HDD, and to the forecast number of customers (including 130 new customers in  
16 2022 and 130 additional new customers in 2023), to forecast deliveries for FTY and  
17 FPFTY. The "weather-normal monthly HDD" are the monthly averages for July 2011  
18 through December 2021.

19 Rate C - This class consists of full-service customers taking service under Rate C. The  
20 monthly use per customer was developed based on a regression analysis, using data for the  
21 same period as for Rate R. The R-square was 94.3%. The regression results were applied

1 to the weather-normal monthly HDD, and to the forecast number of customers, to  
2 determine forecast deliveries for the FTY and FPFTY.

3 Rate L - This class had no customers, deliveries or revenue in the HTY, and is not expected  
4 to have any in the FTY or FPFTY.

5 Rate IS - This class consists of full-service customers taking interruptible service under  
6 Rate IS. The monthly use per customer was developed based on a regression analysis,  
7 using data for 2019-2021. This period was chosen because the R-squares for longer periods  
8 were not as good as for this period (*i.e.* correlation was lower). The R-square was 65.5%.  
9 The relationship between HDD and usage per customer is not as strong as for Rate R and  
10 Rate C, which is expected for an Interruptible class. The regression results were applied  
11 to the weather-normal monthly HDD, and to the forecast number of customers, to  
12 determine forecast deliveries for the FTY and FPFTY.

13 Rate SI - This class consists of full-service customers taking interruptible service under  
14 Rate SI. The monthly use per customer was developed based on a regression analysis,  
15 using data for the same period as for Rate R. The R-square was 68.4%. The regression  
16 results were applied to the weather-normal monthly HDD, and to the forecast number of  
17 customers, to determine forecast deliveries for the FTY and FPFTY.

18 Transport Firm - This class consists of transportation-only customers, with two customer  
19 types:

- 20 • *Customers taking transportation-only service under Rate SI.* The monthly use per  
21 customer was developed based on a regression analysis, using data for 2018-2021,  
22 because data for prior periods was not available. The R-square was 23.1%. The  
23 regression results were applied to the weather-normal monthly HDD, and to the



1 forecast number of customers, to determine forecast deliveries for the FTY and  
2 FPPTY. While the R-square correlation is weak, the resulting forecast was within  
3 the historical range and was accepted as reasonable.

- 4 • *Customers taking transportation-only service pursuant to contracts.* These are two  
5 such customers in the Company' service territory. The monthly use for each  
6 customer was developed based on a regression analysis, using data for 2018-2021;  
7 data for prior periods was not available. The regression determined the R-squares  
8 were 46.7% and 69.0%. While HDD explains a meaningful portion of the variation,  
9 other factors also affect usage, therefore the regressions were accepted as  
10 reasonable. The regression results were applied to the weather-normal monthly  
11 HDD, to determine forecast deliveries for each customer for FTY and FPPTY.

12 Transport DDQ - This class includes transportation-only customers taking service under  
13 Rate C. The monthly use per customer was developed based on a regression analysis, using  
14 data for same period as for Rate R. The R-square was 94.6%. The regression results were  
15 applied to the weather-normal monthly HDD and to the forecast number of customers to  
16 determine forecast deliveries for the FTY and FPPTY.

17 Transport Interruptible - This class includes transportation-only customers taking service  
18 under Rate IS. The monthly use per customer was developed based on a regression  
19 analysis, using data for 2019-2021. This period was chosen because the R-squares for  
20 longer periods were not as good as for this period (*i.e.* correlation was lower). The R-  
21 square was 47.6%. The relationship between HDD and usage per customer is not as strong  
22 as for Rate R and Rate C, which is expected for an Interruptible class. The regression

1 results were applied to the weather-normal monthly HDD, and to the forecast number of  
 2 customers, to determine forecast deliveries for the FTY and FPFTY.

3 The table below summarizes the results of the sales forecast.

Rate Class/ Level of Service	Customers 2021	CCF 2021	Customers 2023	CCF 2023	R-squared
R- Full service	6307	5,598,048	6,657	6,106,738	94.9%
C- Full service	831	2,495,606	856	2,646,462	94.3%
IS- Full service	3	700,210	3	587,921	65.5%
SI- Full service	4	72,875	4	55,582	68.4%
Trans Firm	15	18,402,422	15	18,590,514	23.1%/ 46.7%/ 69.0%
Trans DDQ(C)	57	947,195	56	924,708	94.6%
Trans Interr(IS)	4	6,276,177	4	6,137,556	47.6%
Total	<u>7221</u>	<u>34,492,533</u>	<u>7,595</u>	<u>35,049,481</u>	
HDD		5,827		6,647	

4 **FTY AND FPFTY COSTS**

5 **Q. Please identify the schedules that present Valley's costs.**

6 A. Schedule C1 presents a summary of all costs for the HTY, Distribution-only costs for the  
 7 HTY and Distribution-only costs for the FTY and FPFTY. Schedule C1-1 presents  
 8 operating costs, detailed by account. Schedule C3 presents the computation of depreciation  
 9 expense. Schedule C1-3 presents the computation of Taxes other than income. Rate case  
 10 expense and Income tax expense, and adjustment to reflect costs to be unbundled from  
 11 distribution rates and recovered in the GCR rate, are discussed below.

12 **Q. How did you develop the FTY and FPFTY operating costs?**

13 A. Schedule C1-1 presents operating costs for years 2016 through the FPFTY, detailed by  
 14 account. Total operating costs for the HTY 2021, excluding Purchased Gas, were  
 15 \$3,091,409 (line 48).

1 Schedule C1-1 also shows forecast operating costs by account for FTY and FTY. The  
2 totals for Distribution, Customer accounting and Administrative and General ("A&G") are  
3 carried forward to Schedule C1, lines 11, 12 and 14 respectively. Costs are also  
4 summarized by type- Labor, Transportation, Material, Overhead and Other (Schedule C1-  
5 1, lines 50-55).

6 **Q. Did you prepare a schedule comparing the OPEB included in rates to the OPEB**  
7 **expense for years since 2010, as required by the Stipulation of Settlement in Docket**  
8 **No. R-2010-2172665, Section III-16-b?**

9 A. Yes. Although the requirement applied to the last rate case, we have compiled it again for  
10 this case. This information is presented on Schedule C1-5.

11 **Q. How did you compute Depreciation expense for FTY and FPFTY?**

12 A. Schedule C3, pages 1-3, shows the asset values at original cost in PAPUC/FERC account  
13 detail as of December 31, 2017, actual additions and retirements for 2018, 2019, 2020 and  
14 2021, and planned additions for the FTY and FPFTY. Schedule C3, pages 4-6, shows the  
15 depreciation rate applicable to each account, and depreciation expense for HTY, FTY and  
16 FPFTY. Depreciation expense for each account for the FTY and the FPFTY was computed  
17 by multiplying X), the depreciation rate for the account, times Y), original cost at the prior  
18 year end, plus one-half of additions for the year. The total FPFTY depreciation expense,  
19 less amounts charged to clearing accounts and included in operating costs on Schedule C1-  
20 1, is \$1,178,428 (line 41); this amount is carried forward to Schedule C1, line 17.

21 **Q. What adjustments were made to the plant asset costs shown in Valley's accounts?**

22 A. Two adjustments were made. First, Gas Plant Acquisition costs, shown on Schedule C3,  
23 line 2, were removed from the rate base. Second, costs incurred to serve Customer A,

1 shown on line 6, were removed in accordance with the Commission's approval of the  
2 service arrangement for this customer at Docket No. A-2012-2335954, which states that  
3 all such costs would be paid by Customer A. In both cases, the corresponding accumulated  
4 depreciation was also removed. This is consistent with how these costs were addressed,  
5 without objection from any party, in Valley's last rate case. The removal of these costs is  
6 on line 38.

7 **Q. How did you compute Taxes other than income for FTY 2022 and FPFTY 2023?**

8 A. Schedule C1-3 shows Taxes other than income, which comprises the Public Utility Realty  
9 Tax and the PUC Assessment. The Utility Realty Tax is assumed to change in relation to  
10 Net plant. The PUC Assessment is assumed to remain the same as for the HTY. The total  
11 is carried forward to Schedule C1, line 18.

12 **Q. How did you compute the FPFTY Rate case expense amortization?**

13 A. The Rate case expense amortization reflects the normalized rate case expense. Expenses  
14 for the pending rate case, if fully litigated, are estimated at \$334,500 and a three-year  
15 normalization period was determined to be reasonable, starting January 1, 2023 (the start  
16 of the FPFTY). The computation is shown on Schedule C1-3, lines 10-15 and the result is  
17 carried forward to Schedule C1, line 13.

18 **Q. Is Valley proposing to recover extraordinary costs associated with the Coronavirus  
19 pandemic?**

20 A. Yes. Valley proposes to recover extraordinary costs associated with the Coronavirus  
21 pandemic, pursuant to the Commission's Orders in Docket No. P-2020-3023525 and  
22 Docket Nos. M-2020-3019775 & 3019244: the computations are on Schedule C1-7, and  
23 carried forward to Schedule C1-3, line 14.

- 1 • Carrying costs on higher receivables- During 2020-2021, accounts receivable  
2 balance averaged \$56,611 higher than during 2019. The higher accounts  
3 receivable balance, and the related carrying costs, are an extraordinary cost that  
4 the Company incurred due to the pandemic. The carrying costs total \$8,484 as  
5 of December 31, 2022 (Schedule C1-7, lines 1-2).
- 6 • Out of pocket costs- The Company identified \$18,075 of costs directly related  
7 to the pandemic, mainly hand sanitizers, cleaning supplies and masks. The  
8 items, plus carrying costs through December 31, 2022, total \$19,516 (lines 3-  
9 4).

10 The Company incurred these extraordinary costs due solely to the pandemic and now seeks  
11 recovery of the costs. The Company proposes to recover these costs, plus carrying costs  
12 through the recovery period, over three years; the annual amount of \$10,859 (line 7) is  
13 carried to Schedule C1-3, line 14 and included in the total on Schedule C1-3, line 15 and  
14 carried to Schedule C1, line 13.

15 **Q. How did you compute the FTY and FPFTY Income tax expense?**

16 A. Income tax expense for the FTY and FPFTY is computed on Schedule C1-4.

17 Net operating income before income taxes (line 1), is from Schedule C1, line 22.

18 Synchronized interest expense (lines 3-9) is computed by taking the rate base (Schedule  
19 C1, line 28) excluding Construction Work in Progress (Schedule C1-6, line 5) and  
20 multiplying by the weighted cost of debt (Schedule C1-2).

21 Taxable income before depreciation tax adjustments (line 10) is equal to Net operating  
22 income before income taxes less Synchronized interest expense.

## Valley Statement No. 1

1 Regulatory Pennsylvania taxable income and Regulatory Pennsylvania tax expense are  
2 computed using the Full flow through method; that is, tax depreciation is used in the  
3 computation. The Pennsylvania depreciation adjustment (lines 12-15) reflects the  
4 depreciation expense on Valley's Pennsylvania tax return and is computed using the double  
5 declining balance method applied to tax basis and tax life (just as on the tax return).  
6 Regulatory Pennsylvania taxable income (line 16) is equal to Taxable income before  
7 depreciation tax adjustments as adjusted by the Pennsylvania depreciation adjustment.  
8 Regulatory Pennsylvania income tax expense (line 17) is equal to Regulatory Pennsylvania  
9 taxable income times the statutory 9.99% rate.

10 Regulatory Federal taxable income and Regulatory Federal tax expense are computed using  
11 a modified Full flow through method; that is, a modified tax depreciation amount is used  
12 in the computation. The Federal depreciation adjustment (lines 19-22), reflects straight  
13 line depreciation applied to tax basis and tax life. Federal taxable income (line 27) is equal  
14 to Taxable income before depreciation tax adjustments as adjusted by the Federal  
15 depreciation adjustment and less Regulatory Pennsylvania tax expense. Regulatory  
16 Federal income tax (line 28) is equal to Regulatory Federal taxable income times the  
17 statutory 21% rate.

18 Federal income tax expense in the revenue requirement is reduced by the EDIT accretion  
19 (line 29), which is discussed below.

20 Regulatory total income tax expense (line 30) is equal to Regulatory Pennsylvania income  
21 tax expense plus Regulatory Federal income tax expense, and is carried forward to  
22 Schedule C1, line 24.

1 **Q. Does the computation of income tax expense included in the revenue requirement**  
2 **comply with Act No. 40 of 2016, which amends the Public Utility Code regarding the**  
3 **treatment of income tax expense for ratemaking purposes?**

4 A. Yes. The computation of income tax expense for ratemaking purposes, presented on  
5 Schedule C1-4 (i.e., in the revenue requirement), reflects a tax deduction for each item of  
6 expense (e.g., depreciation expense) in the revenue requirement. In addition, there are no  
7 items that reduce the income tax expense for ratemaking purposes, or increase the deferred  
8 tax liability, other than those reflected in the revenue requirement.

9 **Q. Did you compute the Net Utility Operating Income and Return on Rate Base at**  
10 **present rates?**

11 A. Yes. Schedule C1, line 26 shows Net Utility Operating Income at Present Rates for the  
12 HTY, FTY and FPFTY. Schedule C1, line 29 shows Return on Rate Base for Distribution-  
13 only at present rates of 6.77% for the HTY, 6.27% for the FTY and 3.51% for the FPFTY.

14 **RATE BASE FOR THE FTY AND FPFTY**

15 **Q. How did you develop the Rate Base?**

16 A. The Rate Base at the end of the HTY, FTY and FPFTY is presented in Schedule C1-6.  
17 Assets at original cost and accumulated depreciation are carried forward from Schedule  
18 C3. Schedule C3 shows assets at original cost at the end of the HTY (December 31, 2021)  
19 and adds forecast capital expenditures to compute assets at the end of the FTY  
20 (December 31, 2022) and the FPFTY (December 31, 2023). As described above, annual  
21 depreciation expense for each account is computed by multiplying X) the depreciation rate  
22 for the account times Y) original cost at the prior year end plus one-half of additions for

1 the year. Accumulated depreciation at each year-end is computed by adding annual  
2 depreciation expense, and subtracting retirements, to the previous year-end balance.

3 The adjustments to Rate Base for Construction Work in Progress, Customer deposits and  
4 Materials and supplies, are the amounts on Valley's Balance Sheets at December 31, 2021,  
5 presented in Schedule C2. Each of these items was estimated to be the same for the FTY  
6 and the FPFTY as for the HTY.

7 Natural Gas Inventories (Schedule C1-6, line 9) is the average monthly volume over the  
8 period 2014-2021, times the currently effective GCR rate. This amount is unbundled from  
9 distribution rates and recovered in the GCR, therefore the amount is removed from rate  
10 base.

11 The rate base includes a reduction for Accumulated Deferred Income Taxes ("ADIT") (line  
12 6), equal to the difference between Accumulated depreciation based on X) Federal tax  
13 expense borne by ratepayers (i.e., based on straight line method discussed above) and Y)  
14 Valley's actual Federal tax expense (i.e., based on double declining balance method), times  
15 the current Federal income tax rate. The ADIT is computed on Schedule C1-6, lines 28-  
16 33 and carried up line 6.

17 In addition, the rate base includes a reduction for Excess Deferred Income Taxes ("EDIT")  
18 (line 7), equal to the ADIT at December 31, 2017, the initial effective date of Federal  
19 income tax rates under the TCJA, times the reduction in Federal income rates due to the  
20 TCJA. The EDIT reflects the benefit the Company received by taking depreciation  
21 expense when the Federal tax rate was 34%, and including in the revenue requirement the  
22 tax benefit applicable at the current rate of 21%. The EDIT balance is computed on  
23 Schedule C1-6, lines 35-41 and carried up to line 7.



1 Because the EDIT is due to a change in the tax rate, the amount computed as of  
2 December 31, 2017 does not change. Valley has been accreting the balance over the  
3 estimated remaining book life of the assets, ten years 2018-2027, and the EDIT balance  
4 that is included in rate base declines each year. The annual EDIT accretion (Schedule C1-  
5 6, line 41) is applied to reduce Income tax expense (Schedule C1-4, line 29).

6 The rate base includes a reduction for Accrued Pension / OPEB liability, reflecting the  
7 excess of amounts charged to expense over amounts paid in case (Schedule C1-6, lines 43-  
8 47, carried up to line 11).

9 Cash Working Capital was determined by using the widely-accepted formula of 1/8 of non-  
10 fuel cash operating costs (Schedule C1-6, lines 17-26, carried up to line 14).

11 The total Rate Base, Schedule C1-6, line 15, is carried forward to Schedule C1, line 28.

12 **NET UTILITY OPERATING INCOME**

13 **Q. What is the distribution revenue requirement for the FPFTY?**

14 A. FPFTY forecast revenue at present rates (including Other revenue) is \$5,521,175. The  
15 FPFTY revenue required to produce Mr. D'Ascendis' recommended rate of return of 7.97%  
16 is \$6,771,300. Valley is requesting a revenue increase of just under \$1,000,000, or a total  
17 of \$6,520,807 (Distribution revenue of \$6,496,602). See Schedule C1, line 7.

18 **Q. What revenue is included in the Distribution revenue requirement?**

19 A. The total revenue requirement includes:

20 ▪ Gas delivery revenue: Revenue from delivery of gas, for both sales and  
21 transportation customers, including contract and non-contract customers.

22 ▪ Other revenue: Primarily Forfeited Discounts (late payment charges).

23 Unbilled Revenue is not included because FPFTY sales are normalized.

1 **Q. What rate of return on rate base does Mr. D'Ascendis recommend?**

2 A. Mr. D'Ascendis recommends a return on rate base of 7.97%.

3 **Q. What rate of return on rate base does the proposed revenue requirement produce?**

4 A. Valley's proposed increase produces Distribution revenue of \$6,520,807 (excluding Other  
5 revenue), Net Operating Income of \$1,399,327 and rate of return of 7.08%, on the rate base  
6 of \$19,777,349 (Schedule C1).

7 **PROPOSED RATES**

8 **Q. How were the proposed rates developed?**

9 A. A revenue target was established for each class (other than contract transportation  
10 customers) by increasing revenue at present rates by 21.5%. The fixed monthly charges  
11 are proposed to increase by approximately 9%. For each class, the balance of the revenue  
12 target was recovered by changing volumetric or demand rates. The current rates and  
13 proposed rates are shown in Schedule B5.

14 **Q. Did you compare the amounts that customers in each rate class would pay under the  
15 present and proposed rates?**

16 A. Yes. Schedule B5-1 compares the amounts that customers in each rate class with a range  
17 of usage levels would pay in the FPFTY, both at present rates and the proposed rates,  
18 including the GCR. Schedule B5-2 shows the comparison excluding the GCR and is  
19 therefore applicable to transportation customers.

20 **Q. Did you prepare a schedule showing the number of customers whose bills would  
21 increase under the proposed rates?**

22 A. Yes. Schedule B3 presents that information.

1 **Q. Do the proposed rates produce the required revenue?**

2 A. Yes. Schedule B4-2 computes the distribution revenue that would be produced by the  
3 proposed rates. Line 23 shows that the revenue produced by the proposed rates is  
4 \$6,496,602, representing an increase of \$999,631, producing a return of 7.08%.

5 **Q. Does this conclude your Direct Testimony?**

6 A. Yes.

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket No. R-2022-_____</b>
	:	
<b>Valley Energy, Inc.</b>	:	

**EXHIBITS**  
**OF**  
**HOWARD S. GORMAN**

**ON BEHALF OF**  
**VALLEY ENERGY, INC.**

**APRIL 29, 2022**

## RESUME OF HOWARD S. GORMAN

### SUMMARY

Mr. Gorman has more than 30 years of experience in the energy industry, including 25 years in rate and regulatory proceedings. His areas of expertise include embedded class cost of service studies, marginal cost studies, revenue allocation, rate design and revenue requirements, for both electric and gas utilities. He has testified as an expert witness before the Massachusetts Department of Public Utilities, New Jersey Board of Public Utilities, New Hampshire Public Utilities Commission, New York State Public Service Commission, Ontario Energy Board, Pennsylvania Public Utility Commission and Rhode Island Public Utilities Commission. Mr. Gorman also has experience in financial modeling, financial analysis and forecasting and treasury and financial management.

### PROFESSIONAL EMPLOYMENT

- |                |   |
|----------------|---|
| 2010 - Present | HSG Group, Inc. <ul style="list-style-type: none"><li>• <i>President</i></li></ul>  |
| 1997 - 2010    | Black & Veatch Corporation (R.J. Rudden Associates, Inc. before 2005) <ul style="list-style-type: none"><li>• <i>Principal Consultant</i></li></ul>   |
| 1995 - 1997    | Independent Consultant  |
| 1987 – 1995    | Trigen Energy Corporation <ul style="list-style-type: none"><li>• 1987-1993- <i>Corporate Controller; Trigen was formed in 1987</i></li><li>• 1993-1995- <i>Treasurer; Trigen had IPO with NYSE listing in 1994</i></li></ul> |
| 1982 - 1987    | Coleco Industries, Inc. <ul style="list-style-type: none"><li>• <i>Director, Treasury</i></li></ul>   |
| 1976 - 1979    | Touche Ross & Co. <ul style="list-style-type: none"><li>• <i>Staff Accountant</i></li></ul>   |

### PROFESSIONAL EXPERIENCE

#### Utility Accounting and Costing

Mr. Gorman has performed numerous class cost of service studies, and has developed and supported revenue requirements, revenue allocation, rate designs and marginal cost studies, in rate cases before regulatory commissions in several jurisdictions, for electric and gas utilities. These assignments included development of test year data, forecasts for the rate year, establishment of cost causality, selection of allocation bases, development of allocators, and analysis of customer impacts and policy considerations.

## **Energy Project Analysis and Financing**

Mr. Gorman has negotiated and completed transactions including construction and term loans, tax-exempt bonds, taxable bonds, subordinated debt and asset-backed (receivables and inventory) revolving credit facilities. He has worked successfully with lenders and borrowers to source and structure transactions, and was instrumental in negotiating loan documents and in designing power sale and supply procurement contracts to be financed. Mr. Gorman has performed financial analyses of energy-related assets, including electric and gas distribution companies, power plants and transmission operators. These analyses included development of cash flows and financial statements based on both regulatory and accounting presentations, and included review of assumptions, analysis of data, modeling and forecasting, sensitivity testing and stress testing.

## **Accounting and Financial Management**

Mr. Gorman has extensive experience in financial accounting. As controller of Trigen Energy Corporation, he founded and built the finance and accounting function; developed reports, procedures and management tools; and managed subsidiary controllers across North America, including an IPO with NYSE listing. He managed the corporate insurance portfolios and the benefit plans for Trigen Energy Corporation and for Coleco Industries, and has bought and sold interest rate and currency forward contracts for the purpose of managing risk.

## **PUBLICATIONS AND PRESENTATIONS**

“What Wall Street Needs From FERC,” published in R. J. Rudden Financial, LLC’s *Energy Capital Markets Report*, September 2002

“A Balanced Look at Balance Sheets,” published in R.J. Rudden Financial, LLC’s *Energy Capital Markets Report*, June 2002

“From Wires To Riches: Shareholder Value Creation In The T&D Business,” April 2002 (co-authored).

“Assessment of Retail Choice Programs,” presented at the American Gas Association Rate and Strategic Issues Committee Conference, March 2002

“Value Creation With Transmission Assets,” quoted in *Electrical World’s Special Edition Quarter 1, 2002*, March 2002

“The Remarkable Story on Enron,” published in Scudder’s *Annual End of Year Issue*, 2001

## **EDUCATION**

New York University, B.S., Accounting, 1976

Harvard Business School, MBA, 1981

Relevant Projects			
Jurisdiction	Docket	Client	Subject Matter
Pennsylvania 2021	R-2021-3024060	Vicinity Energy Philadelphia	Steam system revenue requirements; sales forecast (formerly Veolia)
Pennsylvania 2021	R-2021-3024750	Duquesne Light	Electric class cost of service; revenue allocation; rate design
New York 2020	20-G-0381	Niagara Mohawk (Gas)	Gas class cost of service; revenue allocation; rate design; marginal cost
New York 2020	20-E-0380	Niagara Mohawk (Electric)	Electric class cost of service; revenue allocation; rate design; marginal cost
Pennsylvania 2019	R-2019-3008212	Citizens' Electric of Lewisburg, PA	Electric revenue requirements, class cost of service, revenue allocation, rate design
Pennsylvania 2019	R-2019-3008208	Wellsboro Electric Company	Electric revenue requirements, class cost of service, revenue allocation, rate design
Pennsylvania 2019	R-2019-3008209	Valley Energy, Inc.	Gas revenue requirements, rate design
New York 2019	19-G-0309 /0310	Brooklyn Union Gas / KeySpan Gas East	Gas class cost of service; revenue allocation; rate design; marginal cost
Massachusetts 2018	DPU 18-150	Massachusetts / Nantucket Electric	Electric class cost of service; revenue allocation; rate design; marginal cost Monthly Minimum Reliability Contribution
Pennsylvania 2018	R-2018-30000124	Duquesne Light	Electric class cost of service; revenue allocation; rate design
Rhode Island 2017	RIPUC 4770	Narragansett Electric	Electric class cost of service; revenue allocation; rate design
Pennsylvania 2017	R-2017-2593142	Veolia Energy Philadelphia	Steam system revenue requirements; sales forecast
New York 2017	17-G-0239	Niagara Mohawk (Gas)	Gas class cost of service; revenue allocation; rate design; marginal cost
New York 2017	17-E-0238	Niagara Mohawk (Electric)	Electric class cost of service; revenue allocation; rate design; marginal cost
Pennsylvania 2016	R-2016-2531550	Citizens' Electric of Lewisburg, PA	Electric revenue requirements, class cost of service, revenue allocation, rate design
Pennsylvania 2016	R-2016-2531551	Wellsboro Electric Company	Electric revenue requirements, class cost of service, revenue allocation, rate design
New Hampshire 2016	DE 16-383	Granite State Electric	Electric revenue requirement
New York 2016	16-G-0058 /0059	Brooklyn Union Gas / KeySpan Gas East	Gas class cost of service; revenue allocation; rate design; marginal cost
Massachusetts 2015	DPU 15-155	Massachusetts / Nantucket Electric	Marginal cost
New York 2015	15-E-0184	Jamestown Board of Public Utilities	Electric revenue requirements
New Hampshire 2015	DE14-180	Energy North Natural Gas	Gas revenue requirements
New York 2014	14-E-0035	Village of Freeport	Electric revenue requirements; sales forecast; rate design

Relevant Projects			
Jurisdiction	Docket	Client	Subject Matter
Pennsylvania 2021	R-2021-3024060	Vicinity Energy Philadelphia	Steam system revenue requirements; sales forecast (formerly Veolia)
Pennsylvania 2014	R-2013-2386293	Veolia Energy Philadelphia	Steam system revenue requirements and sales forecast
Pennsylvania 2014	R-2013-2372129	Duquesne Light	Electric class cost of service; revenue allocation; rate design
New Hampshire 2013	DE13-063	Granite State Electric	Electric class cost of service (marginal cost); revenue allocation; rate design
Ontario 2005-2013	EB-2005-0378 et al	Hydro One Networks Inc.	Electric Transmission and Distribution cost allocation; OH capitalization rates (2013, 2012, 2010, 2009, 2008, 2006, 2005)
Ontario 2006-2013	EB-2007-0905 et al	Ontario Power Generation	Electric cost allocation methodology (2013, 2010, 2006)
New York 2012	12-E-0201	Niagara Mohawk (Electric)	Electric class cost of service; revenue allocation
Rhode Island 2012	RIPUC 4323	Narragansett Electric	Electric class cost of service
New York 2011	11-E-0590	Village of Rockville Centre	Electric revenue requirements; rate design; sales forecast
New York 2011	11-G-0142	Chautauqua Utilities, Inc.	Gas revenue requirements, rate design
Pennsylvania 2010	R-2010-2179103	Kellogg (intervenor)	Water class cost of service; revenue allocation
Pennsylvania 2010	R-2010-2179522	Duquesne Light	Electric class cost of service; revenue allocation; rate design
Pennsylvania 2010	R-2010-2172662	Wellsboro Electric	Electric revenue requirements, class cost of service, revenue allocation, rate design
Pennsylvania 2010	R-2010-2172665	Citizens' Electric of Lewisburg, PA	Electric revenue requirements, class cost of service, revenue allocation, rate design
Pennsylvania 2010	R-2010-2174470	Valley Energy, Inc.	Gas revenue requirements, rate design
Pennsylvania 2010	R-2010-2161592	PECO Energy (Gas)	Gas class cost of service; revenue allocation; rate design
Pennsylvania 2010	R-2010-2161575	PECO Energy (Electric)	Electric class cost of service; revenue allocation; rate design
New York 2010	10-E-0050	Niagara Mohawk (Electric)	Electric class cost of service
New York 2009	09-E-0862	Jamestown Board of Public Utilities	Electric revenue requirements
Pennsylvania 2001-2009	R-2139884 R-00061931 M-00021612 R- 00017034 R- 00006042	Philadelphia Gas Works	Gas class cost of service; revenue allocation; rate design; rate unbundling; recovery of fixed costs (2006, 2002, 2001)



<b>Relevant Projects</b>			
<b>Jurisdiction</b>	<b>Docket</b>	<b>Client</b>	<b>Subject Matter</b>
Pennsylvania 2021	R-2021-3024060	Vicinity Energy Philadelphia	Steam system revenue requirements; sales forecast (formerly Veolia)
Rhode Island 2009	RIPUC 4065	Narragansett Electric	Electric class cost of service; revenue allocation; rate design
Massachusetts 2009	DPU 09-39	Massachusetts / Nantucket Electric	Electric revenue requirements; adjustment mechanisms; class cost of service; revenue allocation; rate design
Pennsylvania 2008	R-2008-2028394	PECO Energy (Gas)	Gas class cost of service; revenue allocation; rate design
Pennsylvania 2007	R-00072350	Wellsboro Electric	Electric revenue requirements; rate design
Pennsylvania 2007	R-00072348	Citizens' Electric of Lewisburg, PA	Electric revenue requirements; rate design
Pennsylvania 2007	R-00072349	Valley Energy, Inc.	Gas revenue requirements; rate design
New York 2006	06-E-0911	Village of Freeport	Electric revenue requirements; rate design
Pennsylvania 2006	R-00061346	Duquesne Light	Electric class cost of service; revenue allocation; rate design
New York 2003	03-E-1568	Village of Rockville Centre	Electric revenue requirements; rate design; sales forecast
New Jersey 2002	ER02080506, ER02050303 et al	AmeriSteel aka Co-Steel (intervenor)	Electric cost allocation and rate design; industrial rates

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**  
**INDEX TO SCHEDULES**

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5	<a href="#">B1</a>	Summary Of Sales, Customers And Revenue At Present Rates	Historic Year December 31, 2021
6	<a href="#">B1-1</a>	Billing Units, Rates And Revenue At Present Rates	Historic Year December 31, 2021
7	<a href="#">B1-2</a>	Bill Analysis- Revenues Under Present Rates	Historic Year December 31, 2021
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15		<b>TARIFF RATES</b>	
16	<a href="#">B5</a>	Summary Of Present And Proposed Tariff Rates	Historic Year December 31, 2021 and Fully Projected Future Test Year December 31, 2023
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20		<b>NET OPERATING INCOME AND RATES OF RETURN</b>	
21	<a href="#">C1</a>	Net Operating Income And Rates of Return	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
22	<a href="#">C1-1</a>	Support Sheet No. 1- Operating Expense and Going-Level Adjustments	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
23	<a href="#">C1-2</a>	Support Sheet No. 2- Summary of Cost of Capital and Fair Rate of Return Based upon a Hypothetical Ratemaking Capital Structure	12/31/2023
24	<a href="#">C1-3</a>	Support Sheet No. 3- Taxes Other Than Income	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
25	<a href="#">C1-4</a>	Support Sheet No. 4- Income Tax Calculations	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
26	<a href="#">C1-5</a>	Support Sheet No. 5- Pension and OPEB	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
27	<a href="#">C1-6</a>	Support Sheet No. 6- Computation of Rate Base	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
28	<a href="#">C1-7</a>	Extraordinary Coronavirus Pandemic Costs	
29	<a href="#">C1-8</a>	Comparison to Prior Rate Case	Prior Rate Case and Fully Projected Future Test Year December 31, 2023
30	<a href="#">C2</a>	Balance Sheets	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
31	<a href="#">C3</a>	Original Cost of Utility Plant in Service	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
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B

Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023

Operating Revenue Under Present Rates and Proposed Rates  
Years Ended 12/31/2021, 12/31/2022 and 12/31/2023  
Answer to 52 Pa. Code 53.52 b[4]

Line	Operating Revenues	Historic Year December 31, 2021		PRESENT RATES	PRESENT RATES	PROPOSED RATES
		Per Books	Distribution Only	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023	Fully Projected Future Test Year December 31, 2023
1	Residential sales	\$4,523,971	\$2,500,218	\$2,643,225	2,695,871	3,276,012
2	Commercial and Industrial sales	2,014,680	\$832,275	856,824	861,522	1,040,333
3	Transportation	1,886,645	1,886,645	1,925,649	1,939,577	2,180,256
4	Subtotal	8,425,296	5,219,138	5,425,698	5,496,970	6,496,602
5						
6	Forfeited Discounts	14,197	14,197	14,197	14,197	14,197
7	Other operating revenue	4,661	4,661	4,661	4,661	4,661
8	Non-operating revenue	7,659	7,659	5,348	5,348	5,348
9	Total Operating Revenues	\$8,451,812	\$5,245,654	\$5,449,903	\$5,521,175	\$6,520,807

B1

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

**Summary Of Sales, Customers And Revenue At Present Rates**  
**Historic Year December 31, 2021**

Line	Rate Class	Volumes (ccf)	Customers	Revenue - Present Rates		
				Fixed Customer Charge	Variable Distribution-Commodity	Distribution Total
1	<u>Residential Sales Customers</u>					
2	Rate R- Residential	5,598,048	6,307	\$892,291	\$1,607,927	2,500,218
3						
4	<u>Commercial and Industrial Sales Customers</u>					
5	Rate C- Commercial	2,495,606	831	201,595	562,834	764,429
6	Rate IS- Interruptible Service	700,210	3	2,708	50,275	52,983
7	Rate SI- Small Industrial	72,875	4	3,611	11,252	14,863
8		<u>3,268,691</u>	<u>838</u>	<u>207,914</u>	<u>624,361</u>	<u>832,275</u>
9						
10	<u>Transportation Customers</u>					
11	Transport. Firm	2,566,772	12	10,833	396,310	407,143
12	Transport. Firm- Fixed	8,670,950	1	460,887		460,887
13	Transport. Firm- Volumetric	7,164,700	1		337,072	337,072
14	Transport. Firm- DDQ	947,195	56	13,682	213,621	227,303
15	Transport. Interruptible	6,276,177	4	3,611	450,630	454,241
16		<u>25,625,794</u>	<u>74</u>	<u>489,013</u>	<u>1,397,632</u>	<u>1,886,645</u>
17						
18	TOTAL	<u>34,492,533</u>	<u>7,220</u>	<u>\$1,589,218</u>	<u>\$3,629,920</u>	<u>\$5,219,138</u>



B1-2

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

**Bill Analysis- Revenues Under Present Rates**  
**Historic Year December 31, 2021**

Line	Customer Type	Per Books 12/31/2021 Revenue
1	Residential sales	\$4,523,971
2	Commercial and Industrial sales	2,014,680
3	Transportation	1,886,645
4	<b>Distribution Revenue</b>	<b>8,425,296</b>
5		
6	Forfeited Discounts	14,197
7	Other operating	4,661
8	Patronage Capital	7,659
9	<b>Total Revenue for Rate case</b>	<b>8,451,812</b>
10		
11	GCR under (over)	273,082
12	GCR Prior- Residential	165,548
13	GCR Prior- C&I	96,647
14	GCR Prior- computation	2,742
15	Delivery computation	9,278
16	STAS	(3,095)
17	Unbilled	(36,987)
18	Other Operating revenue	507,215
19		
20	Total Operating revenue	<b>8,959,027</b>
21	Cost recovery	517,200
22	Less: Patronage Capital	(7,659)
23	<b>Total Operating Revenue per Financials</b>	<b>\$9,468,568</b>

B2

Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023

Summary Of Sales, Customers And Revenue At Present Rates  
Future Test Year December 31, 2022

Line	Rate Class	Volumes (ccf)	Customers	Revenue - Present Rates		Distribution Total
				Fixed Customer Charge	Variable Distribution-Commodity	
1	<u>Residential Sales Customers</u>					
2	Rate R- Residential	5,987,484	6,527	\$923,440	\$1,719,785	2,643,225
3						
4	<u>Commercial and Industrial Sales Customers</u>					
5	Rate C- Commercial	2,630,805	851	206,385	593,325	799,710
6	Rate IS- Interruptible Service	587,921	3	2,708	42,213	44,921
7	Rate SI- Small Industrial	55,582	4	3,611	8,582	12,193
8		3,274,308	858	212,704	644,120	856,824
9						
10	<u>Transportation Customers</u>					
11	Transport. Firm	2,663,890	13	11,736	411,305	423,041
12	Transport. Firm- Fixed	8,384,920	1	477,333		477,333
13	Transport. Firm- Volumetric	7,541,703	1		358,858	358,858
14	Transport. Firm- DDQ	924,708	56	13,581	208,549	222,131
15	Transport. Interruptible	6,137,556	4	3,611	440,677	444,288
16		25,652,778	75	506,261	1,419,388	1,925,649
17						
18	TOTAL	34,914,570	7,460	\$1,642,405	\$3,783,293	\$5,425,698





B3

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

**Number of Customers Served Whose Bills Will be Increased**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 b[3]**

Line	Customer Type	Average Number of Customers During the Year		
		12/31/2021	12/31/2022	12/31/2023
1	Residential sales	6,307	6,527	6,657
2	Commercial and Industrial sales	838	858	863
3	Transportation	72	73	73
4	Customers with rates changing	7,218	7,458	7,593
5	Rates not changing	2	2	2
6	Total Customers Served	7,220	7,460	7,595
7				
8				
9				

B4

Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023

Summary Of Sales, Customers And Revenue At Present and Proposed Rates  
Fully Projected Future Test Year December 31, 2023

Line	Rate Class	Sales (ccf)	Customers	Revenue - Present Rates			Revenue - Proposed Rates			Target Revenue	Proposed Increase	Proposed Increase %
				Fixed Charge	Volumetric	Distribution Total	Fixed Charge	Volumetric	Distribution Total			
1	<u>Residential Sales Customers</u>											
2	Rate R- Residential	6,106,738	6,657	\$941,832	\$1,754,038	2,695,871	\$1,030,504	\$2,245,509	3,276,012	3,276,021	580,142	21.52%
3												
4	<u>Commercial and Industrial Sales Customers</u>											
5	Rate C- Commercial	2,646,262	856	207,597	596,811	804,409	225,470	746,140	971,610	977,517	167,202	20.79%
6	Rate IS- Interruptible Service	587,921	3	2,708	42,213	44,921	2,952	51,367	54,319	54,588	9,398	20.92%
7	Rate SI- Small Industrial	55,582	4	3,611	8,582	12,193	3,936	10,468	14,404	14,817	2,211	18.13%
8		3,289,765	863	213,916	647,606	861,522	232,358	807,974	1,040,333	1,046,922	178,810	20.76%
9												
10	<u>Transportation Customers</u>											
11	Transport. Firm	2,663,890	13	11,736	411,305	423,041	12,792	501,690	514,483	514,079	91,442	21.62%
12	Transport. Firm- Fixed	8,384,920	1	485,100		485,100	485,100		485,100	485,100	0	0.00%
13	Transport. Firm- Volumetric	7,541,703	1		365,018	365,018		365,018	365,018	365,018		0.00%
14	Transport. Firm- DDQ	924,708	56	13,581	208,549	222,131	14,750	260,731	275,481	269,933	53,351	24.02%
15	Transport. Interruptible	6,137,556	4	3,611	440,677	444,288	3,936	536,238	540,174	539,898	95,887	21.58%
16		25,652,778	75	514,028	1,425,549	1,939,577	516,579	1,663,678	2,180,256	2,174,028	240,679	12.41%
17												
18	TOTAL	35,049,281	7,595	\$1,669,777	\$3,827,193	\$5,496,970	\$1,779,441	\$4,717,161	\$6,496,602	\$6,496,970	\$999,631	18.19%
19												
20	Overall Distribution Increase										18.19%	



**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

**Billing Units, Rates And Revenue At PROPOSED Rates**  
**Fully Projected Future Test Year December 31, 2023**

Line	Description	Rate R- Residential	Rate C- Commercial	Rate IS- Interruptible Service	Rate SI- Small Industrial	Rate ST- Transport Firm	Transport Firm- Contract	Transport. Firm- DDQ	Transport. Interruptible	Total
1	<b>BILLING UNITS</b>									
2	ccf Sales	6,106,738	2,646,262	587,921	55,582	2,663,890	15,926,624	924,708	6,137,556	35,049,281
3										
4	Number of Bills	79,884	10,272	36	48	156	24	672	48	91,140
5	Average Monthly Bills	6,657	856	3	4	13	2	56	4	7,595
6										
7	<b>RATES AND CHARGES</b>									
8	<b>Tariff Rates</b>									
9	Customer Charge	\$12.90	\$21.95	\$82.00	\$82.00	\$82.00	\$0.00	\$21.95	\$82.00	
10							<u>Contract-2</u>			
11	Commodity Block 1	\$0.36771	\$0.28196	\$0.08737	\$0.18833	\$0.18833	\$0.0484	\$0.28196	\$0.08737	
12	Commodity Block 2						\$0.0484			
13	Commodity Block 3						9.2%			
14	Commodity Block 4						Dec ccf %			
15										
16	Demand Block 1									
17	Demand Block 2						<u>Contract-1</u>			
18	Fixed Monthly, Oct-Dec						40,224	10/22-9/23, monthly		
19	Fixed Monthly, Jan-Sep						41,028	10/23-9/24, monthly		
20	<b>COMPUTATION OF REVENUE</b>									
21	Fixed Charge Revenue	1,030,504	225,470	2,952	3,936	12,792	485,100	14,750	3,936	1,779,441
22	Volumetric Revenue	2,245,509	746,140	51,367	10,468	501,690	365,018	260,731	536,238	4,717,161
23	<b>Total Distribution Revenue</b>	<b>\$3,276,012</b>	<b>\$971,610</b>	<b>\$54,319</b>	<b>\$14,404</b>	<b>\$514,483</b>	<b>\$850,118</b>	<b>\$275,481</b>	<b>\$540,174</b>	<b>\$6,496,602</b>
24	Target	3,276,021	977,517	54,588	14,817	514,079	850,118	269,933	539,898	6,496,970
25	<b>BILLING UNITS- DETAIL</b>									
26	Block 1 ccf Sales	6,106,738	2,646,262	587,921	55,582	2,663,890	15,926,624	924,708	6,137,556	35,049,281
27								<i>Check</i>		<i>35,049,281</i>

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

**Summary Of Present And Proposed Tariff Rates**  
**Historic Year December 31, 2021 and Fully Projected Future Test Year December 31, 2023**

Line	Present Rates (excluding GCR)	GCR Current	Present Rates (including GCR present rate)	Proposed Rates (excluding GCR)	GCR Current	Proposed Rates (including GCR present rate)	Proposed Increase (excluding GCR)	Proposed Increase (including GCR present rate)	
<b>Rate R- Residential</b>									
1									
2	Customer Charge per Bill		\$11.79	\$11.79		\$12.90	\$12.90	9.41%	9.41%
3									
4	<u>Commodity charge per ccf</u>								
5	All usage	\$0.28723	\$0.41748	\$0.70471	\$0.36771	\$0.41748	\$0.78519	28.02%	11.42%
6	<b>Rate C- Commercial</b>								
7	Customer Charge per Bill		\$20.21	\$20.21		\$21.95	\$21.95	8.61%	8.61%
8									
9	<u>Commodity charge per ccf</u>								
10	All usage	\$0.22553	\$0.41748	\$0.64301	\$0.28196	\$0.41748	\$0.69944	25.02%	8.78%
11	<b>Rate I- Large Industrial Firm</b>								
12	Customer Charge per Bill		\$0.00	\$0.00		\$0.00	\$0.00		
13									
14	<u>Commodity charge per ccf</u>								
15	Block 1	\$0.11738	\$0.41748	\$0.53486	\$0.14264	\$0.41748	\$0.56012	21.52%	4.72%
16	Block 2	\$0.07210	\$0.41748	\$0.48958	\$0.08762	\$0.41748	\$0.50510	21.53%	3.17%
17	Block 3	\$0.04723	\$0.41748	\$0.46471	\$0.05739	\$0.41748	\$0.47487	21.51%	2.19%
18									
19	<u>Demand charge per mcf</u>								
20	Block 1	\$1.288650		\$1.28865	\$1.56597		\$1.56597	21.52%	21.52%
21	Block 2	\$0.668730		\$0.66873	\$0.81264		\$0.81264	21.52%	21.52%
22	<b>Rate IS- Interruptible Service</b>								
23	Customer Charge per Bill		\$75.23	\$75.23		\$82.00	\$82.00	9.00%	9.00%
24									
25	<u>Transport charge per ccf</u>								
26	All usage	\$0.07180		\$0.0718	\$0.08737		\$0.0874	21.69%	21.69%

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

**Summary Of Present And Proposed Tariff Rates**  
**Historic Year December 31, 2021 and Fully Projected Future Test Year December 31, 2023**

Line	Present Rates (excluding GCR)	GCR Current	Present Rates (including GCR present rate)	Proposed Rates (excluding GCR)	GCR Current	Proposed Rates (including GCR present rate)	Proposed Increase (excluding GCR)	Proposed Increase (including GCR present rate)
<b>Rate SI- Small Industrial</b>								
27								
28	Customer Charge per Bill	\$75.23	\$75.23	\$82.00		\$82.00	9.00%	9.00%
29								
30	<u>Demand charge per mcf</u>							
31	All usage	\$0.1544	\$0.4175	\$0.5719	\$0.1883	\$0.4175	\$0.6058	21.98% 5.93%
32	<b>Rate ST- Transport Firm</b>							
33	Customer Charge per Bill	\$75.23	\$75.23	\$82.00		\$82.00	9.00%	
34								
35	<u>Transport charge per ccf</u>							
36	All usage	\$0.1544	\$0.1544	\$0.1883		\$0.1883	21.98%	21.98%
37	<b>Transport. Firm- DDQ</b>							
38	Customer Charge per Bill	\$20.21	\$20.21	\$21.95		\$21.95	8.61%	8.61%
39								
40	<u>Transport charge per ccf</u>							
41	All usage	\$0.2255	\$0.2255	\$0.2820		\$0.2820	25.02%	25.02%
42	<b>Transport. Interruptible</b>							
43	Customer Charge per Bill	\$75.23	\$75.23	\$82.00		\$82.00	9.00%	
44								
45	<u>Transport charge per ccf</u>							
46	All usage	\$0.0718	\$0.0718	\$0.0874		\$0.0874	21.69%	21.69%

B5-1

Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023

Bill Comparisons (including GCR present rate)  
Fully Projected Future Test Year December 31, 2023  
Rate R- Residential

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
1		Minimum	\$11.79		\$12.90		\$1.11	9.41%
2		10	18.84	\$1.88371	20.75	\$2.07519	1.91	10.17%
3		20	25.88	1.29421	28.60	1.43019	2.72	10.51%
4	All Residential, Apr-Sep	36	37.16	1.03221	41.17	1.14352	4.01	10.78%
5		50	47.03	0.94051	52.16	1.04319	5.13	10.92%
6	All Residential, Annual	76	65.35	0.85984	72.57	0.95493	7.23	11.06%
7	All Residential, Oct-Mar	117	94.24	0.80548	104.77	0.89545	10.53	11.17%
8		150	117.50	0.78331	130.68	0.87119	13.18	11.22%
9		200	152.73	0.76366	169.94	0.84969	17.21	11.27%
10		250	187.97	0.75187	209.20	0.83679	21.23	11.29%

Rate C- Commercial

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
16		Minimum	\$20.21		\$21.95		\$1.74	8.61%
17		25	36.29	\$1.45141	39.44	\$1.57744	3.15	8.68%
18		50	52.36	1.04721	56.92	1.13844	4.56	8.71%
19		100	84.51	0.84511	91.89	0.91894	7.38	8.74%
20		200	148.81	0.74406	161.84	0.80919	13.03	8.75%
21	All Commercial, Annual	258	186.11	0.72134	202.41	0.78452	16.30	8.76%
22		300	213.11	0.71038	231.78	0.77261	18.67	8.76%
23		400	277.41	0.69354	301.73	0.75432	24.31	8.76%
24		500	341.72	0.68343	371.67	0.74334	29.96	8.77%
25		750	502.47	0.66996	546.53	0.72871	44.06	8.77%
26		1,000	663.22	0.66322	721.39	0.72139	58.17	8.77%

B5-1

**Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023**

**Bill Comparisons (including GCR present rate)  
 Fully Projected Future Test Year December 31, 2023  
 Rate SI- Small Industrial**

28  
 29  
 30  
 31  
 32  
 33  
 34  
 35  
 36  
 37  
 38  
 39  
 40  
 41  
 42  
 43

Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
		Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
	Minimum	\$75.23		\$82.00		\$6.77	9.00%
	2,000	1,218.99	\$0.60950	1,293.62	\$0.64681	74.63	6.12%
	4,000	2,362.75	0.59069	2,505.24	0.62631	142.49	6.03%
	6,000	3,506.51	0.58442	3,716.86	0.61948	210.35	6.00%
	8,000	4,650.27	0.58128	4,928.48	0.61606	278.21	5.98%
	10,000	5,794.03	0.57940	6,140.10	0.61401	346.07	5.97%
	12,000	6,937.79	0.57815	7,351.72	0.61264	413.93	5.97%
	14,000	8,081.55	0.57725	8,563.34	0.61167	481.79	5.96%
	16,000	9,225.31	0.57658	9,774.96	0.61094	549.65	5.96%
	18,000	10,369.07	0.57606	10,986.58	0.61037	617.51	5.96%
	20,000	11,512.83	0.57564	12,198.20	0.60991	685.37	5.95%



B5-2

Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023

Bill Comparisons (excluding GCR)  
Fully Projected Future Test Year December 31, 2023  
Rate R- Residential

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
1		Minimum	\$11.79		\$12.90		\$1.11	9.41%
2		10	14.66	\$1.46623	16.58	\$1.65771	1.91	13.06%
3		20	17.53	0.87673	20.25	1.01271	2.72	15.51%
4	All Residential, Apr-Sep	36	22.13	0.61473	26.14	0.72604	4.01	18.11%
5		50	26.15	0.52303	31.29	0.62571	5.13	19.63%
6	All Residential, Annual	76	33.62	0.44236	40.85	0.53745	7.23	21.49%
7	All Residential, Oct-Mar	117	45.40	0.38800	55.92	0.47797	10.53	23.19%
8		150	54.87	0.36583	68.06	0.45371	13.18	24.02%
9		200	69.24	0.34618	86.44	0.43221	17.21	24.85%
10		250	83.60	0.33439	104.83	0.41931	21.23	25.40%

Rate C- Commercial

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
16		Minimum	\$20.21		\$21.95		\$1.74	8.61%
17		25	25.85	\$1.03393	29.00	\$1.15996	3.15	12.19%
18		50	31.49	0.62973	36.05	0.72096	4.56	14.49%
19		100	42.76	0.42763	50.15	0.50146	7.38	17.26%
20		200	65.32	0.32658	78.34	0.39171	13.03	19.94%
21	All Commercial, Annual	258	78.40	0.30386	94.70	0.36704	16.30	20.79%
22		300	87.87	0.29290	106.54	0.35513	18.67	21.25%
23		400	110.42	0.27606	134.73	0.33684	24.31	22.02%
24		500	132.98	0.26595	162.93	0.32586	29.96	22.53%
25		750	189.36	0.25248	233.42	0.31123	44.06	23.27%
26		1,000	245.74	0.24574	303.91	0.30391	58.17	23.67%



**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**

Line	Description	Historic Year December 31, 2021		Future Test Year December 31, 2022	Present Rates Fully Projected Future Test Year December 31, 2023	Full Revenue Requirement Fully Projected Future Test Year December 31, 2023	Proposed Rates Fully Projected Future Test Year December 31, 2023
		Per Books	Distribution Only	Distribution Only	Distribution Only	Distribution Only	Distribution Only
1	<u>REVENUE</u>						
2	Residential	\$4,523,971	\$2,500,218	\$2,643,225	\$2,695,871		3,276,012
3	Commercial and industrial	2,014,680	832,275	856,824	861,522		1,040,333
4	Transportation	1,886,645	1,886,645	1,925,649	1,939,577		2,180,256
5	Operating revenue	8,425,296	5,219,138	5,425,698	5,496,970	6,747,095	6,496,602
6	Other revenue, net	26,516	26,516	24,205	24,205	24,205	24,205
7	Total Revenue	8,451,812	5,245,654	5,449,903	5,521,175	6,771,300	6,520,807
8	<i>ccf</i>	34,492,533		34,914,570		35,049,281	35,049,281
9	<u>EXPENSES</u>						
10	Purchased gas (in revenue)	3,650,808					
11	Distribution	1,456,979	1,456,979	1,646,074	1,791,227	1,791,227	1,791,227
12	Customer accounting & collection	603,108	603,108	698,750	718,042	726,425	724,748
13	Rate case expense amortization				122,359	122,359	122,359
14	Administrative & general expenses	1,031,332	1,031,332	1,088,492	1,006,519	1,006,519	1,006,519
15	Total Operating expenses	6,742,227	3,091,419	3,433,316	3,638,147	3,646,530	3,644,853
16							
17	Depreciation expense	1,063,704	1,063,704	937,616	1,178,428	1,178,428	1,178,428
18	Taxes other than income	31,548	31,548	32,996	34,169	34,169	34,169
19							
20	Total Expenses	7,837,479	4,186,671	4,403,928	4,850,744	4,859,127	4,857,450
21							
22	Net operating income before income ta	614,333	1,058,983	1,045,975	670,432	1,912,173	1,663,357
23							
24	Income tax expense	(386,265)	(223,512)	(193,913)	(22,847)	335,918	264,030
25							
26	NET UTILITY OPERATING INCOME (LOSS) (A)	\$1,000,598	\$1,282,494	\$1,239,888	\$693,278	\$1,576,255	\$1,399,327
27							
28	RATE BASE (B)	\$18,947,540	\$18,947,540	\$19,778,058	\$19,777,349	\$19,777,349	\$19,777,349
29	RATE OF RETURN ON RATE BASE (C)	5.28%	6.77%	6.27%	3.51%	7.97%	7.08%
30							

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**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1] - Support Sheet No. 1**  
**Support Sheet No. 1- Operating Expense and Going-Level Adjustments**

Line	Acct	Account Description	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020	Historic Year December 31, 2021	Adjust HTY to FTY	Future Test Year December 31, 2022	Adjust FTY to FPFTY	Fully Projected Future Test Year December 31, 2023	LABOR	LABOR
													Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023
1		<u>Distribution Expenses</u>												
2	842	Fuel	20,229	22,625	32,754	23,989	27,679	26,245	5,197	31,442	629	32,071	0	0
3	870	Labor Supv /Eng.	65,207	80,117	158,043	152,412	143,501	155,095	13,889	168,984	71,632	240,616	68,593	98,718
4	871	Distrib Load Disp	5,017	5,744	0	5,838	9,756	1,063	4,788	5,851	260	6,111	0	0
5	874	Mains & Services	407,629	425,516	449,306	459,445	387,732	398,302	27,890	426,192	22,038	448,230	135,743	144,437
6	875	Meas & Reg- Gen	45,070	59,771	49,259	59,266	76,371	77,321	1,567	78,888	3,520	82,408	28,690	30,374
7	876	Ind / Com Meters, Reg	53,818	53,967	65,404	67,015	74,823	82,052	5,732	87,784	4,428	92,212	33,497	35,464
8	877	Meas & Reg- City gate	54,341	36,856	45,852	59,375	54,772	43,642	(948)	42,694	1,643	44,337	6,162	6,524
9	878	Meters & House Reg	132,975	139,433	144,074	176,107	147,886	135,380	25,938	161,318	9,659	170,977	63,569	68,175
10	879	Cust installations	131,224	106,627	114,336	138,402	143,494	127,575	48,561	176,136	9,142	185,278	70,416	74,901
11	880	Other operating exp	2,555	3,642	3,893	3,958	4,416	4,393	(137)	4,256	85	4,341	0	0
12	881	Rents	2,626	1,045	1,871	3,180	3,917	4,773	1,050	5,823	1,281	7,104	0	0
13		<i>Total Operation</i>	920,691	935,343	1,064,792	1,148,987	1,074,347	1,055,842	133,526	1,189,368	124,317	1,313,685	406,670	458,593
14														
15	885	Supep and eng	30,192	25,260	25,312	25,152	26,483	29,829	3,525	33,354	1,503	34,857	13,539	14,301
16	886	Structures & improve	26,214	26,268	37,189	64,471	46,330	21,942	3,648	25,590	1,070	26,660	9,576	10,101
17	887	Mains	86,503	89,888	56,809	69,915	76,018	85,519	1,036	86,555	3,526	90,081	27,736	29,365
18	889	Meas & Reg- Gen	22,205	34,174	27,158	28,849	64,814	114,865	(8,615)	106,250	4,606	110,856	36,655	38,807
19	890	Meas & Reg- Ind	24,466	18,825	17,371	29,058	48,581	11,400	39,780	51,180	2,110	53,290	16,040	16,982
20	891	Meas & Reg- City gate	8,130	6,827	11,207	8,438	14,376	15,270	(28)	15,242	676	15,918	5,464	5,785
21	892	Services	51,809	79,354	53,701	48,114	29,992	59,534	(2,377)	57,157	2,605	59,762	18,314	19,579
22	893	Meters & House Reg	104,484	65,985	56,282	60,147	122,720	62,779	18,599	81,378	4,740	86,118	26,829	28,936
23		<i>Total Maintenance</i>	354,003	346,581	285,029	334,144	429,314	401,137	55,569	456,706	20,836	477,542	154,153	163,856
24		<i>Total Distribution</i>	1,274,694	1,281,924	1,349,821	1,483,131	1,503,661	1,456,979	189,095	1,646,074	145,153	1,791,227	560,823	622,449

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**Valley Energy Company (PA)**  
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**Answer to 52 Pa. Code 53.52 c[1] - Support Sheet No. 1**  
**Support Sheet No. 1- Operating Expense and Going-Level Adjustments**

Line	Acct	Account Description	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020	Historic Year December 31, 2021	Adjust HTY to FTY	Future Test Year December 31, 2022	Adjust FTY to FPFTY	Fully Projected Future Test Year December 31, 2023	LABOR	LABOR
													Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023
25														
26		<u>Customer Accounting &amp; Collection Expenses:</u>												
27	902	Meter Reading Exp	84,694	105,993	84,847	73,254	40,927	42,948	(14,751)	28,197	1,240	29,437	10,008	10,595
28	903	Cust Rec & Coll Exp	432,803	448,576	467,964	484,462	469,847	544,861	54,035	598,896	17,319	616,215	178,585	186,180
29	904	Uncollect Acct (Dist)	20,749	39,383	54,012	35,221	69,691	(19,622)	54,622	35,000	0	35,000	0	0
30	905	Miscellaneous cust	4,132	15,190	28,364	21,602	22,690	22,877	633	23,510	470	23,980	0	0
31	909	Info & Inst Advert	2,527	1,240	1,276	9,908	9,439	7,633	1,360	8,993	180	9,173	0	0
32	913	Advertising	6,986	4,143	3,828	6,641	2,243	4,409	(255)	4,154	83	4,237	0	0
33		<i>Total Cust Acct &amp; Coll</i>	551,891	614,525	640,291	631,088	614,837	603,108	95,642	698,750	19,292	718,042	188,593	196,775
34														
35		<u>Administrative &amp; General Expenses:</u>												
36	920	A&G Salaries	443,785	522,229	442,616	486,687	494,299	557,944	55,238	613,182	15,036	628,218	248,780	257,617
37	921	Office Supp & Exp	27,756	37,612	52,025	56,086	30,312	44,898	22,066	66,964	13,410	80,374	0	0
38	923	Outside Services	69,145	77,054	115,613	140,566	69,740	59,326	8,347	67,673	3,053	70,726	0	0
39	924	Property Insurance	10,930	11,156	11,456	12,350	14,721	16,358	1,990	18,348	2,759	21,107	0	0
40	925	Injuries and damage	60,294	56,695	55,616	79,058	89,148	87,139	2,452	89,591	4,444	94,035	0	0
41	926	Empl Pens & Bene	834	2,916	2,150	9,087	8,015	11,387	231	11,618	232	11,850	0	0
42	928	Reg Comm Exp	41,372	38,446	35,992	33,470	148,136	122,392	797	123,189	(123,189)	0	0	0
43	930	General advertising	49,049	52,295	73,436	70,951	111,016	67,795	8,886	76,681	2,500	79,181	0	0
44	930CV	COVID-related	0	0	0	0	0	25,620	(25,620)	0	0	0	0	0
45	932	Maint Gen plant	10,638	19,479	22,214	32,946	41,292	38,473	(17,227)	21,246	(218)	21,028	13,735	14,540
46		<i>Total A&amp;G</i>	713,803	817,882	811,118	921,201	1,006,679	1,031,332	57,160	1,088,492	(81,973)	1,006,519	262,515	272,157
47														
48		<b>Total Oper &amp; Maint</b>	<b>2,540,388</b>	<b>2,714,331</b>	<b>2,801,230</b>	<b>3,035,420</b>	<b>3,125,177</b>	<b>3,091,419</b>	<b>341,897</b>	<b>3,433,316</b>	<b>82,472</b>	<b>3,515,788</b>	<b>1,011,931</b>	<b>1,091,381</b>
49														
50		Labor	790,833	827,348	859,534	921,836	994,791	921,705	90,226	1,011,931	79,450	1,091,381		
51		Transportation	114,959	143,350	150,543	176,859	139,265	127,971	24,122	152,093	11,940	164,033		
52		Material	237,057	258,927	247,422	275,112	240,749	212,869	64,957	277,826	7,317	285,143		
53		OH	969,471	1,018,242	1,005,589	1,075,311	1,054,579	1,186,815	124,087	1,310,902	73,862	1,384,764		
54		Other	428,068	466,464	538,142	586,302	695,793	642,059	38,505	680,564	(90,097)	590,467		
55			2,540,388	2,714,331	2,801,230	3,035,420	3,125,177	3,091,419	341,897	3,433,316	82,472	3,515,788		

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**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

**Support Sheet No. 2- Summary of Cost of Capital and Fair Rate of Return Based upon a  
Hypothetical Ratemaking Capital Structure  
12/31/2023**

<u>Line</u>	<u>Type of Capital</u>	<u>Ratios (1)</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
1	Long-Term Debt	50.47%	4.49%	2.27%
2	Common Equity	49.53%	11.50%	5.70%
3	Total	<u>100.00%</u>		<u>7.97%</u>
4	TargetROR			<u>7.9700%</u>

5

6 [1] Recommended hypothetical capital structure ratios as discussed in direct testimony.

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**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 3- Taxes Other Than Income**

Line	Description	Historic Year December 31, 2021		Future Test Year December 31, 2022	PRESENT RATES Fully Projected Future Test Year December 31, 2023	PROPOSED RATES Fully Projected Future Test Year December 31, 2023
		Per Books	Distribution Only	Distribution Only	Distribution Only	Distribution Only
1	<u>Taxes other than income:</u>					
2	Pennsylvania Use Tax					
3	Public Utility Realty Tax	28,876	28,876	30,324	31,497	31,497
4	Pennsylvania PUC assessment	2,672	2,672	2,672	2,672	2,672
5		<u>\$31,548</u>	<u>\$31,548</u>	<u>\$32,996</u>	<u>\$34,169</u>	<u>\$34,169</u>
6						
7	Plant assets		37,148,890	39,011,655	40,520,766	40,520,766
8	Tax rate		0.07773%			
9						
10	<b>Rate case expense amortization</b>					
11	Estimated expenses				\$334,500	
12	Amortization period (years)				<u>3</u>	
13					\$111,500	
14	Recovery of COVID extraordinary costs		Schedule C1-7		<u>10,859</u>	
15	Annual amortization expense				<u>\$122,359</u>	<u>\$122,359</u>

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 4- Income Tax Calculations**

Line	Description	Historic Year December 31, 2021		Future Test Year December 31, 2022	PRESENT RATES Fully Projected Future Test Year December 31, 2023	FULL REVENUE REQUIREMENT Fully Projected Future Test Year December 31, 2023	PROPOSED RATES Fully Projected Future Test Year December 31, 2023	
		Per Books	Distribution Only	Distribution Only	Distribution Only	Distribution Only	Distribution Only	
1	Net Operating Income Excluding Income Taxes	\$614,333	\$1,058,983	\$1,045,975	\$670,432	\$1,912,173	\$1,663,357	
2								
3	<u>Non-Operating Expenses:</u>							
4	Synchronized interest expense:							
5	Rate base	18,947,540	18,947,540	19,778,058	19,777,349	19,777,349	19,777,349	
6	Less: CWIP	(18,028)	(18,028)	(18,028)	(18,028)	(18,028)	(18,028)	
7	Rate base for interest computation	18,929,512	18,929,512	19,760,030	19,759,321	19,759,321	19,759,321	
8	Weighted Cost of debt	2.270%	2.270%	2.270%	2.270%	2.270%	2.270%	
9	Synchronized interest expense	429,700	429,700	448,553	448,537	448,537	448,537	
10	Taxable income before depreciation tax adjustments	184,633	629,283	597,423	221,895	1,463,636	1,214,820	
11								
12	<u>Pennsylvania depreciation adjustment:</u>							
13	Tax depreciation (using DDB method)	(1,643,478)	(1,643,478)	(1,484,706)	(1,887,016)	(1,887,016)	(1,887,016)	
14	Book depreciation	1,063,704	1,063,704	937,616	1,178,428	1,178,428	1,178,428	
15	Pennsylvania depreciation adjustment	(579,774)	(579,774)	(547,090)	(708,588)	(708,588)	(708,588)	
16	Pennsylvania taxable income	(395,141)	483,931	390,526	(486,693)	755,048	506,232	
17	Regulatory Pennsylvania income tax expense	9.99%	(39,475)	48,345	39,014	(48,621)	75,429	50,573
18								
19	<u>Federal depreciation adjustment:</u>							
20	Tax depreciation (using SL method)	(2,895,636)	(2,895,636)	(2,561,639)	(1,282,651)	(1,282,651)	(1,282,651)	
21	Book depreciation	1,063,704	1,063,704	937,616	1,178,428	1,178,428	1,178,428	
22	Federal depreciation adjustment	(1,831,932)	(1,831,932)	(1,624,023)	(104,223)	(104,223)	(104,223)	
23								
24	Taxable income before depreciation tax adjustments	184,633	629,283	597,423	221,895	1,463,636	1,214,820	
25	Federal depreciation adjustment	(1,831,932)	(1,831,932)	(1,624,023)	(104,223)	(104,223)	(104,223)	
26	Pennsylvania income tax expense	39,475	(48,345)	(39,014)	48,621	(75,429)	(50,573)	
27	Federal taxable income	(1,607,824)	(1,250,994)	(1,065,614)	166,293	1,283,984	1,060,025	
28	Regulatory Federal income tax expense	21.00%	(337,643)	(262,709)	(223,779)	34,921	269,637	222,605
29	EDIT Accretion	(9,148)	(9,148)	(9,148)	(9,148)	(9,148)	(9,148)	
30	Regulatory Total income tax expense		(\$386,265)	(\$223,512)	(\$193,913)	(\$22,847)	\$335,918	\$264,030
31								
32	<u>Deferred Federal Income Tax expense (included in above):</u>							
33	Tax depreciation (using SL method)	2,895,636	2,895,636	2,561,639	1,282,651	1,282,651	1,282,651	
34	Tax depreciation (using DDB method)	1,643,478	1,643,478	1,484,706	1,887,016	1,887,016	1,887,016	
35		(1,252,158)	(1,252,158)	(1,076,953)	604,365	604,365	604,365	
36	Federal tax rate	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	
37	Deferred Federal income tax (credit)		(\$262,953)	(\$262,953)	(\$226,156)	\$126,917	\$126,917	
38	<b>Combined statutory tax rate</b>		<b>28.89%</b>					





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**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 6- Computation of Rate Base**

Line	Description	Source	12/31/2017	Historic Year December 31, 2021	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023
1	<u>Utility Plant in Service</u>					
2	Assets	Schedule C3		\$ 37,148,890	\$ 39,011,655	\$ 40,520,766
3	Less: Accumulated Depreciation	Schedule C3		(17,226,992)	(18,302,157)	(19,618,136)
4				19,921,899	20,709,498	20,902,631
5	Construction work in progress	Schedule C2		18,028	18,028	18,028
6	Less: Accumulated deferred income taxes	Line 33		(251,718)	(253,856)	(467,154)
7	Less: Excess deferred income taxes (EDIT)	Line 40		(82,329)	(73,182)	(64,034)
8	Less: Customer deposits	Schedule C2		(410,578)	(410,578)	(410,578)
9	Natural gas inventories- avg balance for year	Workpaper 5 to Sch C		1,413,315	1,413,315	1,413,315
10	Unbundled, to be Recovered in GCR	To Schedule C4		(1,413,315)	(1,413,315)	(1,413,315)
11	Accrued OPEB Liability / OPEB asset, net	Line 47		(834,426)	(834,426)	(834,426)
12	Materials & Supplies	Schedule C2		197,784	197,784	197,784
13				18,558,660	19,353,268	19,342,250
14	Cash Working Capital Allowance	Line 26		388,880	424,790	435,099
15	RATE BASE			\$ 18,947,540	\$ 19,778,058	\$ 19,777,349
16						

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**Valley Energy Company (PA)**  
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**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 6- Computation of Rate Base**

Line	Description	Source	12/31/2017	Historic Year December 31, 2021	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023
17	<u>Cash Working Capital Allowance:</u>					
18	Operating Expenses	Schedule C1		\$ 7,837,479	\$ 4,403,928	\$ 4,850,744
19						
20	Deductions:					
21	Purchased Gas	Schedule C1		3,650,808	0	0
22	Depreciation Expense, Uncollectible, TOTI	Schedule C1		1,075,631	1,005,612	1,369,956
23	Total Deductions			<u>4,726,439</u>	<u>1,005,612</u>	<u>1,369,956</u>
24	Cash Operating Expenses			3,111,041	3,398,316	3,480,788
25	Cash Operating Expenses Ratio			1/8	1/8	1/8
26	Cash Working Capital Allowance			<u>\$ 388,880</u>	<u>\$ 424,790</u>	<u>\$ 435,099</u>
27						
28	<u>Regulatory Accumulated deferred income tax:</u>					
29	Accumulated depreciation based on tax expense borne by ratepayers			32,740,763	35,277,257	36,492,535
30	Accumulated depreciation based on taxes paid by company			33,939,419	36,486,095	38,717,080
31	(Excess) depreciation taken by company			(1,198,656)	(1,208,838)	(2,224,545)
32	Federal tax rate			21.00%	21.00%	21.00%
33	Regulatory Accumulated deferred income tax (liability)			<u>\$ (251,718)</u>	<u>\$ (253,856)</u>	<u>\$ (467,154)</u>
34						
35	<u>Excess deferred income tax:(EDIT)</u>					
36	Accumulated depreciation based on tax expense borne by ratepayers		23,781,445	Use actual for 2020		
37	Accumulated depreciation based on taxes paid by company		24,485,114	Use actual for 2020		
38	(Excess) depreciation taken by company		<u>(703,669)</u>			
39	Change in Federal tax rate		<u>13.00%</u>			
40	Excess deferred income tax:(EDIT)		<u>(91,477)</u>	(82,329)	(73,182)	(64,034)
41	Annual Amortization	10		(9,148)	(9,148)	(9,148)
42						
43	<u>Accrued OPEB Liability / OPEB asset, net</u>					
44	Accrued postretirement cost			(674,095)	(674,095)	(674,095)
45	Regulatory asset- OPEB			(354,467)	(354,467)	(354,467)
46	Deferred tax asset related to OPEB			194,137	194,137	194,137
47				<u>(834,426)</u>	<u>(834,426)</u>	<u>(834,426)</u>
48						
49	OPEB Expense (for future rate cases)			17,964	21,825	22,480

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

**Extraordinary Coronavirus Pandemic Costs**

Line	Description	Amount		
1	Carrying charge on Excess AR, 2021	7.231%	4,094	
2	Carrying charge on Excess AR, 2022	7.231%	4,390	
3	Extraordinary costs		18,075	
4	Carrying charge on costs		1,441	
5	Total Costs to 12/31/2022		27,999	
6	Carrying rate and Recovery period, years	7.970%	3.0	
7	<b>Annual amount</b>	To Schedule C1-3	<b>10,859</b>	
9	<b>AR Balances</b>	2022	2020-2021	2019
10	January	427,437	473,053	
11	February		634,171	
12	March		630,723	
13	April		549,524	
14	May		533,738	
15	June		367,012	
16	July		246,396	
17	August		207,367	
18	September		176,208	
19	October		159,553	
20	November		233,317	
21	December		488,388	
22	January		674,954	380,762
23	February		957,443	748,983
24	March		667,328	646,726
25	April		561,512	570,343
26	May		509,913	402,955
27	June		313,304	271,372
28	July		174,802	119,234
29	August		140,215	73,396
30	September		10,311	12,290
31	October		(47,919)	(34,584)
32	November		38,064	158,052
33	December		306,522	346,811
34	Next January		427,437	473,053
35	Average		377,333	320,723
36	<b>Excess AR</b>		<b>56,611</b>	
38	<b>Extraordinary Costs</b>	Total	2021	2020
39	Materials and Other	18,075	2,979	15,097
40		18,075	2,979	15,097

C1-8

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023**

**Comparison to Prior Rate Case  
Prior Rate Case and Fully Projected Future Test Year December 31, 2023**

Line	Description	Fully Projected Future Test Year December 31, 2023	R-2019-3008209, Order	Difference- Needs Higher (Lower) Revenue
1	Revenue	5,521,175	5,528,407	7,232
2	<i>ccf</i>	35,049,281	26,569,046	
3				
4				
5	O&M	3,515,788	2,995,053	520,735
6	Taxes other than income, Rate Case	156,528	124,629	31,899
7	Depreciation	1,178,428	970,394	208,034
8	Income tax	335,918	191,302	144,616
9				
10	Rate Base	\$19,777,349	\$17,159,915	
11	Required Return	7.97%	7.27%	
12	Target Return	1,576,255	1,247,526	328,729
13				1,241,244
14	Uncollectibles	0.675%		8,380
15				
16	Rounding			501
17	Revenue Increase Required at Recommended Return			1,250,125
18	Per Schedule C1			1,250,125
19				

C2

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

**Balance Sheets**

**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**

**Answer to 52 Pa. Code 53.52 c[2]**

Line	Account Title	Per Books 12/31/2021	Pro Forma 12/31/2022	Pro Forma 12/31/2023
1	<b>Assets and Other Debits</b>			
2	<u>Utility Plant</u>			
12	Gas plant in service for ratemaking	\$37,148,890	\$39,011,655	\$40,520,766
13	Adjustments, net	2,803,614	668,128	551,492
14	Construction work in progress	18,028	18,028	18,028
15	Accumulated depreciation for ratemaking	(17,226,992)	(18,302,157)	(19,618,136)
16	<i>Total utility plant</i>	22,743,541	21,395,654	21,472,150
17				
18	<u>Other Property and Investments:</u>			
19	RS Plan Prepayment	94,000	94,000	94,000
20	Regulatory asset	120,444	120,444	120,444
21	<i>Total other property and investments</i>	214,444	214,444	214,444
22				
23	<u>Current Assets:</u>			
24	Cash	1,052,864	1,052,864	1,052,864
25	Customer accounts receivable	1,749,225	1,749,225	1,749,225
26	Unrecovered Gas costs	469,803		
27	Advances to affiliates	886,606	886,606	886,606
28	Natural gas inventories	1,104,108	1,104,108	1,104,108
29	Materials and supplies	197,784	197,784	197,784
30	Prepayments	417,458	417,458	417,458
31	<i>Total current assets</i>	5,877,848	5,408,045	5,408,045
32				
33	<b>Total Assets and Other Debits</b>	<b>\$28,835,833</b>	<b>\$27,018,143</b>	<b>\$27,094,639</b>
34				

C2

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

**Balance Sheets**

**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**

**Answer to 52 Pa. Code 53.52 c[2]**

Line	Account Title	Per Books 12/31/2021	Pro Forma 12/31/2022	Pro Forma 12/31/2023
35	<b>Liabilities and Other Credits</b>			
36	<u>Proprietary Capital:</u>			
37	Common stock Issued	\$768,293	\$768,293	\$768,293
38	Retained earnings	12,117,554	13,357,442	14,050,721
39	<i>Total proprietary capital</i>	<u>12,885,847</u>	<u>14,125,735</u>	<u>14,819,014</u>
40				
41	<u>Long-Term Debt:</u>			
42	Long Term Debt incl Cap Leases	6,426,643	5,572,106	4,717,569
43	<i>Total long-term debt</i>	<u>6,426,643</u>	<u>5,572,106</u>	<u>4,717,569</u>
44				
45	<u>Current and Accrued Liabilities:</u>			
46	Cash (over) under	2,500,000	296,960	534,715
47	Current maturities of Long Term Debt	854,537	854,537	854,537
48	Accounts payable and accruals	659,118	659,118	659,118
49	Due for purchased gas	1,067,022	1,067,022	1,067,022
50	Customer deposits	410,578	410,578	410,578
51	Over collected gas costs		0	0
52	<i>Total current and accrued liabilities</i>	<u>5,491,255</u>	<u>3,288,215</u>	<u>3,525,970</u>
53				
54	<u>Deferred Credits and Other Liabilities:</u>			
55	Deferred taxes	2,838,100	2,838,100	2,838,100
56	Accrued postretirement cost	759,431	759,431	759,431
57	Regulatory liability	434,556	434,556	434,556
58	<i>Total deferred credits</i>	<u>4,032,087</u>	<u>4,032,087</u>	<u>4,032,087</u>
59				
60	<b>Total Liabilities and Other Credits</b>	<b><u><u>\$28,835,832</u></u></b>	<b><u><u>\$27,018,143</u></u></b>	<b><u><u>\$27,094,639</u></u></b>









C3 Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 20  
Original Cost of Utility Plant in Service  
Years Ended 12/31/2021, 12/31/2022 and 12/31/202.  
Answer to 52 Pa. Code 53.52 c[3]

Line	Acct No.	Account Title	Accumulated Depreciation			Accumulated Depreciation				
			12/31/2017	Year 2018	12/31/2018	Year 2019	12/31/2019			
			Depr. Rate	Per Books	Depr Exp	Removal	Per Books	Depr Exp	Removals	Balance
1		<i>Distribution Plant.</i>								
2	114	Gas Plant Acquisition Adjustment	3.47%	2,109,977	116,637		2,226,614	116,637		2,343,250
3	366	Trans. Structures and improvements	0.62%	3,909	379		4,288	405		4,692
4	367	Trans. Mains	1.79%	988,738	34,746		1,023,484	34,746		1,058,231
5	369	Trans. Meas / Reg Sta Equip	4.40%	543,234	131,026		674,260	132,600		806,860
6	369A	Customer	4.40%		0		0	0		0
7	375	Structures and improvements	2.63%	74,264	2,352		76,616	3,835		80,451
8	376S	Mains- Steel	3.15%	2,016,306	101,686	(8,144)	2,109,848	110,333	(18,783)	2,201,398
9	376P	Mains- Plastic	2.02%	2,687,923	161,351	(14,077)	2,835,197	167,246	(27,745)	2,974,698
10	378	Meas / Reg Sta Equip	6.72%	755,259	55,696	(961)	809,994	60,379	(7,590)	862,783
11	380S	Services- Steel	3.04%	177,536	16,255	(10,878)	182,913	16,546	(10,798)	188,662
12	380P	Services- Plastic	3.41%	2,686,143	253,255	(30,048)	2,909,350	263,020	(52,653)	3,119,718
13	381	Meters	2.74%	756,603	45,487		802,090	46,747		848,838
14	381AMR	Transponders- Old	2.74%	119,388	24,054		143,442	29,116		172,558
15	381T	Transponders- New	2.74%		0		0	0		0
16	381AMR	Meters-AMR	2.74%		0		0	1,739		1,739
17		Meters-Protection	2.74%		0		0	0		0
18	383	House regulators	3.22%	188,884	9,702		198,586	9,923		208,509
19	385	Indu Meas / Reg Sta Equip	4.11%	605,058	36,064		641,122	37,477		678,599
20	387	Other equipment	3.66%	5,103	365		5,468	365		5,833
21		Total Distribution Plant		13,718,325	989,055	(64,108)	14,643,272	1,031,115	(117,569)	15,556,819
22		<i>General Plant</i>								
23										
24	390	Structures & Improvements	2.43%	531,688	28,361		560,049	34,518		594,567
25		Warehouse Furniture			0		0	0		0
26	391	Office Furniture & Equipment	6.75%	73,244	6,200		79,444	15,630	17,132	112,206
27	391C	Computer equipment	6.75%	427,454	35,245		462,699	35,245		497,944
28	392	Transportation Equipment	12.00%	500,757	106,486		607,243	115,729		722,972
29	393	Stores Equipment	6.67%	10,348	1,995		12,343	1,995		14,338
30	394	Tools, Shop & Garage Equipment	5.00%	564,984	24,179	137	589,300	26,222	10,634	626,156
31	396	Power Operated / Communication	6.67%	91,574	14,000		105,574	17,810	(64,266)	59,118
32		Fully Depreciated			0		0	0		0
33	398	Miscellaneous Equipment	0.00%	(9,781)	0		(9,781)	0		(9,781)
34	301	Intangible plant, organization	0.00%		0		0	0		0
35	304	MGP , Tx-Dx-Gen ROW	0.00%		0		0	0		0
36		Total General Plant		2,190,268	216,465	137	2,406,870	247,149	(36,500)	2,617,519
37										
38		Less: Acquisition, CIAC		(2,109,977)	(116,637)	0	(2,226,614)	(116,637)	0	(2,343,250)
39		Total Plant in Service		\$13,798,616	\$1,088,884	(\$63,971)	\$14,823,529	\$1,161,627	(\$154,069)	\$15,831,087
40		Less: Clearing, Charged to NY			(117,664)			(148,573)		
41					\$971,220			\$1,013,055		

C3 Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 20  
Original Cost of Utility Plant in Service  
Years Ended 12/31/2021, 12/31/2022 and 12/31/202.  
Answer to 52 Pa. Code 53.52 c[3]

Line	Acct No.	Account Title	Accumulated Depreciation			Accumulated Depreciation				
			Year 2020	Year 2020	12/31/2020	Year 2021	Year 2021	12/31/2021		
			Depr Exp	Removals	Balance	Depr Exp	Removals	Balance		
1		<i>Distribution Plant.</i>								
2	114	Gas Plant Acquisition Adjustment	116,637		2,459,887	116,637		2,576,524		
3	366	Trans. Structures and improvements	431		5,124	630	(420)	5,334		
4	367	Trans. Mains	34,746		1,092,977	34,746	(2,443)	1,125,280		
5	369	Trans. Meas / Reg Sta Equip	132,682		939,542	13,077	(738,751)	213,868		
6	369A	Customer	0		0	0	741,614	741,614		
7	375	Structures and improvements	5,297		85,749	5,297		91,046		
8	376S	Mains- Steel	118,861	(12,625)	2,307,634	118,679	(7,751)	2,418,562		
9	376P	Mains- Plastic	180,255	(80,967)	3,073,985	197,401	(59,769)	3,211,618		
10	378	Meas / Reg Sta Equip	69,362	(13,650)	918,495	75,272	(14,106)	979,661		
11	380S	Services- Steel	16,727	(14,930)	190,458	16,685	(10,419)	196,725		
12	380P	Services- Plastic	271,164	(64,662)	3,326,220	282,900	(42,457)	3,566,662		
13	381	Meters	48,637		897,474	49,977		947,451		
14	381AMR	Transponders- Old	29,116		201,674	27,680		229,355		
15	381T	Transponders- New	0		0	0		0		
16	381AMR	Meters-AMR	5,235		6,974	7,085		14,059		
17		Meters-Protection	0		0	245		245		
18	383	House regulators	10,195		218,704	10,326		229,029		
19	385	Indu Meas / Reg Sta Equip	38,125		716,723	38,066		754,790		
20	387	Other equipment	365		6,199	365		6,564		
21		Total Distribution Plant	1,077,835	(186,834)	16,447,820	995,068	(134,502)	17,308,386		
22										
23		<i>General Plant</i>								
24	390	Structures & Improvements	38,350		632,917	47,731		680,648		
25		Warehouse Furniture	0		0	0		0		
26	391	Office Furniture & Equipment	33,402		145,607	48,166		193,773		
27	391C	Computer equipment	35,245	(11,039)	522,150	36,213		558,363		
28	392	Transportation Equipment	125,344		848,316	133,974	(114,818)	867,472		
29	393	Stores Equipment	1,995		16,332	2,086		18,418		
30	394	Tools, Shop & Garage Equipment	29,369	1,481	657,006	30,709		687,714		
31	396	Power Operated / Communication	21,537	7,239	87,894	23,946		111,840		
32		Fully Depreciated	0	11,039	11,039	0	117,258	128,297		
33	398	Miscellaneous Equipment	0		(9,781)	0		(9,781)		
34	301	Intangible plant, organization	0		0	0		0		
35	304	MGP , Tx-Dx-Gen ROW	0		0	0		0		
36		Total General Plant	285,242	8,720	2,911,481	322,824	2,440	3,236,744		
37										
38		Less: Acquisition, CIAC	(116,637)	0	(2,459,887)	(116,637)	(741,614)	(3,318,138)		
39		Total Plant in Service	\$1,246,440	(\$178,114)	\$16,899,413	\$1,201,254	(\$873,676)	\$17,226,992		
40		Less: Clearing, Charged to NY	(142,769)			(137,550)				
41			\$1,103,671			\$1,063,704				

C3 Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 20  
Original Cost of Utility Plant in Service  
Years Ended 12/31/2021, 12/31/2022 and 12/31/202.  
Answer to 52 Pa. Code 53.52 c[3]

Line	Acct No.	Account Title	Accumulated Depreciation			Accumulated Depreciation			
			Year 2022	Year 2022	12/31/2022	Year 2023	Year 2023	12/31/2023	
			Depr Exp	Removals	Balance	Depr Exp	Removals	Balance	
1		<i>Distribution Plant.</i>							
2	114	Gas Plant Acquisition Adjustment	116,637		2,693,161	116,637			2,809,797
3	366	Trans. Structures and improvements	1,178		6,512	1,639			8,151
4	367	Trans. Mains	34,350		1,159,630	34,350			1,193,979
5	369	Trans. Meas / Reg Sta Equip	14,138		228,006	15,199			243,205
6	369A	Customer	121,460		863,074	121,460			984,535
7	375	Structures and improvements	5,297		96,343	5,297			101,640
8	376S	Mains- Steel	118,604		2,537,166	119,197			2,656,363
9	376P	Mains- Plastic	207,194		3,418,811	211,145			3,629,956
10	378	Meas / Reg Sta Equip	82,352		1,062,013	101,894			1,163,907
11	380S	Services- Steel	16,724		213,449	16,835			230,284
12	380P	Services- Plastic	297,247		3,863,910	312,719			4,176,628
13	381	Meters	50,802		998,253	51,895			1,050,148
14	381AMR	Transponders- Old	27,680		257,035	27,680			284,715
15	381T	Transponders- New	217		217	433			650
16	381AMR	Meters-AMR	7,178		21,237	7,178			28,415
17		Meters-Protection	490		735	490			1,224
18	383	House regulators	10,413		239,442	10,529			249,971
19	385	Indu Meas / Reg Sta Equip	39,560		794,350	41,271			835,622
20	387	Other equipment	365		6,929	365			7,294
21		Total Distribution Plant	1,151,886		18,460,272	1,196,213			19,656,485
22									
23		<i>General Plant</i>							
24	390	Structures & Improvements	59,787		740,434	63,511			803,946
25		Warehouse Furniture	0		0	0			0
26	391	Office Furniture & Equipment	59,093		252,866	70,683			323,548
27	391C	Computer equipment	(117,258)		441,105	0			441,105
28	392	Transportation Equipment	142,706		1,010,178	161,486			1,171,663
29	393	Stores Equipment	2,176		20,594	2,176			22,771
30	394	Tools, Shop & Garage Equipment	(9,273)		678,441	35,310			713,751
31	396	Power Operated / Communication	24,146		135,986	24,696			160,683
32		Fully Depreciated	0		128,297	0			128,297
33	398	Miscellaneous Equipment	0		(9,781)	0			(9,781)
34	301	Intangible plant, organization	0		0	0			0
35	304	MGP , Tx-Dx-Gen ROW	0		0	0			0
36		Total General Plant	161,377		3,398,120	357,862			3,755,982
37									
38		Less: Acquisition, CIAC	(238,097)	0	(3,556,235)	(238,097)	0		(3,794,332)
39		Total Plant in Service	\$1,075,166		\$18,302,157	\$1,315,978			\$19,618,136
40		Less: Clearing, Charged to NY	(\$137,550)			(\$137,550)			
41			\$937,616			\$1,178,428			

WP

Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023  
INDEX TO WORKPAPERS

<u>Line</u>	<u>SCHEDULE</u>	<u>DESCRIPTION</u>	<u>PERIOD</u>
1	Index To Workpapers		
2	<a href="#">Workpaper 1 to Schedule B</a>	Monthly Billing Units, Rates And Revenue	Historic Year December 31, 2021- Present Rates
3	<a href="#">Workpaper 1 to Schedule C</a>	Historic O&M	Years 2016 through 2020
4	<a href="#">Workpaper 2 to Schedule C</a>	Historic O&M	Historic Year December 31, 2021
5	<a href="#">Workpaper 3 to Schedule C</a>	Future O&M	Years 2022 and 2023
6	<a href="#">Workpaper 4 to Schedule C</a>	Accumulated Deferred Income Taxes	Years 2017 through 2023
7	<a href="#">Workpaper 5 to Schedule C</a>	Gas Inventory Balances	Years 2014 through 2023
8			

WP1\_E Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023  
 Workpaper 1 to Schedule B  
 Monthly Billing Units, Rates And Revenue  
 Historic Year December 31, 2021- Present Rates

Line		Rate R- Residential	Rate C- Commercial	Rate IS- Interruptible Service	Rate SI- Small Industrial	Rate ST- Transport Firm	Transport Firm- Contract	Transport. Firm- DDQ	Transport. Interruptible	
1	<b>BILLING UNITS</b>									
2	<b>ccf Sales Historic Year December 31, 2021</b>									
3	Jan-21	983,277	429,608	1,050	12,763	208,545	1,692,860	150,853	692,348	4,171,304
4	Feb-21	1,082,674	477,587	0	14,318	247,804	1,621,060	169,360	625,335	4,238,138
5	Mar-21	947,368	409,380	0	13,920	231,387	1,496,660	147,646	604,098	3,850,459
6	Apr-21	624,295	259,293	10,190	8,963	250,553	1,279,530	104,361	487,616	3,024,801
7	May-21	397,048	167,502	37,550	4,909	250,663	1,309,870	70,410	540,872	2,778,824
8	Jun-21	187,084	77,602	121,430	1,992	217,275	1,121,640	35,594	480,983	2,243,600
9	Jul-21	83,812	52,161	72,860	648	176,885	915,810	24,140	435,018	1,761,334
10	Aug-21	74,323	53,384	109,130	793	198,219	1,182,120	24,459	380,323	2,022,751
11	Sep-21	71,162	48,547	117,500	622	165,241	1,146,870	23,193	392,642	1,965,777
12	Oct-21	95,094	58,228	80,730	1,105	203,848	1,245,050	28,386	510,320	2,222,761
13	Nov-21	304,311	142,063	84,930	2,967	229,451	1,417,270	59,865	577,345	2,818,202
14	Dec-21	747,600	320,251	64,840	9,875	186,901	1,406,910	108,928	549,277	3,394,582
15		<u>5,598,048</u>	<u>2,495,606</u>	<u>700,210</u>	<u>72,875</u>	<u>2,566,772</u>	<u>15,835,650</u>	<u>947,195</u>	<u>6,276,177</u>	<u>34,492,533</u>
16	<i>Check to Forecast file</i>	<i>5,598,048</i>	<i>2,495,606</i>	<i>700,210</i>	<i>72,875</i>	<i>18,402,422</i>		<i>947,195</i>	<i>6,276,177</i>	<i>34,492,533</i>
17	<b>Customers Historic Year December 31, 2021</b>									
18	Jan-21	6,337	834	3	4	12	2	57	4	7,253
19	Feb-21	6,344	832	3	4	12	2	58	4	7,259
20	Mar-21	6,342	834	3	4	12	2	58	4	7,259
21	Apr-21	6,304	830	3	4	12	2	57	4	7,216
22	May-21	6,268	825	3	4	12	2	57	4	7,175
23	Jun-21	6,247	825	3	4	12	2	56	4	7,153
24	Jul-21	6,238	825	3	4	12	2	56	4	7,144
25	Aug-21	6,234	825	3	4	12	2	55	4	7,139
26	Sep-21	6,263	824	3	4	12	2	55	4	7,167
27	Oct-21	6,324	832	3	4	12	2	56	4	7,237
28	Nov-21	6,384	843	3	4	12	2	56	4	7,308
29	Dec-21	6,397	846	3	4	12	2	56	4	7,324
30	Annual Bills	<u>75,682</u>	<u>9,975</u>	<u>36</u>	<u>48</u>	<u>144</u>	<u>24</u>	<u>677</u>	<u>48</u>	<u>86,634</u>
31	Average Monthly Bills	<u>6,307</u>	<u>831</u>	<u>3</u>	<u>4</u>	<u>12</u>	<u>2</u>	<u>56</u>	<u>4</u>	<u>7,220</u>

WP1\_E Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023  
 Workpaper 1 to Schedule B  
 Monthly Billing Units, Rates And Revenue  
 Historic Year December 31, 2021- Present Rates

Line		Rate R- Residential	Rate C- Commercial	Rate IS- Interruptible Service	Rate SI- Small Industrial	Rate ST- Transport Firm	Transport Firm- Contract	Transport. Firm- DDQ	Transport. Interruptible		
32	<b>RATES AND CHARGES</b>										
33	<b>Tariff Rates</b>										
34	Customer Charge	Tariff	\$11.79	\$20.21	\$75.23	\$75.23	\$75.23	\$0.00	\$20.21	\$75.23	
35											
36	Commodity Block 1		\$0.28723	\$0.22553	\$0.071800	\$0.154400	\$0.154400	\$0.047000	\$0.225530	\$0.071800	12/20-11/21 -
37	Commodity Block 2						\$0.047500				12/21-11/22 -
38	Commodity Block 3						9.2%				
39	Commodity Block 4						Dec ccf %				
40											
41	Demand Block 1										
42	Demand Block 2										
43	GCR Jan-Oct	\$0.34856	\$0.34856	\$0.34856	\$0.34856	\$0.34856	\$38,000	Contract-1, 10/20-9/21, monthly			
44	GCR Nov-Dec	\$0.41748	\$0.41748	\$0.41748	\$0.41748	\$0.41748	\$39,629	Contract-1, 10/21-9/22, monthly			



WP1\_E Valley Energy Company (PA)  
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 Historic Year December 31, 2021- Present Rates

Line		Rate R- Residential	Rate C- Commercial	Rate IS- Interruptible Service	Rate SI- Small Industrial	Rate ST- Transport Firm	Transport Firm- Contract	Transport. Firm- DDQ	Transport. Interruptible	
45	<b>COMPUTATION OF REVENUE</b>									
46	<b>Customer Charge Revenue</b>									
47	Jan-21	\$74,713	\$16,855	\$226	\$301	\$903	\$38,000	\$1,152	\$301	\$132,451
48	Feb-21	74,796	16,815	226	301	903	38,000	1,172	301	132,513
49	Mar-21	74,772	16,855	226	301	903	38,000	1,172	301	132,530
50	Apr-21	74,324	16,774	226	301	903	38,000	1,152	301	131,981
51	May-21	73,900	16,673	226	301	903	38,000	1,152	301	131,455
52	Jun-21	73,652	16,673	226	301	903	38,000	1,132	301	131,187
53	Jul-21	73,546	16,673	226	301	903	38,000	1,132	301	131,081
54	Aug-21	73,499	16,673	226	301	903	38,000	1,112	301	131,014
55	Sep-21	73,841	16,653	226	301	903	38,000	1,112	301	131,336
56	Oct-21	74,560	16,815	226	301	903	39,629	1,132	301	133,866
57	Nov-21	75,267	17,037	226	301	903	39,629	1,132	301	134,795
58	Dec-21	75,421	17,098	226	301	903	39,629	1,132	301	135,009
59		<b>\$892,291</b>	<b>\$201,595</b>	<b>\$2,708</b>	<b>\$3,611</b>	<b>\$10,833</b>	<b>\$460,887</b>	<b>\$13,682</b>	<b>\$3,611</b>	<b>\$1,589,218</b>
60										
61	<b>Distribution ccf Revenue</b>									
62	Jan-21	\$282,427	\$96,889	\$75	\$1,971	\$32,199	\$37,796	\$34,022	\$49,711	\$535,090
63	Feb-21	\$310,976	\$107,710	\$0	\$2,211	\$38,261	\$35,108	\$38,196	\$44,899	577,361
64	Mar-21	\$272,113	\$92,327	\$0	\$2,149	\$35,726	\$33,470	\$33,299	\$43,374	512,458
65	Apr-21	\$179,316	\$58,478	\$732	\$1,384	\$38,685	\$28,171	\$23,537	\$35,011	365,314
66	May-21	\$114,044	\$37,777	\$2,696	\$758	\$38,702	\$25,398	\$15,880	\$38,835	274,090
67	Jun-21	\$53,736	\$17,502	\$8,719	\$308	\$33,547	\$23,267	\$8,028	\$34,535	179,640
68	Jul-21	\$24,073	\$11,764	\$5,231	\$100	\$27,311	\$14,926	\$5,444	\$31,234	120,084
69	Aug-21	\$21,348	\$12,040	\$7,836	\$122	\$30,605	\$25,925	\$5,516	\$27,307	130,699
70	Sep-21	\$20,440	\$10,949	\$8,437	\$96	\$25,513	\$25,011	\$5,231	\$28,192	123,867
71	Oct-21	\$27,314	\$13,132	\$5,796	\$171	\$31,474	\$26,908	\$6,402	\$36,641	147,838
72	Nov-21	\$87,407	\$32,039	\$6,098	\$458	\$35,427	\$29,667	\$13,501	\$41,453	246,052
73	Dec-21	\$214,733	\$72,226	\$4,656	\$1,525	\$28,858	\$31,425	\$24,567	\$39,438	417,427
74		<b>\$1,607,927</b>	<b>\$562,834</b>	<b>\$50,275</b>	<b>\$11,252</b>	<b>\$396,310</b>	<b>\$337,072</b>	<b>\$213,621</b>	<b>\$450,630</b>	<b>\$3,629,920</b>
75										

WP1\_E Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023  
 Workpaper 1 to Schedule B  
 Monthly Billing Units, Rates And Revenue  
 Historic Year December 31, 2021- Present Rates

Line		Rate R- Residential	Rate C- Commercial	Rate IS- Interruptible Service	Rate SI- Small Industrial	Rate ST- Transport Firm	Transport Firm- Contract	Transport. Firm- DDQ	Transport. Interruptible	
76		<b>GCR Revenue</b>								
77	Jan-21	\$342,731	\$149,744	\$366	\$4,449					\$497,290
78	Feb-21	377,377	166,468	0	4,991					548,835
79	Mar-21	330,215	142,693	0	4,852					477,760
80	Apr-21	217,604	90,379	3,552	3,124					314,659
81	May-21	138,395	58,384	13,088	1,711					211,579
82	Jun-21	65,210	27,049	42,326	694					135,279
83	Jul-21	29,214	18,181	25,396	226					73,017
84	Aug-21	25,906	18,608	38,038	276					82,828
85	Sep-21	24,804	16,922	40,956	217					82,898
86	Oct-21	33,146	20,296	28,139	385					81,966
87	Nov-21	127,044	59,308	35,457	1,239					223,047
88	Dec-21	312,108	133,698	27,069	4,123					476,998
89		<b>\$2,023,753</b>	<b>\$901,731</b>	<b>\$254,387</b>	<b>\$26,286</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,206,158</b>
90										
91		<b>Total Revenue</b>								
92	Jan-21	\$699,871	\$263,489	\$667	\$6,720	\$33,102	\$75,796	\$35,174	\$50,012	\$1,164,830
93	Feb-21	763,149	290,993	226	7,502	39,164	73,108	39,368	45,200	1,258,709
94	Mar-21	677,099	251,876	226	7,302	36,629	71,470	34,471	43,675	1,122,748
95	Apr-21	471,245	165,632	4,509	4,809	39,588	66,171	24,689	35,312	811,954
96	May-21	326,339	112,834	16,010	2,770	39,605	63,398	17,032	39,136	617,124
97	Jun-21	192,598	61,224	51,270	1,303	34,450	61,267	9,159	34,835	446,107
98	Jul-21	126,833	46,618	30,853	627	28,214	52,926	6,576	31,535	324,182
99	Aug-21	120,753	47,320	46,100	700	31,508	63,925	6,628	27,608	344,541
100	Sep-21	119,085	44,523	49,618	614	26,416	63,011	6,342	28,493	338,101
101	Oct-21	135,020	50,243	34,161	857	32,377	66,537	7,534	36,942	363,670
102	Nov-21	289,718	108,385	41,780	1,998	36,330	69,296	14,633	41,754	603,895
103	Dec-21	602,262	223,022	31,951	5,948	29,760	71,054	25,698	39,739	1,029,435
104		<b>\$4,523,971</b>	<b>\$1,666,160</b>	<b>\$307,371</b>	<b>\$41,149</b>	<b>\$407,143</b>	<b>\$797,959</b>	<b>\$227,303</b>	<b>\$454,241</b>	<b>\$8,425,296</b>

WP1_C Valley Energy Company (PA)			rAcct	rType	rHist16	rHist17	rHist18	rHist19	rHist20
Rate Case with Fully Projected Future Test Year 2023					-	-	-	-	-
Workpaper 1 to Schedule C									
Historic O&M									
Years 2016 through 2020									
Line:	Account	Description	Acct	Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual
1	6.	Distribution Expense - Operation							
2	842.1	FUEL (COMPANY USE)	842	Other	20,229	22,625	32,754	23,989	27,679
3	870.01	LABOR OPER SUPR & ENG	870	Labor	26,277	34,194	66,749	66,896	66,495
4	870.02	TRANSP OPER SUPR & ENG	870	Trans	4,504	3,557	4,925	3,921	1,991
5	870.03	C&T OH OPER SUPR & ENG	870	OH	6,030	7,744	14,918	13,425	13,053
6	870.05	VE OH OPER SUPR & ENG	870	OH	28,077	34,622	65,825	68,113	61,962
7	870.45	MAT & SUP OPER SUPR & ENG	870	Mat	319	-	5,626	57	-
8	871.45	DISTRIB LOAD DISPATCHING	871	Mat	5,017	5,744	-	5,838	9,756
9	874.01	LABOR MAINS & SERV EXP	874	Labor	138,332	144,802	153,323	147,918	123,297
10	874.02	TRANSP MAINS & SERVICE EXP	874	Trans	25,669	31,447	39,673	44,294	33,742
11	874.03	C&T OH MAINS & SERVICE EXP	874	OH	32,185	32,622	34,172	29,811	24,297
12	874.05	VE OH MAINS & SERVICE EXP	874	OH	145,753	151,824	153,558	149,617	113,241
13	874.11	EMER LABOR MAINS-SERVICE EXP.	874	Labor	189	-	-	-	-
14	874.13	C&T EMER OH MAINS-EXP	874	OH	40	-	-	-	-
15	874.15	EMERGENCY-OVHD	874	OH	182	-	-	-	-
16	874.45	MAT & SUP MAINS & SERV EXP	874	Mat	35,058	34,056	36,522	43,727	41,109
17	874.5	CALL CENTER EXPENSE	874	Labor	30,221	30,765	32,058	44,078	52,046
18	875.01	LABOR MEAS & REG STAT EXP	875	Labor	16,367	20,597	16,140	19,254	28,977
19	875.02	TRNSP MEAS & REG STAT EXP	875	Trans	7,322	10,932	8,845	9,337	9,220
20	875.03	C&T OH MEAS & REG STAT EXP	875	OH	3,793	4,656	3,808	3,726	5,676
21	875.05	VE OH MEAS & REG STAT EXP	875	OH	16,838	21,016	16,514	18,878	25,365
22	875.45	MAT/SUP MEAS & REG STAT EXP	875	Mat	750	2,570	3,952	8,071	7,133
23	876.01	LABOR IND/CM MTR/REG MNT	876	Labor	21,012	20,863	25,474	26,789	30,246
24	876.02	TRANS IND/CM/MTR/REG/MNT	876	Trans	3,644	4,581	4,607	5,175	6,242
25	876.03	C&T OH IND/CM MTR/REG MNT	876	OH	4,879	4,702	5,623	5,299	5,887
26	876.05	VE OH IND/CM/MTR/REG MNT EXP	876	OH	21,356	21,292	26,027	26,441	29,125
27	876.45	MAT & SUP IND/CM/MTR/REG/MNT	876	Mat	2,927	2,529	3,673	3,311	3,323
28	877.01	LABOR MEAS & REG CITY GATE	877	Labor	2,020	2,853	3,859	6,891	6,950
29	877.02	TRANSP MEAS & REG CITY GATE	877	Trans	392	1,155	1,396	1,467	2,072
30	877.03	C&T OH CITY GATE MEAS/REG STAT	877	OH	475	623	880	1,071	1,403
31	877.05	VE OH CITY GATE MEAS & REG	877	OH	2,147	2,865	4,141	5,429	6,566
32	877.45	MAT/SUP CITYGATE MEAS/REG STA	877	Mat	49,307	29,360	35,576	44,517	37,781
33	878.01	LABOR MTR/HSE REG EXP	878	Labor	52,208	52,342	54,563	64,921	60,701
34	878.02	TRANSP MTR/HSE REG EXP	878	Trans	12,521	17,914	18,828	23,113	11,862
35	878.03	C&T OH MTR/HSE REG EXP	878	OH	12,191	11,865	12,197	12,640	11,839
36	878.05	VE OH MTR/HSE REG EXP	878	OH	54,161	54,521	53,913	65,188	57,942
37	878.45	MAT & SUP MTR/HSE REG EXP	878	Mat	1,894	2,791	4,573	10,245	5,542
38	879.01	LABOR CUST INSTALL EXP	879	Labor	53,713	41,963	44,949	56,534	62,631

WP1_C	Valley Energy Company (PA)	rAcct	rType	rHist16	rHist17	rHist18	rHist19	rHist20
	<b>Rate Case with Fully Projected Future Test Year 2023</b>			-	-	-	-	-
	<b>Workpaper 1 to Schedule C</b>							
	<b>Historic O&amp;M</b>							
	<b>Years 2016 through 2020</b>							
Line:	Account Description	Acct	Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual
39	879.02 TRANSP CUST INSTALL EXP	879	Trans	6,907	7,698	9,638	9,008	7,846
40	879.03 C&T OH CUST INSTALL EXP	879	OH	12,494	9,582	10,059	11,283	12,297
41	879.05 VE OH CUST INSTALL EXP	879	OH	55,546	43,537	44,657	57,825	58,293
42	879.45 MAT/SUP CUST INSTALL EXP	879	Mat	2,564	3,847	5,033	3,752	2,427
43	880.45 MAT/SUP OTHER DIST EXP	880	Mat	2,555	3,642	3,893	3,958	4,416
44	881.45 RENTS - DISTRIBUTION EXPENSE	881	Other	2,626	1,045	1,871	3,180	3,917
45								
				920,691	935,343	1,064,792	1,148,987	1,074,347
46	7. Distribution Expense - Maintenance							
47	885.01 LABOR MAINT SUPV & ENG	885	Labor	8,769	10,339	10,886	10,706	12,002
48	885.02 TRANSP MAINT SUPV & ENG	885	Trans	1,161	1,092	1,095	1,167	843
49	885.03 C&T OH MAINT SUPV & ENG	885	OH	2,042	2,347	2,420	2,148	2,349
50	885.05 VE OH MAINT SUPV & ENG	885	OH	9,110	10,828	10,911	11,074	11,289
51	885.45 MAT/SUPP MAINT SUPV & ENG	885	Mat	9,110	654	-	57	-
52	886.01 LABOR STURCTURES & IMPR	886	Labor	8,595	10,158	14,687	12,433	15,229
53	886.02 TRANSP MAINT STRUCTURES & IMPR	886	Trans	2,777	2,481	2,663	2,606	1,246
54	886.03 C&T OH MAINT STRUCTURES & IMPR	886	OH	1,996	2,324	3,290	2,512	2,983
55	886.05 VE OH MAINT STRUCTURES & IMPR	886	OH	8,751	10,341	14,864	12,749	14,429
56	886.45 MAT/SUP MAINT STRUCTURE/IMPR	886	Mat	4,095	964	1,685	34,171	12,443
57	887.01 LABOR MAINT OF MAIN	887	Labor	22,521	21,406	16,181	23,157	27,463
58	887.02 TRANSP MAINT OF MAIN	887	Trans	7,727	9,324	7,263	7,175	7,331
59	887.03 C&T OH MAINT OF MAIN	887	OH	5,188	5,473	4,188	4,688	5,485
60	887.05 VE OH MAINT OF MAIN	887	OH	22,828	21,451	16,336	22,844	23,986
61	887.45 MAT/SUPP MAINT OF MAIN	887	Mat	23,089	30,632	12,334	11,803	11,753
62	887.99 MAINT MAIN MATERIAL WRITTEN OFF	887	Other	5,150	1,602	507	248	-
63	889.01 LABOR MEAS & REG STAT EQUIP	889	Labor	4,266	7,681	5,624	8,142	21,637
64	889.02 TRANSP MAINT MEAS/REG STAT EQ	889	Trans	1,463	1,223	1,500	2,397	5,383
65	889.03 C&T OH MAINT M&R STAT EQUIP	889	OH	1,006	1,653	1,208	1,644	4,248
66	889.05 VE OH MAINT M&R STAT EQUIP	889	OH	4,304	7,579	5,704	7,728	19,170
67	889.45 MAT/SUP MAINT M&R STAT EQUIP	889	Mat	11,166	16,038	13,122	8,938	14,376
68	890.01 LABOR MAINT. INDUST. M&R STATION	890	Labor	9,606	7,104	5,300	10,298	20,304
69	890.02 TRANSP MAINT INDUS M&R STAT	890	Trans	572	-	61	3,029	1,907
70	890.03 C&T OH MAINT INDUST M&R STATION E	890	OH	2,178	1,555	1,190	2,083	3,958
71	890.05 VE OH MAINT.Industr. M&R STATION	890	OH	9,497	7,030	5,389	9,702	19,213
72	890.45 MAT/SUP MAINT M&R INDUST EQUIP	890	Mat	2,613	3,136	5,431	3,946	3,199
73	891.01 LABOR MAINT CITY GATE STAT	891	Labor	2,733	2,030	3,513	3,055	5,105
74	891.02 TRANSP MAINT CITY GATE STAT	891	Trans	1,436	916	2,067	1,186	1,431
75	891.03 C&T OH MAINT CITY GATE STAT	891	OH	634	446	785	619	976
76	891.05 VE OH MAINT CITY GATE STAT	891	OH	2,841	2,029	3,358	2,843	4,830

WPI_C	Valley Energy Company (PA)	rAcct	rType	rHist16	rHist17	rHist18	rHist19	rHist20	
	<b>Rate Case with Fully Projected Future Test Year 2023</b>			-	-	-	-	-	
	<b>Workpaper 1 to Schedule C</b>								
	<b>Historic O&amp;M</b>								
	<b>Years 2016 through 2020</b>								
Line:	Account	Description	Acct	Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual
77	891.45	MAT/SUP MAINT CITY GATE STAT	891	Mat	486	1,406	1,484	735	2,034
78	892.01	LABOR MAINT OF SERVICE	892	Labor	18,107	17,105	11,243	13,228	11,668
79	892.02	TRANSP MAINT OF SERVICE	892	Trans	4,786	9,140	7,852	11,404	2,645
80	892.03	C&T OH MAINT SERVICES EXP	892	OH	4,265	4,198	2,903	3,068	2,536
81	892.05	VE OH MAINT OF SERVICE	892	OH	17,764	18,177	11,386	13,357	10,792
82	892.45	MAT/SUP MAINT OF SERVICES	892	Mat	6,752	30,734	20,268	7,057	2,351
83	892.99	MAINT SERV MATERIAL WRITTEN OFF	892	Other	135	-	49	-	-
84	893.01	LABOR MAINT MTR & HSE REG	893	Labor	36,360	22,695	18,391	20,327	41,563
85	893.02	TRANSP MAINT MTR HSE REG	893	Trans	7,122	6,566	4,244	6,014	14,236
86	893.03	C&T OH MAINT MTR & HSE REG	893	OH	8,415	4,899	4,068	4,003	8,063
87	893.05	LABOR OH MAINT MTR & HSE REG	893	OH	37,478	23,016	17,855	21,311	40,376
88	893.45	MAT/SUPP MAINT MTR & HSE REG	893	Mat	15,109	8,809	11,724	8,492	18,482
89					354,003	346,581	285,029	334,144	429,314
90	8.	Customer Accounts Expense							
91	902.01	LABOR METER READING EXP	902	Labor	30,628	33,853	29,548	25,222	14,762
92	902.02	TRANS METER READING EXP	902	Trans	10,934	14,099	12,167	10,560	4,612
93	902.03	C&T OH METER READING EXP	902	OH	7,149	7,701	6,614	5,062	2,879
94	902.05	VE OH METER READING EXP	902	OH	32,134	35,582	29,628	25,945	14,042
95	902.45	MAT/SUPP METER READING EXP	902	Mat	3,849	14,758	6,890	6,465	4,632
96	903.01	LABOR CUST REC/COLLECTIONS	903	Labor	116,889	119,629	136,676	140,111	153,480
97	903.02	TRANSP CUST REC/COLLECTIONS	903	Trans	2,830	3,419	4,223	4,894	2,446
98	903.03	C&T OH CUST REC/COLLECTIONS	903	OH	27,250	27,119	30,562	28,101	30,181
99	903.05	VE OH CUST REC/COLLECTIONS	903	OH	123,314	136,241	146,645	157,205	140,822
100	903.25	NISC BILLING	903	Other	101,264	108,508	99,595	102,749	100,517
101	903.45	MAT/SUP CUST REC/COLLECTIONS	903	Mat	56,024	48,564	45,902	48,281	37,156
102	903.55	DOLLAR ENERGY FUND EXPENSES	903	Other	5,232	5,096	4,361	3,121	5,245
103	904.0	BAD DEBT EXPENSE	904	Other	20,749	39,383	54,012	35,221	69,691
104	905.45	MAT/SUP MISC CUST ACCT EXP	905	Mat	4,132	15,190	28,364	21,602	22,690
105	909.45	INFORMATION/INSTRUCTIONAL EXP	909	Other	2,527	1,240	1,276	9,908	9,439
106	913.45	ADVERTISING EXPENSES	913	Other	6,986	4,143	3,828	6,641	2,243
107					551,891	614,525	640,291	631,088	614,837
108	11.	Administrative and General Expense							
109	920.01	LABOR ADMINISTRATION	920	Labor	189,551	222,496	193,530	209,062	225,451
110	920.02	TRANSP ADMINISTRATION	920	Trans	11,981	15,091	16,625	19,561	18,357
111	920.03	C&T OH ADMINISTRATION	920	OH	43,934	50,230	43,121	41,614	44,372
112	920.05	VE OH ADMINISTRATION	920	OH	198,078	230,909	187,970	216,361	205,973
113	920.45	MAT/SUP ADMINISTRATIVE	920	Mat	241	3,503	1,370	89	146
114	921.0	GENERAL OFFICE SUPPLIES & EXP	921	Other	6,752	7,890	10,218	16,279	11,548

WPI_C Valley Energy Company (PA)			rAcct	rType	rHist16	rHist17	rHist18	rHist19	rHist20
Rate Case with Fully Projected Future Test Year 2023									
Workpaper 1 to Schedule C									
Historic O&M									
Years 2016 through 2020									
Line:	Account	Description	Acct	Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual
115	921.4	MEAL EXPENSES	921	Other	1,724	2,338	4,126	4,785	1,693
116	921.45	TRAVEL AND TRAINING	921	Other	16,449	24,600	34,952	32,337	12,087
117	921.5	COMMUNICATION EQUIP	921	Other	2,831	2,784	2,729	2,685	4,984
118	923.0	OUTSIDE SERVICES EMPLOYED	923	Other	8,917	14,676	13,156	13,267	14,617
119	923.25	AUDITOR FEES EXPENSE	923	Other	30,038	26,446	47,837	26,565	36,598
120	923.4	GCR EXPENSE	923	Other	-	-	531	-	-
121	923.45	ATTORNEY FEES EXPENSE	923	Other	30,190	35,932	54,089	100,734	18,525
122	924.0	PROPERTY INSURANCE EXPENSE	924	Other	10,930	11,156	11,456	12,350	14,721
123	925.0	INJURIES AND DAMAGES	925	Other	59,544	55,945	54,866	78,308	88,007
124	925.1	INSURANCE ST OPENING BONDS	925	Other	750	750	750	750	1,141
125	926.45	EMPLOYEE BENEFITS-DIRECT EXP.	926	Other	834	2,916	2,150	9,087	8,015
126	928.0	REGULATORY COMMISSION EXPENSES	928	Other	41,372	38,446	35,916	33,106	89,933
127	930CV		930	Other	-	-	-	-	45,312
128	930.2	REGULATORY COMMISSION EXPENSES	928	Other	-	-	76	364	58,203
129	930.21	LABOR - VOLUNTEER	930	Labor	-	-	9,643	5,144	145
130	930.22	DUES/COMPANY MEMBERSHIPS	930	Other	10,426	13,624	13,227	17,649	17,072
131	930.23	VOLUNTEER EXPENSES	930	Other	-	-	788	336	-
132	930.25	DIRECTOR EXP	930	Other	38,623	38,671	47,029	47,061	47,989
133	930.45	DIRECTOR EXP. - TRAVEL/TRAINING	930	Other	-	-	2,749	761	498
134	932.01	LABOR GENERAL PLT MAINTENANCE	932	Labor	2,469	4,473	7,197	7,670	14,639
135	932.02	TRANS MAINT GENERAL PLANT	932	Trans	1,211	2,715	2,871	10,551	5,853
136	932.03	C&T OVHD GENERAL PLANT	932	OH	576	1,002	1,627	1,535	2,954
137	932.05	OH MAINT PLANT	932	OH	2,592	4,641	7,275	8,369	11,727
138	932.45	MAINT GENERAL PLANT	932	Other	3,790	6,648	3,244	4,821	6,119
139					713,803	817,882	811,118	921,201	1,006,679
140									
141				Labor	790,833	827,348	859,534	921,836	994,791
142				Trans	114,959	143,350	150,543	176,859	139,265
143				Mat	237,057	258,927	247,422	275,112	240,749
144				OH	969,471	1,018,242	1,005,589	1,075,311	1,054,579
145				Other	428,068	466,464	538,142	586,302	695,793
146					2,540,388	2,714,331	2,801,230	3,035,420	3,125,177

WP2\_C Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023

Workpaper 2 to Schedule C

Historic O&M

*rType21*

*rAcct21*

12 Month

*rHTY21*

Historic Year December 31, 2021

Line	Co.	Account		Account	Total
1		<b>PAYROLL - DIRECT LABOR</b>			
2	20	870.01	Labor Oper Supr & Eng	Labor 870	67,985
3	20	874.01	Labor Mains & Serv Exp	Labor 874	124,674
4	20	874.11	Emergency Labor Mains And Service Exp.	Labor 874	-3,566
5	20	875.01	Labor Meas & Reg Stat Exp	Labor 875	26,756
6	20	876.01	Labor Ind/Cm Mtr/Reg Mnt	Labor 876	31,469
7	20	877.01	Labor Meas & Reg City Gate	Labor 877	5,788
8	20	878.01	Labor Mtr/Hse Reg Exp	Labor 878	51,099
9	20	879.01	Labor Cust Install Exp	Labor 879	52,124
10	20	885.01	Labor Maint Supv & Eng	Labor 885	12,590
11	20	886.01	Labor Sturctures & Impr	Labor 886	8,422
12	20	887.01	Labor Maint Of Main	Labor 887	25,494
13	20	889.01	Labor Meas & Reg Stat Equip	Labor 889	31,185
14	20	890.01	Labor Maint. Indust. M&R Station	Labor 889	15,046
15	20	891.01	Labor Maint City Gate Stat	Labor 891	5,133
16	20	892.01	Labor Maint Of Service	Labor 892	14,017
17	20	893.01	Labor Maint Mtr & Hse Reg	Labor 893	19,753
18	20	902.01	Labor Meter Reading Exp	Labor 902	16,611
19	20	903.01	Labor Cust Rec/Collections	Labor 903	167,453
20	20	920.01	Labor Administration	Labor 920	236,771
21	20	932.01	Labor General Plt Maintenance	Labor 932	12,903
22		<b>Total Direct Labor</b>			<b>921,705</b>
23					

WP2\_C Valley Energy Company (PA)

## Rate Case with Fully Projected Future Test Year 2023

## Workpaper 2 to Schedule C

## Historic O&amp;M

*rType21**rAcct21*

12 Month

*rHTY21*

Historic Year December 31, 2021

Line	Co.	Account			Account	Total
24		<b>TRANSPORTATION EXPENSES</b>				
25	20	870.02	Transp Oper Supr & Eng	Trans	870	2,517
26	20	874.02	Transp Mains & Service Exp	Trans	874	33,646
27	20	875.02	Trnsp Meas & Reg Stat Exp	Trans	875	8,105
28	20	876.02	Trans Ind/Cm/Mtr/Reg/Mnt	Trans	876	4,871
29	20	877.02	Transp Meas & Reg City Gate	Trans	877	1,717
30	20	878.02	Transp Mtr/Hse Reg Exp	Trans	878	12,497
31	20	879.02	Transp Cust Install Exp	Trans	879	7,771
32	20	885.02	Transp Maint Supv & Eng	Trans	885	1,188
33	20	886.02	Transp Maint Structures & Impr	Trans	886	1,306
34	20	887.02	Transp Maint Of Main	Trans	887	7,589
35	20	889.02	Transp Maint Meas/Reg Stat Eq	Trans	889	2,166
36	20	890.02	Transp Maint Indus M&R Stat	Trans	890	993
37	20	891.02	Transp Maint City Gate Stat	Trans	891	1,112
38	20	892.02	Transp Maint Of Service	Trans	892	6,441
39	20	893.02	Transp Maint Mtr Hse Reg	Trans	893	2,331
40	20	902.02	Trans Meter Reading Exp	Trans	902	2,679
41	20	903.02	Transp Cust Rec/Collections	Trans	903	2,980
42	20	920.02	Transp Adminstration	Trans	920	20,240
43	20	932.02	Trans Maint General Plant	Trans	932	7,822
44		<b>Total Trans. Exp</b>				<b>127,971</b>
45						



WP2\_C Valley Energy Company (PA)

Rate Case with Fully Projected Future Test Year 2023

Workpaper 2 to Schedule C

Historic O&M

rType21

rAcct21

12 Month

rHTY21

Historic Year December 31, 2021

Line	Co.	Account		Account	Total
46	<b>C&amp;T OVERHEAD</b>				
47	20	602.03	C&T OH Pto - Covid-19	OH 930CV	2,735
48	20	870.03	C&T OH Oper Supr & Eng	OH 870	15,833
49	20	874.03	C&T OH Mains & Service Exp	OH 874	28,987
50	20	875.03	C&T OH Meas & Reg Stat Exp	OH 875	6,197
51	20	876.03	C&T OH Ind/Cm Mtr/Reg Mnt	OH 876	7,292
52	20	877.03	C&T OH City Gate Meas/Reg Stat	OH 877	1,362
53	20	878.03	C&T OH Mtr/Hse Reg Exp	OH 878	11,989
54	20	879.03	C&T OH Cust Install Exp	OH 879	12,189
55	20	885.03	C&T OH Maint Supv & Eng	OH 885	2,941
56	20	886.03	C&T OH Maint Structures & Impr	OH 886	1,961
57	20	887.03	C&T OH Maint Of Main	OH 887	5,958
58	20	889.03	C&T OH Maint M&R Stat Equip	OH 889	7,143
59	20	890.03	C&T OH Maint Indust M&R Station Exp.	OH 889	3,521
60	20	891.03	C&T OH Maint City Gate Stat	OH 891	1,204
61	20	892.03	C&T OH Maint Services Exp	OH 892	3,670
62	20	893.03	C&T OH Maint Mtr & Hse Reg	OH 893	4,693
63	20	902.03	C&T OH Meter Reading Exp	OH 902	3,908
64	20	903.03	C&T OH Cust Rec/Collections	OH 903	39,035
65	20	920.03	C&T OH Administration	OH 920	54,972
66	20	932.03	C&T Ovhd General Plant	OH 932	2,959
67	<b>Total C&amp;T OH</b>				<b>218,548</b>
68					

WP2\_C Valley Energy Company (PA)

Rate Case with Fully Projected Future Test Year 2023

Workpaper 2 to Schedule C

Historic O&M

*rType21*

*rAcct21*

12 Month

*rHTY21*

Historic Year December 31, 2021

Line	Co.	Account		Account	Total
69		<b>VE LABOR OVERHEAD</b>			
70	20	602.05	VE OH Pto - Covid-19	OH 930CV	7,721
71	20	870.05	VE OH Oper Supr & Eng	OH 870	68,761
72	20	874.05	VE OH Mains & Service Exp	OH 874	131,510
73	20	875.05	VE OH Meas & Reg Stat Exp	OH 875	26,838
74	20	876.05	VE OH Ind/Cm/Mtr/Reg Mnt Exp	OH 876	33,626
75	20	877.05	VE OH City Gate Meas & Reg	OH 877	5,727
76	20	878.05	VE OH Mtr/Hse Reg Exp	OH 878	55,772
77	20	879.05	VE OH Cust Install Exp	OH 879	53,690
78	20	885.05	VE OH Maint Supv & Eng	OH 885	13,110
79	20	886.05	VE OH Maint Structures & Impr	OH 886	8,651
80	20	887.05	VE OH Maint Of Main	OH 887	26,482
81	20	889.05	VE OH Maint M&R Stat Equip	OH 889	29,440
82	20	890.05	VE OH Maint. Industr. M&R Station Exp.	OH 889	16,468
83	20	891.05	VE OH Maint City Gate Stat	OH 891	5,994
84	20	892.05	VE OH Maint Of Service	OH 892	16,917
85	20	893.05	Labor OH Maint Mtr & Hse Reg	OH 893	22,093
86	20	902.05	VE OH Meter Reading Exp	OH 902	17,267
87	20	903.05	VE OH Cust Rec/Collections	OH 903	172,384
88	20	920.05	VE OH Administration	OH 920	245,317
89	20	932.05	OH Maint Plant	OH 932	10,500
90	<b>Total VE Labor OH</b>				<b>968,267</b>
91					

WP2\_C Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023  
 Workpaper 2 to Schedule C

Historic O&M				<i>rType21</i>	<i>rAcct21</i>	12 Month	
Historic Year December 31, 2021						<i>rHTY21</i>	
Line	Co.	Account			Account	Total	
92	<b>DIRECT O&amp;M EXPENSES</b>						
93	20	602.0	Pto - Covid-19	Other	930CV	12,186	
94	20	602.45	Mat/Sup Pto - Covid-19	Mat	930CV	2,979	
95	20	842.1	Fuel (Company Use)	Other	842	26,245	
96	20	871.45	Distrib Load Dispatching	Mat	871	1,063	
97	20	874.45	Mat & Sup Mains & Serv Exp	Mat	874	34,996	
98	20	874.5	Call Center Expense	Other	874	48,835	
99	20	874.55	Mains & Serv Exp Emerg Acct	Other	874	(779)	
100	20	875.45	Mat/Sup Meas & Reg Stat Exp	Mat	875	9,425	
101	20	876.45	Mat & Sup Ind/Cm/Mtr/Reg/Mnt	Mat	876	4,795	
102	20	877.45	Mat/Sup Citygate Meas/Reg Sta	Mat	877	29,048	
103	20	878.45	Mat & Sup Mtr/Hse Reg Exp	Mat	878	4,024	
104	20	879.45	Mat/Sup Cust Install Exp	Mat	879	1,800	
105	20	880.45	Mat/Sup Other Distribution Exp	Mat	880	4,393	
106	20	881.45	Rents - Distribution Expense	Other	881	4,773	
107	20	886.45	Mat/Sup Maint Structure/Impr	Mat	886	1,602	
108	20	887.45	Mat/Supp Maint Of Main	Mat	887	20,015	
109	20	887.99	Maint Main Material Written Off	Other	887	(19)	
110	20	889.45	Mat/Sup Maint M&R Stat Equip	Mat	889	9,896	
111	20	890.45	Mat/Sup Maint M&R Indust Equip	Mat	890	10,406	
112	20	891.45	Mat/Sup Maint City Gate Stat	Mat	891	1,827	
113	20	892.0	Maint Of Services	Other	892	10	
114	20	892.45	Mat/Sup Maint Of Services	Mat	892	18,480	
115	20	893.45	Mat/Supp Maint Mtr & Hse Reg	Mat	893	13,564	
116	20	893.99	Maint Mtr Material Written Off	Other	893	346	
117	20	902.45	Mat/Supp Meter Reading Exp	Mat	902	2,483	
118	20	903.25	NISC Billing	Other	903	107,070	
119	20	903.45	Mat/Sup Cust Rec/Collections	Other	903	50,321	

WP2\_C Valley Energy Company (PA)

Rate Case with Fully Projected Future Test Year 2023

Workpaper 2 to Schedule C

Historic O&M

rType21

rAcct21

12 Month

rHTY21

Historic Year December 31, 2021

Line	Co.	Account		Account	Total
120	20	903.55	Dollar Energy Fund Expenses	Other 903	5,618
121	20	904.0	Bad Debt Expense	Other 904	(19,622)
122	20	905.45	Mat/Sup Misc Cust Acct Exp	Mat 905	22,877
123	20	909.45	Information/Instructional Exp	Other 909	7,633
124	20	913.45	Advertising Expenses	Other 913	4,409
125	20	920.45	Mat/Sup Administrative	Mat 920	644
126	20	921.0	General Office Supplies & Exp	Other 921	12,122
127	20	921.4	Meal Expenses	Other 921	2,511
128	20	921.45	Travel And Training	Mat 921	18,552
129	20	921.5	Communication Equip	Other 921	11,714
130	20	923.0	Outside Services Employed	Other 923	19,142
131	20	923.25	Auditor Fees Expense	Other 923	29,692
132	20	923.4	Gcr Expense	Other 923	3,059
133	20	923.45	Attorney Fees Expense	Other 923	7,433
134	20	924.0	Property Insurance Expense	Other 924	16,358
135	20	925.0	Injuries And Damages	Other 925	85,979
136	20	925.1	Insurance St Opening Bonds	Other 925	1,160
137	20	926.45	Employee Benefits-Direct Exp.	Other 926	11,387
138	20	928.0	Regulatory Commission Expenses	Other 928	122,392
139	20	930.2	Miscellaneous General Expense	Other 930	1,325
140	20	930.22	Dues/Company Memberships	Other 930	17,490
141	20	930.25	Director Expense	Other 930	48,980
142	20	932.45	Maint General Plant	Other 932	4,289
143	<b>Total Direct Expenses</b>				<b>854,928</b>
144					<b>3,091,419</b>
				Other	642,059
				Mat	212,869
					<b>854,928</b>

WP3\_C Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023

Workpaper 3 to Schedule C

rFTY22 rFPFTY23

Future O&M

rType22

rAcct22

Years 2022 and 2023

Line	Dept.	Account			Total 2,022	Total 2,023
1	<b><u>PAYROLL - DIRECT LABOR</u></b>					
2	20	870.01	Labor	870	68,593	98,718
3	20	874.01	Labor	874	135,743	144,437
4	20	875.01	Labor	875	28,690	30,374
5	20	876.01	Labor	876	33,497	35,464
6	20	877.01	Labor	877	6,162	6,524
7	20	878.01	Labor	878	63,569	68,175
8	20	879.01	Labor	879	70,416	74,901
9	20	885.01	Labor	885	13,539	14,301
10	20	886.01	Labor	886	9,576	10,101
11	20	887.01	Labor	887	27,736	29,365
12	20	889.01	Labor	889	36,655	38,807
13	20	890.01	Labor	890	16,040	16,982
14	20	891.01	Labor	891	5,464	5,785
15	20	892.01	Labor	892	18,314	19,579
16	20	893.01	Labor	893	26,829	28,936
17	20	902.01	Labor	902	10,008	10,595
18	20	903.01	Labor	903	178,585	186,180
19	20	920.01	Labor	920	248,780	257,617
20	20	932.01	Labor	932	13,735	14,540
21	<b>Total Direct Labor</b>				<b>1,011,931</b>	<b>1,091,381</b>
22						
23						
24	<b><u>TRANSPORTATION EXPENSES</u></b>					
25	20	870.02	Trans	870	10,310	14,837
26	20	874.02	Trans	874	20,402	21,709
27	20	875.02	Trans	875	4,312	4,565
28	20	876.02	Trans	876	5,035	5,330
29	20	877.02	Trans	877	926	981
30	20	878.02	Trans	878	9,554	10,247
31	20	879.02	Trans	879	10,584	11,258
32	20	885.02	Trans	885	2,035	2,149
33	20	886.02	Trans	886	1,439	1,518
34	20	887.02	Trans	887	4,169	4,413
35	20	889.02	Trans	889	5,509	5,833
36	20	890.02	Trans	890	2,411	2,552
37	20	891.02	Trans	891	821	869
38	20	892.02	Trans	892	2,753	2,943
39	20	893.02	Trans	893	4,032	4,349
40	20	902.02	Trans	902	1,504	1,592
41	20	903.02	Trans	903	26,841	27,983
42	20	920.02	Trans	920	37,392	38,720
43	20	932.02	Trans	932	2,064	2,185
44	<b>Total Trans. Exp</b>				<b>152,093</b>	<b>164,033</b>
45						

WP3\_C Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023

Workpaper 3 to Schedule C

rFTY22 rFPFTY23

Future O&M

rType22

rAcct22

Years 2022 and 2023

Line	Dept.	Account			Total 2,022	Total 2,023	
46							
47	<b>C&amp;T OVERHEAD</b>						
48	20	870.03	OH	870	17,668	28,389	
49	20	874.03	OH	874	34,965	41,537	
50	20	875.03	OH	875	7,390	8,735	
51	20	876.03	OH	876	8,628	10,199	
52	20	877.03	OH	877	1,587	1,876	
53	20	878.03	OH	878	16,374	19,606	
54	20	879.03	OH	879	18,138	21,540	
55	20	885.03	OH	885	3,487	4,113	
56	20	886.03	OH	886	2,467	2,905	
57	20	887.03	OH	887	7,144	8,445	
58	20	889.03	OH	889	9,442	11,160	
59	20	890.03	OH	890	4,131	4,884	
60	20	891.03	OH	891	1,407	1,664	
61	20	892.03	OH	892	4,717	5,631	
62	20	893.03	OH	893	6,910	8,321	
63	20	902.03	OH	902	2,578	3,047	
64	20	903.03	OH	903	46,000	53,541	
65	20	920.03	OH	920	64,081	74,085	
66	<b>Total C&amp;T OH</b>				<b>257,114</b>	<b>309,678</b>	
67							
68							
69	<b>VE LABOR OVERHEAD</b>						
70	20	870.05	OH	870	72,413	98,672	
71	20	874.05	OH	874	143,303	144,369	
72	20	875.05	OH	875	30,287	30,360	
73	20	876.05	OH	876	35,363	35,448	
74	20	877.05	OH	877	6,506	6,521	
75	20	878.05	OH	878	67,109	68,143	
76	20	879.05	OH	879	74,338	74,866	
77	20	885.05	OH	885	14,293	14,294	
78	20	886.05	OH	886	10,109	10,097	
79	20	887.05	OH	887	29,281	29,351	
80	20	889.05	OH	889	38,696	38,789	
81	20	890.05	OH	890	16,933	16,974	
82	20	891.05	OH	891	5,768	5,782	
83	20	892.05	OH	892	19,334	19,570	
84	20	893.05	OH	893	28,323	28,923	
85	20	902.05	OH	902	10,565	10,590	
86	20	903.05	OH	903	188,531	186,093	
87	20	920.05	OH	920	262,636	257,497	
88	20	932.05	OH	932	0	(1,253)	
89	<b>Total VE Labor OH</b>				<b>1,053,788</b>	<b>1,075,086</b>	
90							

WP3\_C Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023

Workpaper 3 to Schedule C

rFTY22 rFPFTY23

Future O&M

rType22

rAcct22

Years 2022 and 2023

Total

Total

Line	Dept.	Account			Total 2,022	Total 2,023
91						
92			<b><u>DIRECT O&amp;M EXPENSES</u></b>			
93	20	842.10	Other	842	31,442	32,071
94	20	871.45	Mat	871	5,851	6,111
95	20	874.45	Mat	874	39,944	40,743
96	20	874.50	Other	874	51,835	55,435
97	20	875.45	Mat	875	8,209	8,374
98	20	876.45	Mat	876	5,261	5,771
99	20	877.45	Mat	877	27,513	28,435
100	20	878.45	Mat	878	4,712	4,806
101	20	879.45	Mat	879	2,660	2,713
102	20	880.45	Mat	880	4,256	4,341
103	20	881.45	Mat	881	5,823	7,104
104	20	886.45	Mat	886	1,999	2,039
105	20	887.45	Mat	887	18,225	18,507
106	20	889.45	Mat	889	15,948	16,267
107	20	890.45	Mat	890	11,665	11,898
108	20	891.45	Mat	891	1,782	1,818
109	20	892.45	Mat	892	12,039	12,039
110	20	893.45	Mat	893	15,284	15,589
111	20	902.45	Mat	902	3,542	3,613
112	20	903.25	Other	903	102,212	104,256
113	20	903.45	Mat	903	50,716	51,730
114	20	903.55	Other	903	6,011	6,432
115	20	904.00	Other	904	35,000	35,000
116	20	905.45	Mat	905	23,510	23,980
117	20	909.45	Mat	909	8,993	9,173
118	20	913.45	Mat	913	4,154	4,237
119	20	920.45	Mat	920	293	299
120	20	921.00	Other	921	10,973	11,192
121	20	921.40	Other	921	4,502	5,919

WP3\_C Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023  
 Workpaper 3 to Schedule C

					<i>rFTY22</i>	<i>rFPFTY23</i>
<b>Future O&amp;M</b>						
<b>Years 2022 and 2023</b>						
<b>Line</b>	<b>Dept.</b>	<b>Account</b>	<i>rType22</i>	<i>rAcct22</i>	<b>Total</b>	<b>Total</b>
					<b>2,022</b>	<b>2,023</b>
122	20	921.45	Other	921	35,914	47,688
123	20	921.50	Other	921	15,575	15,575
124	20	923.00	Other	923	24,608	25,264
125	20	923.25	Other	923	30,880	33,041
126	20	923.40	Other	923	400	400
127	20	923.45	Other	923	11,785	12,021
128	20	924.00	Other	924	18,348	21,107
129	20	925.00	Other	925	88,408	92,828
130	20	925.10	Other	925	1,183	1,207
131	20	926.45	Other	926	11,618	11,850
132	20	928.00	Other	928	123,189	0
133	20	930.20	Other	930	2,571	2,622
134	20	930.22	Other	930	17,626	17,762
135	20	930.25	Other	930	53,734	55,964
136	20	930.45	Other	930	2,750	2,833
137	20	932.45	Mat	932	5,447	5,556
138	<b>Total Direct Expenses</b>				<b>958,390</b>	<b>875,610</b>
139					<b>3,433,316</b>	<b>3,515,788</b>
140						
141			Other		680,564	590,467
142			Mat		277,826	285,143
143					<b>958,390</b>	<b>875,610</b>



WP4\_C **Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**  
**Workpaper 4 to Schedule C**  
**Accumulated Deferred Income Taxes**

**Line Years 2017 through 2023**

Line	Valley PA	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
1	Valley PA							
2								
3	Book	13,798,616	14,823,529	15,831,087	16,899,413	17,226,992	18,302,157	19,618,136
4								
5	Federal Tax - MACRS	24,485,114	28,952,001	30,020,317	31,153,658	33,939,419	36,486,095	38,717,080
6								
7	Federal Tax - SL	23,781,445	28,119,997	29,063,411	30,095,592	32,740,763	35,277,257	36,492,535
8								
9	PA Tax	14,833,087	19,786,819	21,310,839	22,777,529	24,175,419	25,911,063	28,242,118
10								
11	Federal Tax Depr Exp - MACRS	1,408,995	1,145,913	1,139,816	1,295,554	3,031,349	2,571,820	2,298,359
12								
13	Federal Tax Depr Exp - SL	1,338,378	1,017,162	1,053,348	1,180,538	2,895,636	2,561,639	1,282,651
14								
15	PA Tax Depr Exp	1,804,121	1,632,758	1,595,520	1,628,903	1,643,478	1,484,706	1,887,016

WP5\_C Valley Energy Company (PA)  
 Rate Case with Fully Projected Future Test Year 2023  
 Workpaper 5 to Schedule C  
 Gas Inventory Balances  
 Years 2014 through 2023

Line	<u>Volumes dth</u>	<u>Average</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
1	January	303,492	239,316	316,185	324,010	303,966	288,448	262,049	348,294	345,770	303,388
2	February	199,050	137,330	205,138	216,106	205,227	199,441	162,488	235,743	230,927	
3	March	120,378	73,110	87,111	123,140	104,509	90,857	82,198	221,307	180,789	
4	April	162,665	102,115	134,840	161,039	158,026	140,091	133,872	249,101	222,236	
5	May	227,704	164,566	199,779	229,451	219,484	208,626	200,548	315,055	284,125	
6	June	296,268	235,210	272,102	296,747	299,653	270,023	269,114	374,779	352,519	
7	July	367,296	310,689	343,498	369,243	377,771	348,425	343,384	416,525	428,834	
8	August	432,999	380,552	415,982	440,488	447,551	409,464	415,442	469,372	485,143	
9	September	500,984	458,095	480,148	510,136	509,996	490,264	479,213	549,092	530,928	
10	October	538,908	533,294	529,372	533,064	538,540	522,002	540,177	554,292	560,526	
11	November	514,044	517,763	507,262	509,242	500,821	476,879	509,961	553,870	536,555	
12	December	433,672	446,279	436,961	421,771	410,292	394,290	429,939	459,074	470,770	
13	January	303,492									
14											
15	<b>Average volume</b>	<b>338,535</b>	dth								
16	GCR at Present	\$4.17480	per dth								
17	<b>Inventory Value</b>	<b>1,413,315</b>									
18											

**BEFORE THE**

**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission**

**v.**

**Citizens' Electric Company of Lewisburg, PA  
and Valley Energy Company**

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**Docket Nos. R-2022-\_\_\_\_\_  
R-2022-\_\_\_\_\_**

**DIRECT TESTIMONY  
AND EXHIBIT  
OF  
DYLAN W. D'ASCENDIS, CRRA, CVA**

**ON BEHALF OF**

**CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA  
AND  
VALLEY ENERGY, INC.**

**APRIL 29, 2022**

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1 **I. INTRODUCTION**

2 **A. Witness Identification**

3 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

4 A. My name is Dylan W. D'Ascendis. My business address is 3000 Atrium Way, Suite  
5 241, Mount Laurel, NJ 08054.

6 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

7 A. I am a Partner at ScottMadden, Inc.

8 **B. Background and Qualifications**

9 **Q. PLEASE SUMMARIZE YOUR PROFESSIONAL EXPERIENCE AND**  
10 **EDUCATIONAL BACKGROUND.**

11 A. I have offered expert testimony on behalf of investor-owned utilities in over 30 state  
12 regulatory commissions in the United States, the Federal Energy Regulatory  
13 Commission, the Alberta Utility Commission, one American Arbitration  
14 Association panel, and the Superior Court of Rhode Island on issues including, but  
15 not limited to, common equity cost rate, rate of return, valuation, capital structure,  
16 class cost of service, and rate design.

17 On behalf of the American Gas Association ("AGA"), I calculate the AGA  
18 Gas Index, which serves as the benchmark against which the performance of the  
19 American Gas Index Fund ("AGIF") is measured on a monthly basis. The AGA  
20 Gas Index and AGIF are a market capitalization weighted index and mutual fund,  
21 respectively, comprised of the common stocks of the publicly traded corporate  
22 members of the AGA.

1 I am a member of the Society of Utility and Regulatory Financial Analysts  
2 ("SURFA"). In 2011, I was awarded the professional designation "Certified Rate  
3 of Return Analyst" by SURFA, which is based on education, experience, and the  
4 successful completion of a comprehensive written examination.

5 I am also a member of the National Association of Certified Valuation  
6 Analysts ("NACVA") and was awarded the professional designation "Certified  
7 Valuation Analyst" by the NACVA in 2015.

8 I am a graduate of the University of Pennsylvania, where I received a  
9 Bachelor of Arts degree in Economic History. I have also received a Master of  
10 Business Administration with high honors and concentrations in Finance and  
11 International Business from Rutgers University.

12 The details of my educational background and expert witness appearances  
13 are included in Appendix A.

14 **II. PURPOSE OF TESTIMONY**

15 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**  
16 **PROCEEDING?**

17 A. The purpose of my testimony is to present evidence on behalf of Valley Energy, Inc.  
18 ("Valley") and Citizens' Electric Company of Lewisburg, PA ("Citizens"),  
19 (collectively, "the Companies") and recommend allowed weighted average costs of  
20 capital ("WACC") for each company's jurisdictional rate base.

1 **Q. HAVE YOU PREPARED AN EXHIBIT IN SUPPORT OF YOUR**  
2 **RECOMMENDATION?**

3 A. Yes. I have prepared Exhibit \_\_ (DWD-1), which consists of Schedules DWD-1  
4 through DWD-8.

5 **III. SUMMARY**

6 **Q. WHAT ARE YOUR RECOMMENDED WACCS FOR THE COMPANIES?**

7 A. I recommend that the Pennsylvania Public Utility Commission (the "Commission")  
8 authorize Valley and Citizens' opportunities to earn WACCs of 7.97% and 7.76%,  
9 respectively, on their jurisdictional rate bases. My recommended capital structure  
10 for the Companies are based on the capital structure of their parent company, C&T  
11 Enterprises, as will be discussed below. The recommended capital structure  
12 consists of 50.47% long-term debt and 49.53% common equity. The costs of long-  
13 term debt for the Companies are their actual costs of debt at December 31, 2021, as  
14 provided to the Commission in their rate of return reports. The cost of common  
15 equity for each of the Companies is 11.50%, as will be discussed in detail below.  
16 The summary of the Companies' requested WACCs are shown on page 1 of  
17 Schedule DWD-1, and on Tables 1 and 2, below.

1       **Table 1: Summary of Recommended Weighted Average Cost of Capital for**  
2   **Valley**

<u>Type of Capital</u>	<u>Ratios</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
Long-Term Debt	50.47%	4.49%	2.27%
Common Equity	<u>49.53%</u>	11.50%	<u>5.70%</u>
Total	<u>100.00%</u>		<u>7.97%</u>

3       **Table 2: Summary of Recommended Weighted Average Cost of Capital for**  
4   **Citizens'**

<u>Type of Capital</u>	<u>Ratios</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
Long-Term Debt	50.47%	4.09%	2.06%
Common Equity	<u>49.53%</u>	11.50%	<u>5.70%</u>
Total	<u>100.00%</u>		<u>7.76%</u>

5   **Q.     PLEASE SUMMARIZE YOUR RECOMMENDED COMMON EQUITY**  
6       **COST RATES.**

7   A.     My recommended common equity cost rates of 11.50% applicable to Valley and  
8       Citizens' are summarized on page 2 of Schedule DWD-1. I have assessed the  
9       market-based common equity cost rates of companies of relatively similar, but not  
10      necessarily identical, risk to the Companies. Using companies of relatively  
11      comparable risk as proxies is consistent with the principles of fair rate of return  
12      established in the *Hope*<sup>1</sup> and *Bluefield*<sup>2</sup> decisions. No proxy group can be identical  
13      in risk to any single company. Consequently, there must be an evaluation of relative

---

<sup>1</sup>     *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591 (1944) ("*Hope*").

<sup>2</sup>     *Bluefield Water Works Improvement Co. v. Public Serv. Comm'n*, 262 U.S. 679 (1922).



1 risk between the company and the proxy group to determine if it is appropriate to  
2 adjust the proxy group's indicated rate of return.

3 My recommendation results from applying several cost of common equity  
4 models, specifically the Discounted Cash Flow ("DCF") model, the Risk Premium  
5 Model ("RPM"), and the Capital Asset Pricing Model ("CAPM"), to the market  
6 data of the Gas Utility Proxy Group and Electric Utility Proxy Group whose  
7 selection criteria will be discussed below. In addition, I applied the DCF model,  
8 RPM, and CAPM to proxy groups of domestic, non-price regulated companies  
9 comparable in total risk to the Gas and Electric Utility Proxy Groups ("Non-Price  
10 Regulated Proxy Groups"). The results derived from each are as follows:

11 **Table 3: Summary of Common Equity Cost Rates**

	<u>Gas Proxy Group</u>	<u>Electric Proxy Group</u>
Discounted Cash Flow Model	9.76%	9.05%
Risk Premium Model	10.60%	10.84%
Capital Asset Pricing Model	11.75%	12.15%
Cost of Equity Models Applied to Comparable Risk, Non-Price Regulated Companies	<u>12.04%</u>	<u>12.60%</u>
Indicated Range of Common Equity Cost Rates Before Adjustments	9.90% - 11.90%	9.85% - 11.85%
Size Adjustment	0.90%	1.00%
Performance Factor Adjustment	<u>0.05%</u>	<u>0.05%</u>
Indicated Range of Common Equity Cost Rates After Adjustments	<u>10.85% -12.85%</u>	<u>10.90% - 12.90%</u>
Recommended Cost of Common Equity After Adjustments	<u>11.50%</u>	<u>11.50%</u>

1           The indicated ranges of common equity cost rates were 9.90% to 11.90%  
2           and 9.85% to 11.85% for the Gas and Electric Utility Proxy Groups, respectively,  
3           before any company-specific adjustments. I then adjusted the indicated ranges of  
4           common equity cost rates upward by 0.90% to reflect Valley's smaller relative size,  
5           as compared to the Gas Utility Proxy Group, and by 1.00% to reflect Citizens'  
6           smaller relative size, as compared to the Electric Utility Proxy Group. I also  
7           adjusted the Companies' indicated ranges of common equity cost rates upward by  
8           0.05% to reflect a performance factor adjustment, based on guidance from Section  
9           523 of the Pennsylvania Public Utility Code, 66 Pa.C.S. § 523, and the Commission  
10          Order in the Companies' last rate case.<sup>3</sup> These adjustments resulted in company-  
11          specific ranges of common equity cost rates of 10.85% to 12.85% for Valley and  
12          10.90% to 12.90% for Citizens'. Given the indicated ranges of common equity cost  
13          rates for the Companies, I recommend the Commission to approve a common  
14          equity cost rate of 11.50% for both Valley and Citizens'.

15   **IV.   GENERAL PRINCIPLES**

16   **Q.   WHAT GENERAL PRINCIPLES HAVE YOU CONSIDERED IN**  
17   **ARRIVING AT YOUR RECOMMENDED COMMON EQUITY COST**  
18   **RATES?**

19   A.   In unregulated industries, marketplace competition is the principal determinant of  
20   the price of products or services. For regulated public utilities, regulation must act  
21   as a substitute for marketplace competition. Assuring that the utility can fulfill its  
22   obligations to the public, while providing safe and reliable service at all times,

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<sup>3</sup> Docket No. R-2019-3008209 (Valley), at 118-120 and R-2019-3008212 (Citizens'), at 108-110.

1 requires a level of earnings sufficient to maintain the integrity of presently invested  
2 capital. Sufficient earnings also permit the attraction of needed new capital at a  
3 reasonable cost, for which the utility must compete with other firms of comparable  
4 risk, consistent with the fair rate of return standards established by the U.S.  
5 Supreme Court in the previously cited *Hope* and *Bluefield* cases. The U.S. Supreme  
6 Court affirmed the fair rate of return standards in *Hope*, when it stated:

7           The rate-making process under the Act, *i.e.*, the fixing of 'just and  
8 reasonable' rates, involves a balancing of the investor and the consumer  
9 interests. Thus we stated in the *Natural Gas Pipeline Co.* case that  
10 'regulation does not insure that the business shall produce net revenues.'  
11 315 U.S. at page 590, 62 S.Ct. at page 745. But such considerations  
12 aside, the investor interest has a legitimate concern with the financial  
13 integrity of the company whose rates are being regulated. From the  
14 investor or company point of view it is important that there be enough  
15 revenue not only for operating expenses but also for the capital costs of  
16 the business. These include service on the debt and dividends on the  
17 stock. Cf. *Chicago & Grand Trunk R. Co. v. Wellman*, 143 U.S. 339,  
18 345, 346 12 S.Ct. 400,402. By that standard the return to the equity  
19 owner should be commensurate with returns on investments in other  
20 enterprises having corresponding risks. That return, moreover, should  
21 be sufficient to assure confidence in the financial integrity of the  
22 enterprise, so as to maintain its credit and to attract capital.<sup>4</sup>

23           In summary, the U.S. Supreme Court has found a return that is adequate to  
24 attract capital at reasonable terms enables the utility to provide service while  
25 maintaining its financial integrity. As discussed above, and in keeping with  
26 established regulatory standards, that return should be commensurate with the  
27 returns expected elsewhere for investments of equivalent risk. Therefore, the  
28 Commission's decision in this proceeding should provide the Company with the  
29 opportunity to earn a return that is: (1) adequate to attract capital at reasonable cost

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<sup>4</sup> *Hope*, 320 U.S. 591 (1944), at 603.

1 and terms; (2) sufficient to ensure their financial integrity; and (3) commensurate  
2 with returns on investments in enterprises having corresponding risks.

3 Lastly, the required return for a regulated public utility is established on a  
4 stand-alone basis, *i.e.*, for the utility operating company at issue in a rate case.  
5 Parent entities, like other investors, have capital constraints and must look at the  
6 attractiveness of the expected risk-adjusted return of each investment alternative in  
7 their capital budgeting process. That is, utility holding companies that own many  
8 utility operating companies have choices as to where they will invest their capital  
9 within the holding company family. Therefore, the opportunity cost concept applies  
10 regardless of the source of the funding, whether it be public funding or corporate  
11 funding.

12 When funding is provided by a parent entity, the return still must be  
13 sufficient to provide an incentive to allocate equity capital to the subsidiary or  
14 business unit rather than other internal or external investment opportunities. That  
15 is, the regulated subsidiary must compete for capital with all the parent company's  
16 affiliates, and with other, similarly situated companies. In that regard, investors  
17 value corporate entities on a sum-of-the-parts basis and expect each division within  
18 the parent company to provide an appropriate risk-adjusted return.

19 It therefore is important that the authorized ROE reflects the risks and  
20 prospects of the utility's operations and supports the utility's financial integrity from  
21 a stand-alone perspective, as measured by its combined business and financial risks.  
22 Consequently, the ROE authorized in this proceeding should be sufficient to

1 support the operational (*i.e.*, business risk) and financing (*i.e.*, financial risk) of the  
2 Companies on a stand-alone basis.

3 **Q. WITHIN THAT BROAD FRAMEWORK, HOW IS THE COST OF**  
4 **CAPITAL ESTIMATED IN REGULATORY PROCEEDINGS?**

5 A. Regulated utilities primarily use common stock and long-term debt to finance their  
6 permanent property, plant, and equipment (*i.e.*, rate base). The fair rate of return  
7 for a regulated utility is based on its weighted average cost of capital, in which, as  
8 noted earlier, the costs of the individual sources of capital are weighted by their  
9 respective book values with appropriate adjustments.

10 The cost of capital is the return investors require to make an investment in  
11 a firm. Investors will provide funds to a firm only if the return that they *expect* is  
12 equal to, or greater than, the return that they *require* to accept the risk of providing  
13 funds to the firm.

14 The cost of capital (that is, the combination of the costs of debt and equity)  
15 is based on the economic principle of "opportunity costs." Investing in any asset  
16 (whether debt or equity securities) represents a forgone opportunity to invest in  
17 alternative assets. For any investment to be sensible, its expected return must be at  
18 least equal to the return expected on alternative, comparable risk investment  
19 opportunities. Because investments with like risks should offer similar returns, the  
20 opportunity cost of an investment should equal the return available on an  
21 investment of comparable risk.

22 Whereas the cost of debt is contractually defined and can be directly  
23 observed as the interest rate or yield on debt securities, the cost of common equity

1 must be estimated based on market data and various financial models. Because the  
2 cost of common equity is premised on opportunity costs, the models used to  
3 determine it are typically applied to a group of "comparable" or "proxy" companies.  
4 In the end, the estimated cost of capital should reflect the return that investors  
5 require in light of the subject company's business and financial risks, and the returns  
6 available on comparable investments.

7 **Q. IS THE AUTHORIZED RETURN SET IN REGULATORY PROCEEDINGS**  
8 **GUARANTEED?**

9 A. No, it is not. Consistent with the *Hope* and *Bluefield* standards, the ratemaking  
10 process should provide the utility a reasonable opportunity to recover its return of,  
11 and return on, its reasonably incurred investments, but it does not guarantee that  
12 return. While a utility may have control over some factors that affect the ability to  
13 earn its authorized return (*e.g.*, management performance, operating and  
14 maintenance expenses, *etc.*), there are several factors beyond a utility's control that  
15 affect its ability to earn its authorized return. Those may include factors such as  
16 weather, the economy, and the prevalence and magnitude of regulatory lag.

17 A. **Business Risk**

18 **Q. PLEASE DEFINE BUSINESS RISK AND EXPLAIN WHY IT IS**  
19 **IMPORTANT FOR DETERMINING A FAIR RATE OF RETURN.**

20 A. The investor-required return on common equity reflects investors' assessment of  
21 the total investment risk of the subject firm. Total investment risk is often discussed  
22 in the context of business and financial risk.

1           Business risk reflects the uncertainty associated with owning a company's  
2 common stock without the company's use of debt and/or preferred stock financing.  
3 One way of considering the distinction between business and financial risk is to  
4 view the former as the uncertainty of the expected earned return on common equity,  
5 assuming the firm is financed with no debt.

6           Examples of business risks generally faced by utilities include, but are not  
7 limited to, the regulatory environment, mandatory environmental compliance  
8 requirements, customer mix and concentration of customers, service territory  
9 economic conditions, market demand, risks and uncertainties of supply, operations,  
10 capital intensity, size, the degree of operating leverage, emerging technologies  
11 including distributed energy resources, and the vagaries of weather.

12           Although analysts, including rating agencies, may categorize business risks  
13 individually, as a practical matter, such risks are interrelated and not wholly distinct  
14 from one another. When determining an appropriate return on common equity, the  
15 relevant issue is where investors see the subject company in relation to other  
16 similarly situated utility companies (*i.e.*, the Utility Proxy Group). To the extent  
17 investors view a company as being exposed to higher risk, the required return will  
18 increase, and vice versa.

19           For regulated utilities, business risks are both long-term and near-term in  
20 nature. Whereas near-term business risks are reflected in year-to-year variability  
21 in earnings and cash flow brought about by economic or regulatory factors, long-  
22 term business risks reflect the prospect of an impaired ability of investors to obtain  
23 both a fair rate of return on, and return of, their capital. Moreover, because utilities

1 accept the obligation to provide safe, adequate and reliable service at all times (in  
2 exchange for the opportunity to earn a fair return on their investment), they  
3 generally do not have the option to delay, defer, or reject capital investments.  
4 Because those investments are capital-intensive, utilities generally do not have the  
5 option to avoid raising external funds during periods of capital market distress, if  
6 necessary.

7 Because utilities invest in long-lived assets, long-term business risks are of  
8 paramount concern to equity investors. That is, the risk of not recovering the return  
9 on their investment extends far into the future. The timing and nature of events that  
10 may lead to losses, however, also are uncertain and, consequently, those risks and  
11 their implications for the required return on equity tend to be difficult to quantify.  
12 Regulatory commissions (like investors who commit their capital) must review a  
13 variety of quantitative and qualitative data and apply their reasoned judgment to  
14 determine how long-term risks weigh in their assessment of the market-required  
15 return on common equity.

16 **B. Financial Risk**

17 **Q. PLEASE DEFINE FINANCIAL RISK AND EXPLAIN WHY IT IS**  
18 **IMPORTANT IN DETERMINING A FAIR RATE OF RETURN.**

19 A. Financial risk is the additional risk created by the introduction of debt and preferred  
20 stock into the capital structure. The higher the proportion of debt and preferred  
21 stock in the capital structure, the higher the financial risk to common equity owners  
22 (*i.e.*, failure to receive dividends due to default or other covenants). Therefore,



1 consistent with the basic financial principle of risk and return, common equity  
2 investors demand higher returns as compensation for bearing higher financial risk.

3 **Q. CAN BOND AND CREDIT RATINGS BE A PROXY FOR A FIRM'S**  
4 **COMBINED BUSINESS AND FINANCIAL RISKS TO EQUITY OWNERS**  
5 **(I.E., INVESTMENT RISK)?**

6 A. Yes, similar bond ratings/issuer credit ratings reflect, and are representative of,  
7 similar combined business and financial risks (*i.e.*, total risk) faced by bond  
8 investors.<sup>5</sup> Although specific business or financial risks may differ between  
9 companies, the same bond/credit rating indicates that the combined risks are  
10 roughly similar from a debtholder perspective. The caveat is that these debtholder  
11 risk measures do not translate directly to risks for common equity.

12 **Q. DO RATING AGENCIES ACCOUNT FOR COMPANY SIZE IN THEIR**  
13 **BOND RATINGS?**

14 A. No. Neither Standard & Poor's ("S&P") nor Moody's Investors Service  
15 ("Moody's") have minimum company size requirements for any given rating level.  
16 This means, all else equal, a relative size analysis must be conducted for equity  
17 investments in companies with similar bond ratings.

18 **V. VALLEY, CITIZENS', AND THE UTILITY PROXY GROUPS**

19 **Q. PLEASE SUMMARIZE YOUR KNOWLEDGE OF THE COMPANIES.**

20 A. Valley is an investor-owned natural gas distribution utility that provides natural gas  
21 service to customers in Sayre and surrounding communities in Bradford County,

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<sup>5</sup> Risk distinctions within S&P's bond rating categories are recognized by a plus or minus, e.g., within the A category, an S&P rating can be at A+, A, or A-. Similarly, risk distinction for Moody's ratings are distinguished by numerical rating gradations, e.g., within the A category, a Moody's rating can be A1, A2 and A3.

1 which is in the northern tier of Pennsylvania and is predominantly rural. Valley's  
2 Pennsylvania operations serve more than 7,300 customers.

3 Citizens' is a Pennsylvania corporation with its principal office located in  
4 Lewisburg, Union County, Pennsylvania. Citizens' is an investor-owned, for-profit  
5 electric distribution utility. Citizens' service territory is a 55-square-mile territory  
6 in and around Lewisburg, Pennsylvania. As of December 31, 2021, Citizens'  
7 served 7,093 customers, of which 5,892 were residential and 1,201 were  
8 commercial, industrial or lighting.<sup>6</sup>

9 The Companies are wholly-owned by C&T Enterprises, Inc., and are not  
10 publicly-traded.

11 **Q. PLEASE EXPLAIN HOW YOU CHOSE THE COMPANIES IN THE GAS**  
12 **UTILITY PROXY GROUP.**

- 13 A. The companies selected for the Gas Utility Proxy Group met the following criteria:
- 14 (i) They were included in the Natural Gas Utility Group of *Value Line's*  
15 *Standard Edition* ("*Value Line*") (February 21, 2022);
  - 16 (ii) They have 60% or greater of fiscal year 2021 total operating income derived  
17 from, and 60% or greater of fiscal year 2021 total assets attributable to,  
18 regulated gas distribution operations;
  - 19 (iii) At the time of preparation of this testimony, they had not publicly  
20 announced that they were involved in any major merger or acquisition  
21 activity (*i.e.*, one publicly-traded utility merging with or acquiring another)  
22 or any other major development;

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<sup>6</sup> Source: <https://citizenselectric.com/about-us/>

- 1 (iv) They have not cut or omitted their common dividends during the five years  
2 ended 2021 or through the time of preparation of this testimony;
- 3 (v) They have *Value Line* and Bloomberg Professional Services ("Bloomberg")  
4 adjusted beta coefficients ("beta");
- 5 (vi) They have positive *Value Line* five-year dividends per share ("DPS")  
6 growth rate projections; and
- 7 (vii) They have *Value Line*, Reuters, Zacks, or Yahoo! Finance consensus five-  
8 year earnings per share ("EPS") growth rate projections.

9 The following six companies met these criteria: Atmos Energy Corporation,  
10 New Jersey Resources Corporation, NiSource Inc., Northwest Natural Holding  
11 Company, ONE Gas, Inc., and Spire Inc.

12 **Q. PLEASE EXPLAIN HOW YOU CHOSE THE COMPANIES IN THE**  
13 **ELECTRIC UTILITY PROXY GROUP.**

- 14 A. The companies selected for the Electric Utility Proxy Group met the following  
15 criteria:
- 16 (i) They were included in the Eastern, Central, or Western Electric Utility  
17 Group of *Value Line* (March 11, 2022, February 11, 2022, January 21,  
18 2022);
- 19 (ii) They have 70% or greater of fiscal year 2021 total operating income derived  
20 from, and 70% or greater of fiscal year 2021 total assets attributable to,  
21 regulated electric distribution operations;
- 22 (iii) At the time of preparation of this testimony, they had not publicly  
23 announced that they were involved in any major merger or acquisition

- 1 activity (*i.e.*, one publicly-traded utility merging with or acquiring another)  
2 or any other major development;
- 3 (iv) They have not cut or omitted their common dividends during the five years  
4 ended 2021 or through the time of preparation of this testimony;
- 5 (v) They have *Value Line* and Bloomberg adjusted betas;
- 6 (vi) They have positive *Value Line* five-year DPS growth rate projections; and
- 7 (vii) They have *Value Line*, Reuters, Zacks, or Yahoo! Finance consensus five-  
8 year EPS growth rate projections.

9 The following 14 companies met these criteria: Alliant Energy Corporation,  
10 Ameren Corporation, American Electric Power Company, Inc., Duke Energy  
11 Corporation, Edison International, Entergy Corporation, Evergy, Inc., Eversource  
12 Energy, IDACORP, Inc., NorthWestern Corporation, OGE Energy Corporation,  
13 Portland General Electric Company, The Southern Company, and Xcel Energy Inc.

14 **Q. PLEASE DESCRIBE PAGES 1 AND 2 OF SCHEDULE DWD-2.**

15 A. Pages 1 and 2 of Schedule DWD-2 contain comparative capitalization and financial  
16 statistics for the Gas and Electric Utility Proxy Groups identified above for the  
17 years 2017 to 2021.

18 During the five-year period ending 2021, the historically achieved average  
19 earnings rate on book common equity for the Gas and Electric Utility Proxy Groups  
20 averaged 8.13% and 9.15%, respectively. Total debt to earnings before interest,  
21 taxes, depreciation, and amortization for the years 2017 to 2021 ranged between  
22 4.96 and 7.65, with an average of 5.94 for the Gas Utility Proxy Group, and ranged  
23 between 4.55 and 6.07, with an average of 5.19 for the Electric Utility Proxy Group.

1 Funds from operations to total debt ranged from 8.50% to 24.21%, with an average  
2 of 15.30% for the Gas Utility Proxy Group, and 9.76% to 17.91% with an average  
3 of 13.91% for the Electric Utility Proxy Group.

4 **VI. CAPITAL STRUCTURE AND ASSOCIATED COST RATES**

5 **Q. WHAT CAPITAL STRUCTURE RATIOS DO YOU RECOMMEND BE**  
6 **EMPLOYED IN DEVELOPING AN OVERALL FAIR RATE OF RETURN**  
7 **APPROPRIATE FOR THE COMPANIES?**

8 A. For Valley and Citizens' I recommend the use of the capital structure maintained  
9 by the Companies' parent organization, C&T Enterprises, which consists of 50.47%  
10 long-term debt and 49.53% common equity.

11 **Q. WHY ARE YOU RECOMMENDING A HYPOTHETICAL CAPITAL**  
12 **STRUCTURE IN THIS PROCEEDING?**

13 A. Valley's and Citizens' capital structures at December 31, 2021 contain 63.89% and  
14 84.56% common equity, respectively<sup>7</sup>. Although these capital structures finance  
15 the Companies' rate bases, equity ratios of 63.89% and 84.56% are inappropriate at  
16 this time for ratemaking purposes because they contain a higher than necessary  
17 common equity ratio that results in, all else equal, a higher revenue cost of capital,  
18 which must be paid for by rate payers.

19 **Q. HOW DOES YOUR PROPOSED HYPOTHETICAL CAPITAL**  
20 **STRUCTURE COMPARE WITH THE CAPITAL STRUCTURES**

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<sup>7</sup> Companies' December 31, 2021 Return on Equity Report to the Commission.

1           **MAINTAINED BY THE COMPANIES IN YOUR GAS AND ELECTRIC**  
2           **UTILITY PROXY GROUPS?**

3    A.    My proposed hypothetical capital structure is reasonable to use and is consistent  
4           with the range of capital structures maintained by my Gas and Electric Utility Proxy  
5           Groups, as shown on pages 3 through 5 of Schedule DWD-2.

6    **Q.    WHAT ARE YOUR RECOMMENDED EMBEDDED LONG-TERM DEBT**  
7           **COST RATES FOR THE COMPANIES?**

8    A.    I recommend the actual embedded long-term debt cost rates of the Companies,  
9           which are 4.49% (Valley) and 4.09% (Citizens').

10 **VII.   COMMON EQUITY COST RATE MODELS**

11 **Q.    IS IT IMPORTANT THAT COST OF COMMON EQUITY MODELS BE**  
12           **MARKET-BASED?**

13   A.    Yes. As discussed previously, regulated public utilities, like the Companies, must  
14           compete for equity in capital markets along with all other companies with  
15           commensurate risk, including non-utilities. The cost of common equity is thus  
16           determined based on equity market expectations for the returns of those companies.  
17           If an individual investor is choosing to invest their capital among companies with  
18           comparable risk, they will choose the company providing a higher return over a  
19           company providing a lower return.

20 **Q.    ARE YOUR COST OF COMMON EQUITY MODELS MARKET-BASED?**

21   A.    Yes. The DCF model is market-based in that market prices are used in developing  
22           the dividend yield component of the model. The RPM and CAPM are also market-  
23           based in that the bond/issuer ratings and expected bond yields/risk-free rate used in

1 the application of the RPM and CAPM reflect the market's assessment of  
2 bond/credit risk. In addition, the use of beta to determine the equity risk premium  
3 also reflects the market's assessment of market/systematic risk, as betas are derived  
4 from regression analyses of market prices. Moreover, market prices are used in the  
5 development of the monthly returns and equity risk premiums used in the Predictive  
6 Risk Premium Model ("PRPM"), one of the specific methods used in the RPM  
7 analysis. Selection criteria for the Non-Price Regulated Proxy Group are based on  
8 regression analyses of market prices and reflect the market's assessment of total  
9 risk.

10 **Q. WHAT ANALYTICAL APPROACHES DID YOU USE TO DETERMINE**  
11 **THE COMPANIES' ROE?**

12 A. As discussed earlier, I have relied on the DCF model, the RPM, and the CAPM,  
13 which I apply to the Utility Proxy Group described above. I also applied these same  
14 models to a Non-Price Regulated Proxy Group described later in this section.

15 I rely on these models because reasonable investors use a variety of tools  
16 and do not rely exclusively on a single source of information or single model.  
17 Moreover, the models on which I rely focus on different aspects of return  
18 requirements and provide different insights to investors' views of risk and return.  
19 The DCF model, for example, estimates the investor-required return assuming a  
20 constant expected dividend yield and growth rate in perpetuity, while risk premium-  
21 based methods (*i.e.*, the RPM and CAPM approaches) provide the ability to reflect  
22 investors' views of risk, future market returns, and the relationship between interest  
23 rates and the cost of common equity. Just as the use of market data for the Utility

1 Proxy Group adds the reliability necessary to inform expert judgment in arriving at  
2 a recommended common equity cost rate, the use of multiple generally accepted  
3 common equity cost rate models also adds reliability and accuracy when arriving  
4 at a recommended common equity cost rate.

5 The use of multiple models also makes intuitive sense when we consider  
6 that market prices are set by the buying and selling behavior of multiple investors,  
7 whose circumstances, objectives, and constraints vary over time and across market  
8 conditions. We cannot assume a single method is the best measure of the factors  
9 motivating those decisions for all investors at all times. Giving undue weight to a  
10 single method runs the very real risk of ignoring important information provided  
11 by other methods.

12 In other words, no single model is more reliable than all others under all  
13 market conditions. Intuition suggests it is more appropriate to use as many methods  
14 as we reasonably can and to reflect the many factors motivating investment  
15 decisions as best we can. In this instance, intuition, financial theory,<sup>8</sup> and financial  
16 practice reach a common conclusion: we should apply and reasonably consider  
17 multiple methods when estimating the ROE.

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<sup>8</sup> As Brigham explains: "Whereas debt and preferred stocks are contractual obligations which have easily determined costs, it is not at all easy to estimate [the ROE]. However, three methods can be used: (1) the Capital Asset Pricing Model (CAPM), (2) the discounted cash flow (DCF) model, and (3) the bond-yield-plus-risk-premium approach. These methods should not be regarded as mutually exclusive – no one dominates the others, and all are subject to error when used in practice. Therefore, when faced with the task of estimating a company's cost of equity, we generally use all three methods and then choose among them on the basis of our confidence in the data used for each in the specific case at hand." Eugene F. Brigham, Louis C. Gapenski, Financial Management, Theory and Practice, 7<sup>th</sup> ed., The Dryden Press, 1994, at 341.



1           **A.     Discounted Cash Flow Model**

2           **Q.     WHAT IS THE THEORETICAL BASIS OF THE DCF MODEL?**

3           A.     The theory underlying the DCF model is that the present value of an expected future  
4           stream of net cash flows during the investment holding period can be determined  
5           by discounting those cash flows at the cost of capital, or the investors' capitalization  
6           rate. DCF theory indicates that an investor buys a stock for an expected total return  
7           rate, which is derived from the cash flows received from dividends and market price  
8           appreciation. Mathematically, the dividend yield on market price plus a growth rate  
9           equals the capitalization rate; *i.e.*, the total common equity return rate expected by  
10          investors.

11          **Q.     WHICH VERSION OF THE DCF MODEL DID YOU USE?**

12          A.     I used the single-stage constant growth DCF model in my analyses.

13          **Q.     PLEASE DESCRIBE THE DIVIDEND YIELD YOU USED IN APPLYING  
14          THE CONSTANT GROWTH DCF MODEL.**

15          A.     The unadjusted dividend yields are based on the proxy companies' dividends as of  
16          March 18, 2022, divided by the average closing market price for the 60 trading days  
17          ended March 18, 2022.<sup>9</sup>

18          **Q.     PLEASE EXPLAIN YOUR ADJUSTMENT TO THE DIVIDEND YIELD.**

19          A.     Because dividends are paid periodically (*e.g.* quarterly), as opposed to continuously  
20          (daily), an adjustment must be made to the dividend yield. This is often referred to  
21          as the discrete, or the "Gordon Periodic," version of the DCF model.

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<sup>9</sup> See, Column 1, page 1 of Schedule DWD-3.

1 DCF theory calls for using the full growth rate, or  $D_1$ , in calculating the  
2 model's dividend yield component. Because the companies in the Gas and Electric  
3 Utility Proxy Groups increase their quarterly dividends at various times during the  
4 year, a reasonable assumption is to reflect one-half the annual dividend growth rate  
5 in the dividend yield component, or  $D_{1/2}$ . Because the dividend should be  
6 representative of the next 12-month period, this adjustment is a conservative  
7 approach that does not overstate the dividend yield. Therefore, the actual average  
8 dividend yields in Column 1, page 1 of Schedule DWD-3 have been adjusted  
9 upward to reflect one-half the average projected growth rate shown in Column 5.

10 **Q. PLEASE EXPLAIN THE BASIS FOR THE GROWTH RATES YOU**  
11 **APPLIED TO THE UTILITY PROXY GROUPS IN YOUR CONSTANT**  
12 **GROWTH DCF MODEL.**

13 A. Investors with more limited resources than institutional investors are likely to rely  
14 on widely available financial information services, such as *Value Line*, Zacks, and  
15 Yahoo! Finance. Investors realize that analysts have significant insight into the  
16 dynamics of the industries and individual companies they analyze, as well as  
17 companies' abilities to effectively manage the effects of changing laws and  
18 regulations, and ever-changing economic and market conditions. For these reasons,  
19 I used analysts' five-year forecasts of EPS growth in my DCF analysis.

20 Over the long run, there can be no growth in DPS without growth in EPS.  
21 Security analysts' earnings expectations have a more significant influence on  
22 market prices than dividend expectations. Thus, using earnings growth rates in a

1 DCF analysis provides a better match between investors' market price appreciation  
2 expectations and the growth rate component of the DCF.

3 **Q. PLEASE SUMMARIZE THE CONSTANT GROWTH DCF MODEL**  
4 **RESULTS.**

5 A. As shown on page 1 of Schedule DWD-3, for the Gas Utility Proxy Group, the  
6 mean result of applying the single-stage DCF model is 9.62%, the median result is  
7 9.89%, and the average of the two is 9.76%. For the Electric Utility Proxy Group,  
8 the mean DCF result is 8.89%, the median result is 9.21%, and the average of the  
9 two is 9.05%. In arriving at a conclusion for the constant growth DCF-indicated  
10 common equity cost rate for the Gas and Electric Utility Proxy Groups, I relied on  
11 an average of the mean and the median results of the DCF, or 9.76% (gas) and  
12 9.05% (electric). This approach considers all the proxy utilities' results, while  
13 mitigating the high and low outliers of those individual results.

14 **B. The Risk Premium Model**

15 **Q. PLEASE DESCRIBE THE THEORETICAL BASIS OF THE RPM.**

16 A. The RPM is based on the fundamental financial principle of risk and return; namely,  
17 that investors require greater returns for bearing greater risk. The RPM recognizes  
18 that common equity capital has greater investment risk than debt capital, as  
19 common equity shareholders are behind debt holders in any claim on a company's  
20 assets and earnings. As a result, investors require higher returns from common  
21 stocks than from bonds to compensate them for bearing the additional risk.

22 While it is possible to directly observe bond returns and yields, investors'  
23 required common equity returns cannot be directly determined or observed.

1 According to RPM theory, one can estimate a common equity risk premium over  
2 bonds (either historically or prospectively) and use that premium to derive a cost  
3 rate of common equity. The cost of common equity equals the expected cost rate  
4 for long-term debt capital, plus a risk premium over that cost rate, to compensate  
5 common shareholders for the added risk of being unsecured and last-in-line for any  
6 claim on the corporation's assets and earnings upon liquidation.

7 **Q. PLEASE EXPLAIN HOW YOU DERIVED YOUR INDICATED COST OF**  
8 **COMMON EQUITY BASED ON THE RPM.**

9 A. To derive my indicated cost of common equity under the RPM, I used two risk  
10 premium methods. The first method was the PRPM and the second method was a  
11 risk premium model using a total market approach. The PRPM estimates the risk-  
12 return relationship directly, while the total market approach indirectly derives a risk  
13 premium by using known metrics as a proxy for risk.

14 **Q. PLEASE EXPLAIN THE PRPM.**

15 A. The PRPM, published in the *Journal of Regulatory Economics*,<sup>10</sup> was developed  
16 from the work of Robert F. Engle, who shared the Nobel Prize in Economics in  
17 2003 "for methods of analyzing economic time series with time-varying volatility  
18 ("ARCH)".<sup>11</sup> Engle found that volatility changes over time and is related from  
19 one period to the next, especially in financial markets. Engle discovered that  
20 volatility of prices and returns clusters over time and is therefore highly predictable  
21 and can be used to predict future levels of risk and risk premiums.

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<sup>10</sup> Autoregressive conditional heteroscedasticity. See "A New Approach for Estimating the Equity Risk Premium for Public Utilities", Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. The Journal of Regulatory Economics (December 2011), 40:261-278.

<sup>11</sup> [www.nobelprize.org](http://www.nobelprize.org).

1           The PRPM estimates the risk-return relationship directly, as the predicted  
2 equity risk premium is generated by predicting volatility or risk. The PRPM is not  
3 based on an estimate of investor behavior, but rather on an evaluation of the results  
4 of that behavior (*i.e.*, the variance of historical equity risk premiums).

5           The inputs to the model are the historical returns on the common shares of  
6 each Gas and Electric Utility Proxy Group company minus the historical monthly  
7 yield on long-term U.S. Treasury securities through February 2022. Using a  
8 generalized form of ARCH, known as GARCH, I calculated each Utility Proxy  
9 Group company's projected equity risk premium using Eviews<sup>®</sup> statistical software.  
10 When the GARCH model is applied to the historical return data, it produces a  
11 predicted GARCH variance series<sup>12</sup> and a GARCH coefficient<sup>13</sup>. Multiplying the  
12 predicted monthly variance by the GARCH coefficient and then annualizing it<sup>14</sup>  
13 produces the predicted annual equity risk premium. I then added the forecasted 30-  
14 year U.S. Treasury bond yield of 2.89%<sup>15</sup> to each company's PRPM-derived equity  
15 risk premium to arrive at an indicated cost of common equity. The 30-year U.S.  
16 Treasury bond yield is a consensus forecast derived from *Blue Chip Financial*  
17 *Forecasts ("Blue Chip")*<sup>16</sup>.

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<sup>12</sup> Illustrated on Columns 1 and 2, page 2 of Schedule DWD-4.

<sup>13</sup> Illustrated on Column 4, page 2 of Schedule DWD-4.

<sup>14</sup> Annualized Return =  $(1 + \text{Monthly Return})^{12} - 1$ .

<sup>15</sup> See, Column 6, page 2 of Schedule DWD-4.

<sup>16</sup> *Blue Chip Financial Forecasts*, December 1, 2021 at page 14 and March 1, 2022 at page 2.

1 **Q. WHAT ARE THE INDICATED RESULTS OF THE PRPM AS APPLIED**  
2 **TO YOUR UTILITY PROXY GROUPS?**

3 A. The mean PRPM indicated common equity cost rate for the Gas Utility Proxy  
4 Group is 11.10%, the median is 9.93%, and the average of the two is 10.52%. For  
5 the Electric Utility Proxy Group, the mean PRPM result is 10.85%, the median is  
6 10.69%, and the average of the two is 10.77%. Consistent with my reliance on the  
7 average of the median and mean results of the DCF models, I relied on the average  
8 of the mean and median results of the Gas and Electric Utility Proxy Group PRPM  
9 to calculate cost of common equity rates of 10.52% and 10.77%, respectively.

10 **Q. PLEASE EXPLAIN THE TOTAL MARKET APPROACH RPM.**

11 A. The total market approach RPM adds a prospective public utility bond yield to an  
12 average of: 1) an equity risk premium that is derived from a beta-adjusted total  
13 market equity risk premium, 2) an equity risk premium based on the S&P Utilities  
14 Index, and 3) an equity risk premium based on authorized ROEs for gas and electric  
15 utilities, respectively.

16 **Q. PLEASE EXPLAIN THE BASIS OF THE EXPECTED BOND YIELD OF**  
17 **4.44% APPLICABLE TO THE GAS UTILITY PROXY GROUP AND THE**  
18 **4.53% EXPECTED BOND YIELD APPLICABLE TO THE ELECTRIC**  
19 **UTILITY PROXY GROUP.**

20 A. The first step in the total market approach RPM analysis is to determine the  
21 expected bond yield. Because both ratemaking and the cost of capital, including  
22 common equity cost rate, are prospective in nature, a prospective yield on similarly-  
23 rated long-term debt is essential. I relied on a consensus forecast of about 50

1 economists of the expected yield on Aaa-rated corporate bonds for the six calendar  
2 quarters ending with the second calendar quarter of 2023, and *Blue Chip's* long-  
3 term projections for 2023 to 2027, and 2028 to 2032. As shown on line 1, page 3  
4 of Schedule DWD-4, the average expected yield on Moody's Aaa-rated corporate  
5 bonds is 3.95%. To derive an expected yield on Moody's A2-rated public utility  
6 bonds, I made an upward adjustment of 0.41%, which represents a recent spread  
7 between Aaa-rated corporate bonds and A2-rated public utility bonds, in order to  
8 adjust the expected Aaa-rated corporate bond yield to an equivalent A2-rated public  
9 utility bond yield.<sup>17</sup> Adding that recent 0.41% spread to the expected Aaa-rated  
10 corporate bond yield of 3.95% results in an expected A2-rated public utility bond  
11 yield of 4.36%. Since the Gas Utility Proxy Group's average Moody's long-term  
12 issuer rating is A3, and the Electric Utility Proxy Group's average Moody's long-  
13 term issuer rating is Baa1, additional adjustments to the expected Moody's A2  
14 public utility bond yields are needed to reflect the difference in bond ratings for  
15 each group. Upward adjustments of 0.08% and 0.17%, which are one-third and  
16 two-thirds the recent spread between A2 and Baa2 public utility bond yields,  
17 respectively, result in 4.44% and 4.53% expected bond yields for the Gas Utility  
18 Proxy Group and Electric Utility Proxy Group, respectively.

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<sup>17</sup> As shown on line 2 and explained in note 2, page 3 of Schedule DWD-4.

**Table 4: Summary of the Calculation of the Gas and Electric Utility Proxy  
Group Projected Bond Yields<sup>18</sup>**

	<b>Gas</b>	<b>Electric</b>
Prospective Yield on Moody's Aaa-Rated Corporate Bonds ( <i>Blue Chip</i> )	3.95%	3.95%
Adjustment to Reflect Yield Spread Between Moody's Aaa-Rated Corporate Bonds and Moody's A2-Rated Utility Bonds	0.41%	0.41%
Adjustment to Reflect the Gas Utility Proxy Group's Average Moody's Bond Rating of A3	<u>0.08%</u>	
Adjustment to Reflect the Electric Utility Proxy Group's Average Moody's Bond Rating of Baa1		<u>0.17%</u>
Prospective Bond Yield Applicable to the Utility Proxy Group	<u>4.44%</u>	<u>4.53%</u>

**Q. PLEASE EXPLAIN HOW THE BETA-DERIVED EQUITY RISK PREMIUM IS DETERMINED.**

A. The components of the beta-derived risk premium model are: 1) an expected market equity risk premium over corporate bonds, and 2) the beta. The derivation of the beta-derived equity risk premium that I applied to the Gas and Electric Utility Proxy Groups are shown on lines 1 through 9, page 8 of Schedule DWD-4. The total beta-derived equity risk premium I applied is based on an average of three historical market data-based equity risk premiums, two *Value Line*-based equity risk premiums, and one Bloomberg-based equity risk premium. Each of these is described below.

<sup>18</sup> As shown on page 3 of Schedule DWD-4.



1 **Q. HOW DID YOU DERIVE A MARKET EQUITY RISK PREMIUM BASED**  
2 **ON LONG-TERM HISTORICAL DATA?**

3 A. To derive a historical market equity risk premium, I used the most recent holding  
4 period returns for the large company common stocks from the Stocks, Bonds, Bills,  
5 and Inflation ("SBBI") Yearbook 2021 ("SBBI - 2021")<sup>19</sup> less the average historical  
6 yield on Moody's Aaa/Aa-rated corporate bonds for the period 1928 to 2020. Using  
7 holding period returns over a very long time is appropriate because it is consistent  
8 with the long-term investment horizon presumed by investing in a going concern,  
9 *i.e.*, a company expected to operate in perpetuity.

10 SBBI's long-term arithmetic mean monthly total return rate on large  
11 company common stocks was 11.94% and the long-term arithmetic mean monthly  
12 yield on Moody's Aaa/Aa-rated corporate bonds was 6.02%.<sup>20</sup> As shown on line 1,  
13 page 8 of Schedule DWD-4, subtracting the mean monthly bond yield from the  
14 total return on large company stocks results in a long-term historical equity risk  
15 premium of 5.92%.

16 I used the arithmetic mean monthly total return rates for the large company  
17 stocks and yields (income returns) for the Moody's Aaa/Aa-rated corporate bonds,  
18 because they are appropriate for the purpose of estimating the cost of capital as  
19 noted in SBBI - 2021.<sup>21</sup> Using the arithmetic mean return rates and yields is  
20 appropriate because historical total returns and equity risk premiums provide  
21 insight into the variance and standard deviation of returns needed by investors in

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<sup>19</sup> SBBI Appendix A Tables: Morningstar Stocks, Bonds, Bills, & Inflation 1926-2020.

<sup>20</sup> As explained in note 1, page 9 of Schedule DWD-4.

<sup>21</sup> SBBI - 2021, at page 10-22.

1           estimating future risk when making a current investment. If investors relied on the  
2           geometric mean of historical equity risk premiums, they would have no insight into  
3           the potential variance of future returns, because the geometric mean relates the  
4           change over many periods to a constant rate of change, thereby obviating the year-  
5           to-year fluctuations, or variance, which is critical to risk analysis.

6   **Q.   PLEASE EXPLAIN THE DERIVATION OF THE REGRESSION-BASED**  
7   **MARKET EQUITY RISK PREMIUM.**

8   A.   To derive the regression-based market equity risk premium of 8.23% shown on line  
9           2, page 8 of Schedule DWD-4, I used the same monthly annualized total returns on  
10          large company common stocks relative to the monthly annualized yields on  
11          Moody's Aaa/Aa-rated corporate bonds as mentioned above. I modeled the  
12          relationship between interest rates and the market equity risk premium using the  
13          observed monthly market equity risk premium as the dependent variable, and the  
14          monthly yield on Moody's Aaa/Aa-rated corporate bonds as the independent  
15          variable. I then used a linear Ordinary Least Squares ("OLS") regression, in which  
16          the market equity risk premium is expressed as a function of the Moody's Aaa/Aa-  
17          rated corporate bonds yield:

18   
$$RP = \alpha + \beta (R_{Aaa/Aa})$$

19   **Q.   PLEASE EXPLAIN THE DERIVATION OF THE PRPM EQUITY RISK**  
20   **PREMIUM.**

21   A.   I used the same PRPM approach described above to the PRPM equity risk premium.  
22          The inputs to the model are the historical monthly returns on large company  
23          common stocks minus the monthly yields on Moody's Aaa/Aa-rated corporate

1 bonds during the period from January 1928 through February 2022.<sup>22</sup> Using the  
2 previously discussed generalized form of ARCH, known as GARCH, the projected  
3 equity risk premium is determined using Eviews<sup>®</sup> statistical software. The resulting  
4 PRPM predicted a market equity risk premium of 8.07%.<sup>23</sup>

5 **Q. PLEASE EXPLAIN THE DERIVATION OF A PROJECTED EQUITY RISK**  
6 **PREMIUM BASED ON *VALUE LINE* DATA FOR YOUR RPM ANALYSIS.**

7 A. As noted above, because both ratemaking and the cost of capital are prospective, a  
8 prospective market equity risk premium is needed. The derivation of the forecasted  
9 or prospective market equity risk premium can be found in note 4, page 8 of  
10 Schedule DWD-4. Consistent with my calculation of the dividend yield component  
11 in my DCF analysis, this prospective market equity risk premium is derived from  
12 an average of the three- to five-year median market price appreciation potential by  
13 *Value Line* for the 13 weeks ended March 18, 2022, plus an average of the median  
14 estimated dividend yield for the common stocks of the 1,700 firms covered in *Value*  
15 *Line's* Standard Edition.<sup>24</sup>

16 The average median expected price appreciation is 44%, which translates to  
17 a 9.54% annual appreciation, and, when added to the average of *Value Line's*  
18 median expected dividend yields of 1.85%, equates to a forecasted annual total  
19 return rate on the market of 11.39%. The forecasted Moody's Aaa-rated corporate  
20 bond yield of 3.95% is deducted from the total market return of 11.39%, resulting

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<sup>22</sup> Data from January 1926 to December 2020 is from SBBI - 2021. Data from December 2020 to February 2022 is from Bloomberg.

<sup>23</sup> Shown on line 3, page 8 of Schedule DWD-4.

<sup>24</sup> As explained in detail in note 1, page 2 of Schedule DWD-5.

1 in an equity risk premium of 7.44%, as shown on line 4, page 8 of Schedule DWD-  
2 4.

3 **Q. PLEASE EXPLAIN THE DERIVATION OF AN EQUITY RISK PREMIUM**  
4 **BASED ON THE S&P 500 COMPANIES.**

5 A. Using data from *Value Line*, I calculated an expected total return on the S&P 500  
6 companies using expected dividend yields and long-term growth estimates as a  
7 proxy for capital appreciation. The expected total return for the S&P 500 is 16.14%.  
8 Subtracting the prospective yield on Moody's Aaa-rated corporate bonds of 3.95%  
9 results in a 12.19% projected equity risk premium.

10 **Q. PLEASE EXPLAIN THE DERIVATION OF AN EQUITY RISK PREMIUM**  
11 **BASED ON BLOOMBERG DATA.**

12 A. Using data from Bloomberg, I calculated an expected total return on the S&P 500  
13 using expected dividend yields and long-term growth estimates as a proxy for  
14 capital appreciation, identical to the method described above. The expected total  
15 return for the S&P 500 is 14.60%. Subtracting the prospective yield on Moody's  
16 Aaa-rated corporate bonds of 3.95% results in a 10.65% projected equity risk  
17 premium.

18 **Q. WHAT WAS YOUR CONCLUSION OF A BETA-DERIVED EQUITY RISK**  
19 **PREMIUM FOR USE IN YOUR RPM ANALYSIS?**

20 A. I gave equal weight to all six equity risk premiums based on each source - historical,  
21 *Value Line*, and Bloomberg - in arriving at an 8.75% equity risk premium.

**Table 5: Summary of the Calculation of the Equity Risk Premium  
Using Total Market Returns<sup>25</sup>**

Historical Spread Between Total Returns of Large Stocks and Aaa and Aa2-Rated Corporate Bond Yields (1928 – 2020)	5.92%
Regression Analysis on Historical Data	8.23%
PRPM Analysis on Historical Data	8.07%
Prospective Equity Risk Premium using Total Market Returns from <i>Value Line</i> Summary & Index less Projected Aaa Corporate Bond Yields	7.44%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from <i>Value Line</i> for the S&P 500 less Projected Aaa Corporate Bond Yields	12.19%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from Bloomberg Professional Services for the S&P 500 less Projected Aaa Corporate Bond Yields	<u>10.65%</u>
<b>Average</b>	<u>8.75%</u>

After calculating the average market equity risk premium of 8.75%, I adjusted it by the beta to account for the risk of the Gas and Electric Utility Proxy Groups. As discussed below, the beta is a meaningful measure of prospective relative risk to the market as a whole, and is a logical way to allocate a company's, or proxy group's, share of the market's total equity risk premium relative to corporate bond yields. As shown on page 1 of Schedule DWD-5, the average of the mean and median betas for the Gas and Electric Utility Proxy Groups are 0.89 and 0.93, respectively. Multiplying the average betas for each group by the market equity risk premium of 8.75% results in beta-adjusted equity risk premiums for the Gas and Electric Utility Proxy Groups of 7.79% and 8.14%, respectively.

<sup>25</sup> As shown on page 8 of Schedule DWD-4.

1 **Q. HOW DID YOU DERIVE THE EQUITY RISK PREMIUM BASED ON THE**  
2 **S&P UTILITY INDEX AND MOODY'S A-RATED PUBLIC UTILITY**  
3 **BONDS?**

4 A. I estimated three equity risk premiums based on S&P Utility Index holding returns,  
5 and two equity risk premiums based on the expected returns of the S&P Utilities  
6 Index, using *Value Line* and Bloomberg data, respectively. Turning first to the S&P  
7 Utility Index holding period returns, I derived a long-term monthly arithmetic mean  
8 equity risk premium between the S&P Utility Index total returns of 10.65% and  
9 monthly Moody's A-rated public utility bond yields of 6.49% from 1928 to 2020 to  
10 arrive at an equity risk premium of 4.16%.<sup>26</sup> I then used the same historical data to  
11 derive an equity risk premium of 6.04% based on a regression of the monthly equity  
12 risk premiums. The final S&P Utility Index holding period equity risk premium  
13 involved applying the PRPM using the historical monthly equity risk premiums  
14 from January 1928 to February 2022 to arrive at a PRPM-derived equity risk  
15 premium of 5.27% for the S&P Utility Index.

16 I then derived expected total returns on the S&P Utilities Index of 10.69%  
17 and 9.78% using data from *Value Line* and Bloomberg, respectively, and subtracted  
18 the prospective Moody's A2-rated public utility bond yield of 4.36%<sup>27</sup>, which  
19 resulted in equity risk premiums of 6.33% and 5.42%, respectively. As with the  
20 market equity risk premiums, I averaged each risk premium based on each source  
21 (*i.e.*, historical, *Value Line*, and Bloomberg) to arrive at my utility-specific equity  
22 risk premium of 5.44%.

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<sup>26</sup> As shown on line 1, page 10 of Schedule DWD-4.

<sup>27</sup> Derived on line 3, page 3 of Schedule DWD-4.

**Table 6: Summary of the Calculation of the Equity Risk Premium  
Using S&P Utility Index Holding Returns<sup>28</sup>**

Historical Spread Between Total Returns of the S&P Utilities Index and A2-Rated Utility Bond Yields (1928 – 2020)	4.16%
Regression Analysis on Historical Data	6.04%
PRPM Analysis on Historical Data	5.27%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from <i>Value Line</i> for the S&P Utilities Index less Projected A2 Utility Bond Yields	6.33%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from Bloomberg Professional Services for the S&P Utilities Index less Projected A2 Utility Bond Yields	<u>5.42%</u>
<b>Average</b>	<u>5.44%</u>

**Q. HOW DID YOU DERIVE AN EQUITY RISK PREMIUM OF 5.46% BASED ON AUTHORIZED ROES FOR GAS DISTRIBUTION UTILITIES?**

A. The equity risk premium of 5.46% shown on line 3, page 7 of Schedule DWD-4 is the result of a regression analysis based on regulatory awarded gas distribution ROEs related to the yields on Moody's A-rated public utility bonds. That analysis is shown on page 13 of Schedule DWD-4. Page 13 of Schedule DWD-4 contains the graphical results of a regression analysis of 809 rate cases for gas distribution utilities which were fully litigated during the period from January 1, 1980 through March 18, 2022. It shows the implicit equity risk premium relative to the yields on A2-rated public utility bonds immediately prior to the issuance of each regulatory decision. It is readily discernible that there is an inverse relationship between the yield on A2-rated public utility bonds and equity risk premiums. In other words,

<sup>28</sup> As shown on page 12 of Schedule DWD-4.

1 as interest rates decline, the equity risk premium rises and vice versa, a result  
2 consistent with financial literature on the subject.<sup>29</sup> I used the regression results to  
3 estimate the equity risk premium applicable to the projected yield on Moody's A2-  
4 rated public utility bonds of 4.36%. Given the expected A-rated utility bond yield  
5 of 4.36%, it can be calculated that the indicated equity risk premium applicable to  
6 that bond yield is 5.46%, which is shown on line 3, page 7 of Schedule DWD-4.

7 **Q. HOW DID YOU DERIVE AN EQUITY RISK PREMIUM OF 5.52% BASED**  
8 **ON AUTHORIZED ROES FOR ELECTRIC UTILITIES?**

9 A. The equity risk premium of 5.52% shown on line 4, page 7 of Schedule DWD-4 is  
10 the result of a regression analysis based on regulatory awarded electric utility ROEs  
11 related to the yields on Moody's A-rated public utility bonds. That analysis is  
12 shown on page 14 of Schedule DWD-4. Page 14 of Schedule DWD-4 contains the  
13 graphical results of a regression analysis of 1,192 rate cases for electric utilities  
14 which were fully litigated during the period from January 1, 1980 through  
15 March 18, 2022. It shows the implicit equity risk premium relative to the yields on  
16 A-rated public utility bonds immediately prior to the issuance of each regulatory  
17 decision. Similar to the analysis using gas distribution utilities, it is readily  
18 discernible that there is also an inverse relationship between the yield on A-rated  
19 public utility bonds and equity risk premiums for electric utilities. I therefore used  
20 the regression results to estimate the equity risk premium applicable to the projected  
21 yield on Moody's A2-rated public utility bonds of 4.36%. Given the expected A-

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<sup>29</sup> See, e.g., Robert S. Harris and Felicia C. Marston, *The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts*, Journal of Applied Finance, Vol. 11, No. 1, 2001, at 11-12; Eugene F. Brigham, Dilip K. Shome, and Steve R. Vinson, *The Risk Premium Approach to Measuring a Utility's Cost of Equity*, Financial Management, Spring 1985, at pp. 33-45.



1 rated utility bond yield of 4.36%, it can be calculated that the indicated equity risk  
2 premium applicable to that bond yield is 5.52%, which is shown on line 4, page 7  
3 of Schedule DWD-4.

4 **Q. WHAT IS YOUR CONCLUSION OF AN EQUITY RISK PREMIUM FOR**  
5 **USE IN YOUR TOTAL MARKET APPROACH RPM ANALYSIS?**

6 A. The equity risk premiums I applied to the Gas and Electric Utility Proxy Groups  
7 were 6.23% and 6.37%, respectively, which gave equal weight to the beta-adjusted  
8 equity risk premium for the Gas and Electric Utility Proxy Groups, the S&P  
9 Utilities Index, and the authorized return utility equity risk premiums as shown on  
10 page 7 of Schedule DWD-4.

11 **Table 7: Summary of Conclusions for the Equity Risk Premium for Use in**  
12 **the Total Market Approach for the Utility Proxy Groups<sup>30</sup>**

	<b>Gas Proxy Group</b>	<b>Electric Proxy Group</b>
Beta-Adjusted Equity Risk Premium	7.79%	8.14%
S&P Utilities Index Equity Risk Premium	5.44%	5.44%
Authorized ROE Equity Risk Premium	<u>5.46%</u>	<u>5.52%</u>
Average	<u>6.23%</u>	<u>6.37%</u>

13

14 **Q. WHAT IS THE INDICATED RPM COMMON EQUITY COST RATE**  
15 **BASED ON THE TOTAL MARKET APPROACH?**

16 A. As shown on line 7, page 3 of Schedule DWD-4, I calculated common equity cost  
17 rates of 10.67% and 10.90% for the Gas and Electric Utility Proxy Groups,  
18 respectively, based on the total market approach RPM.

---

<sup>30</sup> As shown on page 7 of Schedule DWD-4.

1                   **Table 8: Summary of the Total Market Return Risk Premium Model<sup>31</sup>**

	<b>Gas Proxy Group</b>	<b>Electric Proxy Group</b>
Prospective Moody's Utility Bond Yield Applicable to the Utility Proxy Group	4.44%	4.53%
Prospective Equity Risk Premium	<u>6.23%</u>	<u>6.37%</u>
Indicated Cost of Common Equity	<u>10.67%</u>	<u>10.90%</u>

2

3   **Q.     WHAT ARE THE RESULTS OF YOUR APPLICATION OF THE PRPM**  
4           **AND THE TOTAL MARKET APPROACH RPM?**

5   A.     As shown on page 1 of Schedule DWD-4, the indicated RPM-derived common  
6           equity cost rates for the Gas and Electric Utility Proxy Groups are 10.60% and  
7           10.84%, respectively, which gives equal weight to the PRPM and the adjusted-  
8           market approach results.

9           **C.     The Capital Asset Pricing Model**

10   **Q.     PLEASE EXPLAIN THE THEORETICAL BASIS OF THE CAPM.**

11   A.     CAPM theory defines risk as the co-variability of a security's returns with the  
12           market's returns as measured by the beta ( $\beta$ ). A beta less than 1.0 indicates lower  
13           variability than the market as a whole, while a beta greater than 1.0 indicates greater  
14           variability than the market.

15           The CAPM assumes that all non-market or unsystematic risk can be  
16           eliminated through diversification. The risk that cannot be eliminated through  
17           diversification is called market, or systematic, risk. In addition, the CAPM  
18           presumes that investors only require compensation for systematic risk, which is the  
19           result of macroeconomic and other events that affect the returns on all assets. The

---

<sup>31</sup> As shown on page 3 of Schedule DWD-4.

1 model is applied by adding a risk-free rate of return to a market risk premium, which  
2 is adjusted proportionately to reflect the systematic risk of the individual security  
3 relative to the total market as measured by beta. The traditional CAPM model is  
4 expressed as:

$$5 \quad R_s = R_f + \beta (R_m - R_f)$$

6 Where:  $R_s$  = Return rate on the common stock

7  $R_f$  = Risk-free rate of return

8  $R_m$  = Return rate on the market as a whole

9  $\beta$  = Adjusted beta (volatility of the  
10 security relative to the market as a whole)

11 Numerous tests of the CAPM have measured the extent to which security  
12 returns and beta are related as predicted by the CAPM, confirming its validity. The  
13 empirical CAPM ("ECAPM") reflects the reality that while the results of these tests  
14 support the notion that the beta is related to security returns, the empirical Security  
15 Market Line ("SML") described by the CAPM formula is not as steeply sloped as  
16 the predicted SML.<sup>32</sup>

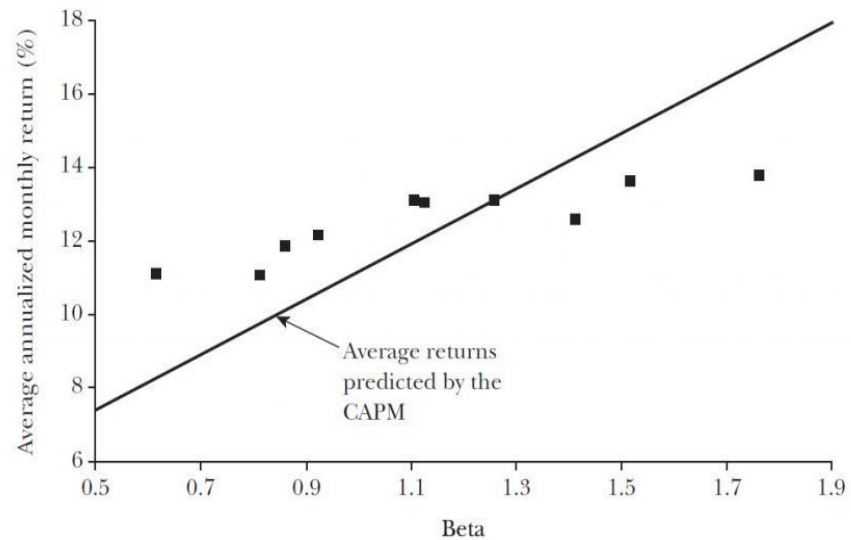
17 The ECAPM reflects this empirical reality. Fama and French clearly state  
18 regarding their Figure 2, below, that "[t]he returns on the low beta portfolios are too  
19 high, and the returns on the high beta portfolios are too low."<sup>33</sup>

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<sup>32</sup> Roger A. Morin, Modern Regulatory Finance, at page 206 ("Morin").

<sup>33</sup> Eugene F. Fama and Kenneth R. French, *The Capital Asset Pricing Model: Theory and Evidence*, Journal of Economic Perspectives, Vol. 18, No. 3, Summer 2004 at p. 33 ("Fama & French").

Figure 2 <http://pubs.aeaweb.org/doi/pdfplus/10.1257/0895330042162430>  
Average Annualized Monthly Return versus Beta for Value Weight Portfolios Formed on Prior Beta, 1928–2003



1

2 Morin also states that:

2

3 With few exceptions, the empirical studies agree that ... low-beta  
4 securities earn returns somewhat higher than the CAPM would predict,  
5 and high-beta securities earn less than predicted.<sup>34</sup>

3

4

5

\* \* \*

6

7 Therefore, the empirical evidence suggests that the expected return on a  
8 security is related to its risk by the following approximation:

7

8

$$K = R_F + x (R_M - R_F) + (1-x) \beta(R_M - R_F)$$

9

10 where x is a fraction to be determined empirically. The value of x that  
11 best explains the observed relationship [is]  $\text{Return} = 0.0829 + 0.0520 \beta$   
12 is between 0.25 and 0.30. If  $x = 0.25$ , the equation becomes:

10

11

12

$$K = R_F + 0.25(R_M - R_F) + 0.75 \beta(R_M - R_F)^{35}$$

13

14 Fama and French provide similar support for the ECAPM when they state:

14

15 The early tests firmly reject the Sharpe-Lintner version of the CAPM.  
16 There is a positive relation between beta and average return, but it is too  
17 "flat."... The regressions consistently find that the intercept is greater

15

16

17

<sup>34</sup> Morin, at p. 207.

<sup>35</sup> Morin, at p. 221.

1 than the average risk-free rate... and the coefficient on beta is less than  
2 the average excess market return... This is true in the early tests... as  
3 well as in more recent cross-section regressions tests, like Fama and  
4 French (1992).<sup>36</sup>

5 Finally, Fama and French further note:

6 Confirming earlier evidence, the relation between beta and average  
7 return for the ten portfolios is much flatter than the Sharpe-Linter  
8 CAPM predicts. The returns on low beta portfolios are too high, and  
9 the returns on the high beta portfolios are too low. For example, the  
10 predicted return on the portfolio with the lowest beta is 8.3 percent per  
11 year; the actual return as 11.1 percent. The predicted return on the  
12 portfolio with the t beta is 16.8 percent per year; the actual is 13.7  
13 percent.<sup>37</sup>

14 Clearly, the justification from Morin, and Fama and French, along with their  
15 reviews of other academic research on the CAPM, validate the use of the ECAPM.  
16 In view of theory and practical research, I have applied both the traditional CAPM  
17 and the ECAPM to the companies in the Gas and Electric Utility Proxy Groups and  
18 averaged the results.

19 **Q. WHAT BETA DID YOU USE IN YOUR CAPM ANALYSIS?**

20 A. For the beta in my CAPM analysis, I considered two sources: *Value Line* and  
21 Bloomberg Professional Services. While both of those services adjust their  
22 calculated (or "raw") betas to reflect the tendency of beta to regress to the market  
23 mean of 1.00, *Value Line* calculates beta over a five-year period, while Bloomberg  
24 calculates it over a two-year period.

---

<sup>36</sup> Fama & French, at 32.

<sup>37</sup> Fama & French, at 33.

1 **Q. PLEASE DESCRIBE YOUR SELECTION OF A RISK-FREE RATE OF**  
2 **RETURN.**

3 A. As shown in Column 5, page 1 of Schedule DWD-5, the risk-free rate adopted for  
4 both applications of the CAPM is 2.89%. This risk-free rate is based on the average  
5 of the *Blue Chip* consensus forecast of the expected yields on 30-year U.S. Treasury  
6 bonds for the six quarters ending with the second calendar quarter of 2023, and  
7 long-term projections for the years 2023 to 2027 and 2028 to 2032.

8 **Q. WHY IS THE YIELD ON LONG-TERM U.S. TREASURY BONDS**  
9 **APPROPRIATE FOR USE AS THE RISK-FREE RATE?**

10 A. The yield on long-term U.S. Treasury bonds is almost risk-free and its term is  
11 consistent with the long-term cost of capital to public utilities measured by the  
12 yields on Moody's A-rated public utility bonds; the long-term investment horizon  
13 inherent in utilities' common stocks; and the long-term life of the jurisdictional rate  
14 base to which the allowed fair rate of return (*i.e.*, cost of capital) will be applied.  
15 In contrast, short-term U.S. Treasury yields are more volatile and largely a function  
16 of Federal Reserve monetary policy.

17 **Q. PLEASE EXPLAIN THE ESTIMATION OF THE EXPECTED RISK**  
18 **PREMIUM FOR THE MARKET USED IN YOUR CAPM ANALYSES.**

19 A. The basis of the market risk premium is explained in detail in note 1 on Schedule  
20 DWD-5. As discussed above, the market risk premium is derived from an average  
21 of three historical data-based market risk premiums, two *Value Line* data-based  
22 market risk premiums, and one Bloomberg data-based market risk premium.

1           The long-term income return on U.S. Government securities of 5.05% was  
2           deducted from the SBBI - 2021 monthly historical total market return of 12.20%,  
3           which results in an historical market equity risk premium of 7.15%.<sup>38</sup> I applied a  
4           linear OLS regression to the monthly annualized historical returns on the S&P 500  
5           relative to historical yields on long-term U.S. Government securities from SBBI -  
6           2021. That regression analysis yielded a market equity risk premium of 9.38%.  
7           The PRPM market equity risk premium is 9.03% and is derived using the PRPM  
8           relative to the yields on long-term U.S. Treasury securities from January 1926  
9           through February 2022.

10           The *Value Line*-derived forecasted total market equity risk premium is  
11           derived by deducting the forecasted risk-free rate of 2.89%, discussed above, from  
12           the *Value Line* projected total annual market return of 11.39%, resulting in a  
13           forecasted total market equity risk premium of 8.50%. The S&P 500 projected  
14           market equity risk premium using *Value Line* data is derived by subtracting the  
15           projected risk-free rate of 2.89% from the projected total return of the S&P 500 of  
16           16.14%. The resulting market equity risk premium is 13.25%.

17           The S&P 500 projected market equity risk premium using Bloomberg data  
18           is derived by subtracting the projected risk-free rate of 2.89% from the projected  
19           total return of the S&P 500 of 14.60%. The resulting market equity risk premium  
20           is 11.71%.

21           These six measures, when averaged, result in an average total market equity  
22           risk premium of 9.84%.

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<sup>38</sup> SBBI - 2021, at Appendix A-1 (1) through A-1 (3) and Appendix A-7 (19) through A-7 (21).

**Table 9: Summary of the Calculation of the Market Risk Premium  
for Use in the CAPM<sup>39</sup>**

Historical Spread Between Total Returns of Large Stocks and Long-Term Government Bond Yields (1926 – 2020)	7.15%
Regression Analysis on Historical Data	9.38%
PRPM Analysis on Historical Data	9.03%
Prospective Equity Risk Premium using Total Market Returns from <i>Value Line</i> Summary & Index less Projected 30-Year Treasury Bond Yields	8.50%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from <i>Value Line</i> for the S&P 500 less Projected 30-Year Treasury Bond Yields	13.25%
Prospective Equity Risk Premium using Measures of Capital Appreciation and Income Returns from Bloomberg Professional Services for the S&P 500 less Projected 30-Year Treasury Bond Yields	<u>11.71%</u>
<b>Average</b>	<u>9.84%</u>

**Q. WHAT ARE THE RESULTS OF YOUR APPLICATION OF THE TRADITIONAL AND EMPIRICAL CAPM TO THE GAS AND ELECTRIC UTILITY PROXY GROUPS?**

A. As shown on page 1 of Schedule DWD-5, the mean result of my CAPM/ECAPM analyses for the Gas Utility Proxy Group is 11.71%, the median is 11.78%, and the average of the two is 11.75%. For the Electric Utility Proxy Group, the mean CAPM/ECAPM result is 12.16%, the median is 12.13%, and the average of the two is 12.15%. Consistent with my reliance on the average of mean and median DCF results discussed above, the indicated common equity cost rates for the Gas and

---

<sup>39</sup> As shown on page 2 of Schedule DWD-5.



1 Electric Utility Proxy Group using the CAPM/ECAPM are 11.75% and 12.15%,  
2 respectively.

3 **D. Common Equity Cost Rates for Proxy Group of Domestic, Non-Price**  
4 **Regulated Companies Based on the DCF, RPM, and CAPM**

5 **Q. WHY DID YOU ALSO CONSIDER PROXY GROUPS OF DOMESTIC,**  
6 **NON-PRICE REGULATED COMPANIES?**

7 A. In the *Hope* and *Bluefield* cases, the U.S. Supreme Court did not specify that  
8 comparable risk companies had to be utilities. Because the purpose of rate  
9 regulation is to be a substitute for marketplace competition, non-price regulated  
10 firms operating in the competitive marketplace make an excellent proxy if they are  
11 comparable in total risk to the Gas and Electric Utility Proxy Groups being used to  
12 estimate the cost of common equity. The selection of such domestic, non-price  
13 regulated competitive firms theoretically and empirically results in a proxy group  
14 that is comparable in total risk to the Gas and Electric Utility Proxy Groups, because  
15 all of these companies compete for capital in the exact same markets.

16 **Q. HOW DID YOU SELECT NON-PRICE REGULATED COMPANIES THAT**  
17 **ARE COMPARABLE IN TOTAL RISK TO THE REGULATED GAS AND**  
18 **ELECTRIC UTILITY PROXY GROUPS?**

19 A. In order to select proxy groups of domestic, non-price regulated companies similar  
20 in total risk to the Gas and Electric Utility Proxy Groups, I relied on beta and related  
21 statistics derived from *Value Line* regression analyses of weekly market prices over  
22 the most recent 260 weeks (*i.e.*, five years) for each group. These selection criteria  
23 resulted in a proxy group of 38 domestic, non-price regulated firms comparable in  
24 total risk to the Gas Utility Proxy Group and 48 non-price regulated firms

1 comparable in total risk to the Electric Utility Proxy Group. Total risk is the sum  
2 of non-diversifiable market risk and diversifiable company-specific risk. The  
3 criteria used in selecting the domestic, non-price regulated firms were:

- 4 (i) They must be covered by *Value Line Investment Survey* (Standard  
5 Edition);
- 6 (ii) They must be domestic, non-price regulated companies, *i.e.*, not utilities;
- 7 (iii) Their betas must lie within plus or minus two standard deviations of the  
8 average unadjusted betas of the Gas and Electric Utility Proxy Groups,  
9 respectively; and
- 10 (iv) The residual standard errors of the *Value Line* regressions which gave rise  
11 to the unadjusted betas must lie within plus or minus two standard  
12 deviations of the average residual standard errors of the Gas and Electric  
13 Utility Proxy Groups, respectively.

14 Betas measure market, or systematic, risk, which is not diversifiable. The  
15 residual standard errors of the regressions measure each firm's company-specific,  
16 diversifiable risk. Companies that have similar betas and similar residual standard  
17 errors resulting from the same regression analyses have similar total investment  
18 risk.

19 **Q. HAVE YOU PREPARED A SCHEDULE WHICH SHOWS THE DATA**  
20 **FROM WHICH YOU SELECTED THE DOMESTIC, NON-PRICE**

1           **REGULATED COMPANIES THAT ARE COMPARABLE IN TOTAL RISK**  
2           **TO THE GAS AND ELECTRIC UTILITY PROXY GROUPS?**

3    A.    Yes, the basis of my selection and both proxy groups' regression statistics are shown  
4           in Schedule DWD-6.

5    **Q.    DID YOU CALCULATE COMMON EQUITY COST RATES USING THE**  
6           **DCF MODEL, RPM, AND CAPM FOR THE NON-PRICE REGULATED**  
7           **PROXY GROUPS?**

8    A.    Yes. Because the DCF model, RPM, and CAPM have been applied in an identical  
9           manner as described above, I will not repeat the details of the rationale and  
10          application of each model. One exception is in the application of the RPM, where  
11          I did not use public utility-specific equity risk premiums, nor did I apply the PRPM  
12          to the individual non-price regulated companies.

13                 Pages 2 and 3 of Schedule DWD-7 derives the constant growth DCF model  
14                 common equity cost rate. As shown, the indicated common equity cost rate, using  
15                 the constant growth DCF for the Non-Price Regulated Proxy Groups comparable  
16                 in total risk to the Gas and Electric Utility Proxy Group, are 12.22% and 12.70%,  
17                 respectively.

18                 Pages 4 through 7 of Schedule DWD-7 contain the data and calculations  
19                 that support the 12.12% and 12.73% RPM common equity cost rates applicable to  
20                 the Non-Price Regulated Proxy Groups comparable in total risk to the Gas and  
21                 Electric Utility Proxy Groups, respectively. As shown on line 1, page 4 of Schedule  
22                 DWD-7, the consensus prospective yield on Moody's Baa-rated corporate bonds  
23                 for the six quarters ending in the second quarter of 2023, and for the years 2023 to

1           2027 and 2028 to 2032, is 4.71%.<sup>40</sup> Since the Non-Price Regulated Proxy Groups  
2           relative to the Gas and Electric Utility Proxy Groups both have average Moody's  
3           long-term issuer ratings of Baa1, a downward adjustment of 0.12% to the projected  
4           Baa2-rated corporate bond yield is necessary to reflect the difference in ratings.<sup>41</sup>  
5           This results in projected Baa1-rated corporate bond yields of 4.59% applicable to  
6           both of the Non-Price Regulated Proxy Groups comparable in total risk to the Gas  
7           and Electric Utility Proxy Groups.

8                       When the beta-adjusted risk premiums of 7.53% and 8.14%<sup>42</sup> relative to the  
9           Non-Price Regulated Proxy Groups comparable in total risk to the Gas and Electric  
10          Utility Proxy Groups, respectively, are added to the prospective Baa1-rated  
11          corporate bond yields of 4.59%, the indicated RPM common equity cost rates are  
12          12.12% and 12.73%, respectively.

13                      Pages 8 and 9 of Schedule DWD-7 contains the inputs and calculations that  
14          support my indicated CAPM/ECAPM common equity cost rates of 11.54% and  
15          12.07% for the Non-Price Regulated Proxy Groups comparable in total risk to the  
16          Gas and Electric Utility Proxy Groups, respectively.

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<sup>40</sup> *Blue Chip Financial Forecasts*, December 1, 2021, at page 14 and March 1, 2022, at page 2.

<sup>41</sup> As demonstrated in line 2 and described in note 2, page 4 of Schedule DWD-7.

<sup>42</sup> Derived on page 7 of Schedule DWD-7.

1 **Q. WHAT IS THE COST RATE OF COMMON EQUITY BASED ON THE**  
 2 **NON-PRICE REGULATED PROXY GROUPS COMPARABLE IN TOTAL**  
 3 **RISK TO THE GAS AND ELECTRIC UTILITY PROXY GROUPS?**

4 A. As shown on page 1 of Schedule DWD-7, the results of the common equity models  
 5 applied to the Non-Price Regulated Proxy Groups that are comparable in total risk  
 6 to the Gas and Electric Utility Proxy Groups are as follows:

7 **Table 10: Summary of Common Equity Cost Rates for the Non-Price**  
 8 **Regulated Proxy Groups**

	<u>Non-Utility Group</u> <u>Based on Gas Utility</u> <u>Group</u>	<u>Non-Utility Group</u> <u>Based on Electric</u> <u>Utility Group</u>
Discounted Cash Flow Model	12.22%	12.70%
Risk Premium Model	12.12%	12.73%
Capital Asset Pricing Model	<u>11.54%</u>	<u>12.07%</u>
Mean	<u>11.96%</u>	<u>12.50%</u>
Median	<u>12.12%</u>	<u>12.70%</u>
Average of Mean and Median	<u>12.04%</u>	<u>12.60%</u>

9

10 The average of the mean and median of these models for the Non-Price  
 11 Regulated Proxy Groups comparable in total risk to the Gas and Electric Utility  
 12 Proxy Groups are 12.04% and 12.60%, respectively, which I used as the indicated  
 13 common equity cost rates for the Non-Price Regulated Proxy Groups.

1 **VIII. CONCLUSION OF COMMON EQUITY COST RATES BEFORE**  
2 **ADJUSTMENTS**

3 **Q. WHAT ARE THE INDICATED COMMON EQUITY COST RATES FOR**  
4 **THE GAS AND ELECTRIC UTILITY PROXY GROUPS BEFORE**  
5 **ADJUSTMENTS?**

6 A. By applying multiple cost of common equity models to the Gas and Electric Utility  
7 Proxy Groups and the Non-Price Regulated Proxy Group, the indicated cost of  
8 common equity before any relative risk adjustments is 10.85% - 12.85% for the Gas  
9 Proxy Group and 10.90% - 12.90% for the Electric Proxy Group. I used multiple  
10 cost of common equity models as primary tools in arriving at my recommended  
11 range of common equity cost rates, because no single model is so inherently precise  
12 that it can be relied on to the exclusion of other theoretically sound models. Using  
13 multiple models adds reliability to the estimated common equity cost rate, with the  
14 prudence of using multiple cost of common equity models supported in both the  
15 financial literature and regulatory precedent.

16 As will be discussed below, the Companies have greater risk than their  
17 respective Utility Proxy Groups. Because of this, the indicated range of model  
18 results based on the Utility Proxy Groups must be adjusted to reflect the Companies'  
19 greater relative risk.

1 **IX. ADJUSTMENTS TO THE COMMON EQUITY COST RATES**

2 **A. Size Adjustment**

3 **Q. DOES THE COMPANIES' SMALLER SIZE RELATIVE TO THE GAS AND**  
4 **ELECTRIC UTILITY PROXY GROUPS INCREASE THEIR BUSINESS**  
5 **RISK?**

6 A. Yes. The Companies' smaller size relative to the Gas and Electric Utility Proxy  
7 Groups indicates greater relative business risk for the Companies because, all else  
8 being equal, size has a material bearing on risk.

9 Size affects business risk because smaller companies generally are less able  
10 to cope with significant events that affect sales, revenues and earnings. For  
11 example, smaller companies face more risk exposure to business cycles and  
12 economic conditions, both nationally and locally. Additionally, the loss of revenues  
13 from a few larger customers would have a greater effect on a small company than  
14 on a bigger company with a larger, more diverse, customer base.

15 As further evidence that smaller firms are riskier, investors generally  
16 demand greater returns from smaller firms to compensate for less marketability and  
17 liquidity of their securities. Duff & Phelps 2020 Valuation Handbook Guide to Cost  
18 of Capital ("D&P - 2020") discusses the nature of the small-size phenomenon,  
19 providing an indication of the magnitude of the size premium based on several  
20 measures of size. In discussing "Size as a Predictor of Equity Premiums," D&P -  
21 2020 states:

22 The size effect is based on the empirical observation that companies  
23 of smaller size are associated with greater risk and, therefore, have  
24 greater cost of capital [sic]. The "size" of a company is one of the  
25 most important risk elements to consider when developing cost of

1 equity capital estimates for use in valuing a business simply because  
2 size has been shown to be a *predictor* of equity returns. In other  
3 words, there is a significant (negative) relationship between size and  
4 historical equity returns - as size *decreases*, returns tend to *increase*,  
5 and vice versa. (footnote omitted) (emphasis in original)<sup>43</sup>

6 Furthermore, in "The Capital Asset Pricing Model: Theory and Evidence,"  
7 Fama and French note size is indeed a risk factor which must be reflected when  
8 estimating the cost of common equity. On page 14, they note:

9 . . . the higher average returns on small stocks and high book-to-  
10 market stocks reflect unidentified state variables that produce  
11 undiversifiable risks (covariances) in returns not captured in the  
12 market return and are priced separately from market betas.<sup>44</sup>

13 Based on this evidence, Fama and French proposed their three-factor model  
14 which includes a size variable in recognition of the effect size has on the cost of  
15 common equity.

16 Also, it is a basic financial principle that the use of funds invested, and not  
17 the source of funds, is what gives rise to the risk of any investment.<sup>45</sup> Eugene  
18 Brigham, a well-known authority, states:

19 A number of researchers have observed that portfolios of small-  
20 firms (sic) have earned consistently higher average returns than  
21 those of large-firm stocks; this is called the "small-firm effect." On  
22 the surface, it would seem to be advantageous to the small firms to  
23 provide average returns in a stock market that are higher than those  
24 of larger firms. In reality, it is bad news for the small firm; **what the  
25 small-firm effect means is that the capital market demands  
26 higher returns on stocks of small firms than on otherwise similar  
27 stocks of the large firms.** (emphasis added)<sup>46</sup>

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<sup>43</sup> Duff & Phelps Valuation Handbook – U.S. Guide to Cost of Capital, Wiley 2020, at 4-1.

<sup>44</sup> Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence," *Journal of Economic Perspectives*, Volume 18, Number 3, Summer 2004, at 25-43.

<sup>45</sup> Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance (McGraw-Hill Book Company, 1996), at 204-205, 229.

<sup>46</sup> Eugene F. Brigham, Fundamentals of Financial Management, Fifth Edition (The Dryden Press, 1989), at 623.



1                   Consistent with the financial principle of risk and return discussed above,  
2                   increased relative risk due to small size must be considered in the allowed rate of  
3                   return on common equity. Therefore, the Commission's authorization of a cost rate  
4                   of common equity in this proceeding must appropriately reflect the Companies'  
5                   unique risks, including their small size, which is justified and supported above by  
6                   evidence in the financial literature.

7   **Q.   IS THERE A WAY TO QUANTIFY A RELATIVE RISK ADJUSTMENT DUE**  
8                   **TO THE COMPANIES' SMALL SIZE RELATIVE TO THE GAS AND**  
9                   **ELECTRIC UTILITY PROXY GROUPS?**

10  A.   Yes. The Companies have greater relative risk than the average utility in the Gas  
11                   and Electric Utility Proxy Groups because of their smaller size compared with the  
12                   utilities in those groups, as measured by an estimated market capitalization of  
13                   common equity for the jurisdictional operations of each company.

1 **Table 11: Size as Measured by Market Capitalization for Valley, Citizens',**  
2 **and the Gas and Electric Utility Proxy Groups**

	<u>Market Capitalization*</u> (\$ Millions)	<u>Times Greater than The Company</u>
Valley Energy, Inc.	\$20.425	
Gas Utility Proxy Group	\$6,796.116	332.7x
Citizens' Electric Company	\$15.971	
Electric Utility Proxy Group	\$27,854.041	1,744.1x

\*From page 1 of Schedule DWD-8.

3 Valley's and Citizens' estimated market capitalizations were \$20.425 million  
4 and \$15.971 million, respectively, as of March 18, 2022, compared with the market  
5 capitalization of the average company in the Gas and Electric Utility Proxy Groups  
6 of \$6.796 billion and \$27.854 billion, respectively, as of March 18, 2022. The  
7 average companies in the Gas and Electric Utility Proxy Groups have a market  
8 capitalization 332.7 times and 1,744.1 times Valley and Citizens', respectively.

9 As a result, it is necessary to upwardly adjust the indicated common equity  
10 cost rates attributable to the Gas and Electric Utility Proxy Groups to reflect the  
11 Companies' greater risk due to their smaller relative size. The determination is  
12 based on the size premiums for portfolios of New York Stock Exchange, American  
13 Stock Exchange, and NASDAQ listed companies ranked by deciles for the 1926 to  
14 2020 period. The average size premium for the Gas and Electric Utility Proxy  
15 Groups with market capitalizations of \$6.796 and \$27.854 billion fall in the 4<sup>th</sup> and

1 2<sup>nd</sup> deciles, respectively, while Valley's and Citizens' estimated market  
2 capitalizations of \$20.425 million and \$15.971 million, respectively, place them in  
3 the 10<sup>th</sup> decile. The size premium spread between the 4<sup>th</sup> decile and the 10<sup>th</sup> decile  
4 is 4.26% while the size premium between the 2<sup>nd</sup> decile and the 9<sup>th</sup> decile is 4.52%.

5 **Q. HAS THIS COMMISSION CONSIDERED SIZE IN DETERMINING THE**  
6 **AUTHORIZED ROE?**

7 A. Yes, it has. In Docket No. R-2019-3008212, the Commission stated:

8 Based on the evidence of record, we agree with the recommendation  
9 of the ALJs that the Company be awarded a DCF cost of common  
10 equity which is one standard deviation about the average of the mean  
11 and median proxy group ROE from the Company's DCF analysis.  
12 In so doing, we recognize that the Company's size is a factor in  
13 assessing its ability to attract capital. Accordingly, we shall reject  
14 Citizens' Exception No. 10, I&E's Exception No. 4, and the OCA's  
15 Exception No. 7, consistent with the following discussion.

16 We are not convinced by the arguments of I&E and the OCA that  
17 the ALJs erred in awarding a size adjustment to Citizens'. Rather, we  
18 are of the same position as the ALJs that the Company's witness Mr.  
19 D'Ascendis offered persuasive record evidence that there is a  
20 general inverse relationship between size and risk, such that smaller  
21 utilities like Citizens' face greater risk.<sup>47</sup>

22 **Q. WHAT WOULD BE THE ROE RESULT USING THE COMMISSION'S**  
23 **METHOD IN THIS CASE?**

24 A. The average of the mean and median DCF model results are 9.76% and 9.05% for  
25 the Gas and Electric Utility Proxy Groups, respectively, as shown on page 1 of  
26 Schedule DWD-3. The standard deviation of those results is 0.93% and 1.00%,  
27 respectively. In view of the indicated size premiums of 4.26% and 4.52% and DCF

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<sup>47</sup> Pennsylvania Public Utility Commission, Docket No. R-2019-3008212, Opinion and Order, at 103.

1 model size premiums of 0.93% and 1.00%, I recommend size premiums of 0.90%  
2 and 1.00% for Valley and Citizens', respectively.

3 **B. Performance Factor Adjustment**

4 **Q. HAVE YOU REFLECTED THE COMPANIES' REQUESTED RATE OF**  
5 **RETURN PREMIUM BASED ON CODE 66 Pa.C.S. § 523 REGARDING**  
6 **PERFORMANCE FACTOR?**

7 A. Yes. The adjustment is shown on line 7 of page 2 of Schedule DWD-1. The  
8 testimonies for including the performance factor adjustment in the ROE for the  
9 Companies are sponsored by Valley's Witness Mr. Rogers and Citizens' Witness Mr.  
10 Kelchner. The rate of return premium associated with the performance factor is  
11 0.05%.

12 **Q. HAS THE COMMISSION AWARDED THE COMPANIES A**  
13 **PERFORMANCE FACTOR ADJUSTMENT?**

14 A. Yes, it has. In Docket Nos. R-2019-3008209 (Valley) and R-2019-3008212  
15 (Citizens'), the Commission awarded the Companies performance factor  
16 adjustments of 0.05%.<sup>48</sup> As discussed by Valley Witness Mr. Rogers and Citizens'  
17 Witness Mr. Kelchner, it is their belief that the performance factor adjustment still  
18 applies.

19 **Q. WHAT IS THE INDICATED COST OF COMMON EQUITY AFTER YOUR**  
20 **COMPANY-SPECIFIC ADJUSTMENTS?**

21 A. Applying the 0.90% and 1.00% size adjustments, and the 0.05% performance factor  
22 adjustment to the indicated costs of common equity of 9.90% - 11.90% and 9.85%

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<sup>48</sup> Docket No. R-2019-3008209 (Valley), at 118-120, and Docket No. R-2019-3008212 (Citizens'), at 108-110.

1 - 11.85%, applicable to the Gas and Electric Utility Proxy Groups, respectively,  
2 results in a range of common equity cost rates of 10.85% - 12.85% for Valley, and  
3 10.90% - 12.90% for Citizens'. Based on those ranges, I recommend a cost of  
4 common equity rate of 11.50% for the Companies, which is reasonable and  
5 conservative.

6 **X. CONCLUSION**

7 **Q. WHAT ARE YOUR RECOMMENDED OVERALL WACCS FOR THE**  
8 **COMPANIES?**

9 A. Given the Companies' ratemaking capital structures, actual embedded long-term  
10 debt cost rates, as discussed above, in combination with my recommended cost of  
11 common equity of 11.50% for Valley and Citizens', I recommend that WACCs of  
12 7.97% and 7.76%, for Valley and Citizens', respectively, are allowed.

13 **Q. IN YOUR OPINION, ARE YOUR PROPOSED WACCS FAIR AND**  
14 **REASONABLE TO THE COMPANIES AND THEIR CUSTOMERS?**

15 A. Yes, they are.

16 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

17 A. Yes, it does.

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket Nos. R-2022-_____</b>
	:	<b>R-2022-_____</b>
<b>Citizens' Electric Company of Lewisburg, PA</b>	:	
<b>and Valley Energy Company</b>	:	

**EXHIBIT**

**OF**

**DYLAN W. D'ASCENDIS, CRRA, CVA**

**ON BEHALF OF**

**CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA**  
**AND**  
**VALLEY ENERGY COMPANY**

**APRIL 29, 2022**

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA

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Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Recommended Capital Structure and Cost Rates  
for Ratemaking Purposes

Valley Energy, Inc.			
<u>Type Of Capital</u>	<u>Ratios (1)</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
Long-Term Debt	50.47%	4.49% (2)	2.27%
Common Equity	<u>49.53%</u>	11.50% (3)	<u>5.70%</u>
Total	<u><u>100.00%</u></u>		<u><u>7.97%</u></u>

Citizens' Electric Company of Lewisburg, PA			
<u>Type Of Capital</u>	<u>Ratios (1)</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
Long-Term Debt	50.47%	4.09% (2)	2.06%
Common Equity	<u>49.53%</u>	11.50% (3)	<u>5.70%</u>
Total	<u><u>100.00%</u></u>		<u><u>7.76%</u></u>

Notes:

- (1) Capital structure based on 2021 capital structure maintained by the Companies' Parent, C&T Enterprises.
- (2) Company-provided.
- (3) From page 2 of this Schedule.



Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Brief Summary of Common Equity Cost Rate

<u>Line No.</u>	<u>Principal Methods</u>	<u>Proxy Group of Six Natural Gas Distribution Companies</u>	<u>Proxy Group of Fourteen Electric Companies</u>
1.	Discounted Cash Flow Model (DCF) (1)	9.76%	9.05%
2.	Risk Premium Model (RPM) (2)	10.60%	10.84%
3.	Capital Asset Pricing Model (CAPM) (3)	11.75%	12.15%
4.	Market Models Applied to Comparable Risk, Non-Price Regulated Companies (4)	<u>12.04%</u>	<u>12.60%</u>
5.	Indicated Range of Common Equity Cost Rates before Adjustment for Size Risk	9.90% - 11.90%	9.85% - 11.85%
6.	Size Adjustment (5)	0.90%	1.00%
7.	Performance Factor Adjustment (6)	<u>0.05%</u>	<u>0.05%</u>
8.	Recommended Range of Common Equity Cost Rates after Adjustment for Size Risk	<u>10.85% - 12.85%</u>	<u>10.90% - 12.90%</u>
9.	Recommended Cost of Common Equity Cost Rates after Adjustment for Size Risk	<u>11.50%</u>	<u>11.50%</u>

- Notes: (1) From page 1 of Schedule DWD-3.  
(2) From page 1 of Schedule DWD-4.  
(3) From page 1 of Schedule DWD-5.  
(4) From page 1 of Schedule DWD-7.  
(5) Adjustment to reflect the Valley Energy, Inc.'s and Citizens' Electric Company greater business risk due to their smaller sizes relative to the Utility Proxy Groups as detailed in Mr. D'Ascendis' Direct Testimony.  
(6) Performance factor adjustment as explained in Mr. D'Ascendis' Direct Testimony.

Proxy Group of Six Natural Gas Distribution Companies  
CAPITALIZATION AND FINANCIAL STATISTICS (1)  
2017 - 2021, Inclusive

	2021	2020	2019	2018	2017	
	(MILLIONS OF DOLLARS)					
<u>CAPITALIZATION STATISTICS</u>						
<u>AMOUNT OF CAPITAL EMPLOYED</u>						
TOTAL PERMANENT CAPITAL	\$8,159.717	\$6,855.835	\$6,012.401	\$5,411.345	\$5,040.640	
SHORT-TERM DEBT	\$415.467	\$333.183	\$612.061	\$629.275	\$468.027	
TOTAL CAPITAL EMPLOYED	<u>\$8,575.184</u>	<u>\$7,189.018</u>	<u>\$6,624.462</u>	<u>\$6,040.620</u>	<u>\$5,508.667</u>	
<u>INDICATED AVERAGE CAPITAL COST RATES (2)</u>						
TOTAL DEBT	2.74 %	3.29 %	3.63 %	3.57 %	3.77 %	
PREFERRED STOCK	5.33	6.19	4.60	2.64	NA	
<u>CAPITAL STRUCTURE RATIOS</u>						
<u>BASED ON TOTAL PERMANENT CAPITAL:</u>						
LONG-TERM DEBT	54.97 %	50.04 %	46.42 %	46.03 %	49.53 %	49.40 %
PREFERRED STOCK	2.30	1.78	1.92	1.14	-	1.43
COMMON EQUITY	42.73	48.18	51.66	52.83	50.47	49.17
TOTAL	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>BASED ON TOTAL CAPITAL:</u>						
TOTAL DEBT, INCLUDING SHORT-TERM	58.45 %	53.51 %	51.06 %	51.14 %	53.67 %	53.57 %
PREFERRED STOCK	2.18	1.66	1.68	0.99	-	1.30
COMMON EQUITY	39.37	44.83	47.26	47.87	46.33	45.13
TOTAL	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>FINANCIAL STATISTICS</u>						
<u>FINANCIAL RATIOS - MARKET BASED</u>						
EARNINGS / PRICE RATIO	5.25 %	3.45 %	3.84 %	4.32 %	2.74 %	3.92 %
MARKET / AVERAGE BOOK RATIO	176.32	191.60	224.79	213.85	213.58	204.03
DIVIDEND YIELD	3.44	3.10	2.61	2.78	2.71	2.93
DIVIDEND PAYOUT RATIO	60.27	83.22	69.25	54.00	51.64	63.67
<u>RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY</u>	9.85 %	6.75 %	8.68 %	9.55 %	5.82 %	8.13 %
<u>TOTAL DEBT / EBITDA (3)</u>	6.03 x	6.03 x	4.96 x	5.01 x	7.65 x	5.94 x
<u>FUNDS FROM OPERATIONS / TOTAL DEBT (4)</u>	8.50 %	12.46 %	14.99 %	24.21 %	16.35 %	15.30 %
<u>TOTAL DEBT / TOTAL CAPITAL</u>	58.45 %	53.51 %	51.06 %	51.14 %	53.67 %	53.57 %

Notes:

- (1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.
- (2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.
- (3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).
- (4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Source of Information: Company Annual Forms 10-K

Proxy Group of Fourteen Electric Companies  
CAPITALIZATION AND FINANCIAL STATISTICS (1)  
2017 - 2021, Inclusive

	2021	2020	2019	2018	2017	
	(MILLIONS OF DOLLARS)					
<u>CAPITALIZATION STATISTICS</u>						
<u>AMOUNT OF CAPITAL EMPLOYED</u>						
TOTAL PERMANENT CAPITAL	\$34,183.780	\$31,746.146	\$29,472.393	\$27,131.517	\$25,522.450	
SHORT-TERM DEBT	\$1,152.131	\$954.222	\$985.672	\$1,070.510	\$977.275	
TOTAL CAPITAL EMPLOYED	<u>\$35,335.911</u>	<u>\$32,700.368</u>	<u>\$30,458.065</u>	<u>\$28,202.027</u>	<u>\$26,499.725</u>	
<u>INDICATED AVERAGE CAPITAL COST RATES (2)</u>						
TOTAL DEBT	3.67 %	4.08 %	4.29 %	4.42 %	4.36 %	
PREFERRED STOCK	4.60	5.47	5.17	5.26	4.67	
<u>CAPITAL STRUCTURE RATIOS</u>						
<u>5 YEAR AVERAGE</u>						
<u>BASED ON TOTAL PERMANENT CAPITAL:</u>						
LONG-TERM DEBT	56.51 %	55.26 %	53.49 %	52.83 %	52.68 %	54.15 %
PREFERRED STOCK	0.61	0.78	0.91	0.91	0.96	0.83
COMMON EQUITY	42.88	43.96	45.60	46.26	46.35	45.02
TOTAL	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>99.99 %</u>	<u>100.00 %</u>
<u>BASED ON TOTAL CAPITAL:</u>						
TOTAL DEBT, INCLUDING SHORT-TERM	57.78 %	56.42 %	54.62 %	54.17 %	54.42 %	55.48 %
PREFERRED STOCK	0.58	0.75	0.89	0.88	0.90	0.80
COMMON EQUITY	41.64	42.84	44.49	44.95	44.69	43.72
TOTAL	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>FINANCIAL STATISTICS</u>						
<u>FINANCIAL RATIOS - MARKET BASED</u>						
EARNINGS / PRICE RATIO	5.38 %	4.15 %	5.43 %	4.84 %	4.62 %	4.88 %
MARKET / AVERAGE BOOK RATIO	190.71	186.80	196.49	191.32	199.93	193.05
DIVIDEND YIELD	3.59	3.65	3.42	3.71	3.48	3.57
DIVIDEND PAYOUT RATIO	71.08	84.32	63.09	69.23	89.30	75.40
<u>RATE OF RETURN ON AVERAGE BOOK COMMON EQUITY</u>	10.05 %	7.87 %	10.46 %	8.70 %	8.66 %	9.15 %
<u>TOTAL DEBT / EBITDA (3)</u>	5.35 x	6.07 x	4.63 x	5.37 x	4.55 x	5.19 x
<u>FUNDS FROM OPERATIONS / TOTAL DEBT (4)</u>	9.76 %	11.65 %	13.05 %	17.91 %	17.17 %	13.91 %
<u>TOTAL DEBT / TOTAL CAPITAL</u>	57.78 %	56.42 %	54.62 %	54.17 %	54.42 %	55.48 %

Notes:

- (1) All capitalization and financial statistics for the group are the arithmetic average of the achieved results for each individual company in the group, and are based upon financial statements as originally reported in each year.
- (2) Computed by relating actual total debt interest or preferred stock dividends booked to average of beginning and ending total debt or preferred stock reported to be outstanding.
- (3) Total debt relative to EBITDA (Earnings before Interest, Income Taxes, Depreciation and Amortization).
- (4) Funds from operations (sum of net income, depreciation, amortization, net deferred income tax and investment tax credits, less total AFUDC) plus interest charges as a percentage of total debt.

Source of Information: Company Annual Forms 10-K

Capital Structure Based upon Total Permanent Capital for the  
Proxy Group of Six Natural Gas Distribution Companies  
2017 - 2021, Inclusive

	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>5 YEAR AVERAGE</u>
<u>Atmos Energy Corporation</u>						
Long-Term Debt	48.11 %	40.03 %	38.03 %	39.15 %	44.03 %	41.87 %
Preferred Stock	-	-	-	-	-	-
Common Equity	51.89	59.98	61.97	60.85	55.97	58.13
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>New Jersey Resources Corporation</u>						
Long-Term Debt	57.81 %	55.35 %	50.11 %	47.89 %	48.45 %	51.92 %
Preferred Stock	-	-	-	-	-	-
Common Equity	42.19	44.65	49.89	52.11	51.55	48.08
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>NiSource Inc.</u>						
Long-Term Debt	57.09 %	61.64 %	56.79 %	55.44 %	64.35 %	59.06 %
Preferred Stock	9.55	5.87	6.35	6.82	-	5.72
Common Equity	33.36	32.49	36.86	37.74	35.65	35.22
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Northwest Natural Holding Company</u>						
Long-Term Debt	52.77 %	51.81 %	50.43 %	49.12 %	51.22 %	51.07 %
Preferred Stock	-	-	-	-	-	-
Common Equity	47.23	48.19	49.57	50.88	48.78	48.93
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>ONE Gas, Inc.</u>						
Long-Term Debt	61.05 %	41.76 %	37.65 %	38.62 %	37.84 %	43.38 %
Preferred Stock	-	-	-	-	-	-
Common Equity	38.95	58.24	62.35	61.38	62.16	56.62
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Spire Inc.</u>						
Long-Term Debt	52.98 %	49.62 %	45.49 %	45.95 %	51.27 %	49.06 %
Preferred Stock	4.28	4.83	5.19	-	-	2.86
Common Equity	42.74	45.55	49.32	54.05	48.73	48.08
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Proxy Group of Six Natural Gas Distribution Companies</u>						
Long-Term Debt	54.97 %	50.04 %	46.42 %	46.03 %	49.53 %	49.39 %
Preferred Stock	2.30	1.78	1.92	1.14	-	1.43
Common Equity	42.73	48.18	51.66	52.83	50.47	49.18
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>

Source of Information:  
Annual Forms 10-K.



Capital Structure Based upon Total Permanent Capital for the  
Proxy Group of Fourteen Electric Companies  
2017 - 2021, Inclusive

	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>5 YEAR AVERAGE</u>
<u>IDACORP, Inc.</u>						
Long-Term Debt	42.85 %	43.86 %	42.70 %	43.63 %	43.68 %	43.34 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	57.15	56.14	57.30	56.37	56.32	56.66
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>NorthWestern Corporation</u>						
Long-Term Debt	52.09 %	52.72 %	52.27 %	51.98 %	50.26 %	51.86 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	47.91	47.28	47.73	48.02	49.74	48.14
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>OGE Energy Corporation</u>						
Long-Term Debt	52.57 %	49.04 %	43.56 %	44.00 %	43.78 %	46.59 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	47.43	50.96	56.44	56.00	56.22	53.41
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Portland General Electric Company</u>						
Long-Term Debt	54.82 %	53.83 %	50.06 %	49.72 %	50.10 %	51.71 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	45.18	46.17	49.94	50.28	49.90	48.29
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>The Southern Company</u>						
Long-Term Debt	64.99 %	63.22 %	61.71 %	63.72 %	66.38 %	64.00 %
Preferred Stock	0.36	0.38	0.40	0.42	0.44	0.40
Common Equity	34.65	36.40	37.89	35.86	33.18	35.60
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Xcel Energy Inc.</u>						
Long-Term Debt	58.91 %	57.93 %	57.77 %	57.01 %	56.66 %	57.66 %
Preferred Stock	-	-	-	-	-	0.00
Common Equity	41.09	42.07	42.23	42.99	43.34	42.34
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>
<u>Proxy Group of Fourteen Electric Companies</u>						
Long-Term Debt	56.51 %	55.26 %	53.49 %	52.83 %	52.69 %	54.15 %
Preferred Stock	0.61	0.78	0.91	0.91	0.96	0.84
Common Equity	42.88	43.96	45.60	46.26	46.35	45.01
Total Capital	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>	<u>100.00 %</u>

Source of Information  
Annual Forms 10-K

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Indicated Common Equity Cost Rate Using the Discounted Cash Flow Model for the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Proxy Group of Six Natural Gas Distribution Companies	Average Dividend Yield (1)	Value Line Projected Five Year Growth in EPS (2)	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth in EPS (3)	Adjusted Dividend Yield (4)	Indicated Common Equity Cost Rate (5)
Atmos Energy Corporation	2.53 %	7.50 %	7.30 %	7.60 %	7.47 %	2.62 %	10.09 %
New Jersey Resources Corporation	3.54	4.50	6.00	6.00	5.50	3.64	9.14
NiSource Inc.	3.29	10.50	7.20	3.52	7.07	3.41	10.48
Northwest Natural Holding Company	3.90	6.00	5.10	5.90	5.67	4.01	9.68
ONE Gas, Inc.	3.13	6.00	5.00	2.90	4.63	3.20	7.83
Spire Inc.	4.17	9.00	5.30	4.30	6.20	4.30	10.50
						Average	<u>9.62</u> %
						Median	<u>9.89</u> %
						Average of Mean and Median	<u>9.76</u> %

NA = Not Available  
NMF = Non-Meaningful Figure

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Proxy Group of Fourteen Electric Companies	Average Dividend Yield (1)	Value Line Projected Five Year Growth in EPS (2)	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth in EPS (3)	Adjusted Dividend Yield (4)	Indicated Common Equity Cost Rate (5)
Alliant Energy Corporation	2.88 %	4.50 %	6.10 %	6.10 %	5.57 %	2.96 %	8.53 %
Ameren Corporation	2.71	6.50	7.50	7.40	7.13	2.81	9.94
American Electric Power Company, Inc.	3.46	6.50	5.80	6.10	6.13	3.57	9.70
Duke Energy Corporation	3.82	7.00	6.10	5.85	6.32	3.94	10.26
Edison International	4.39	NMF	4.00	5.35	4.68	4.49	9.17
Entergy Corporation	3.70	3.00	1.00	6.00	3.33	3.76	7.09
Eversource Energy	2.97	5.50	6.20	7.10	6.27	3.06	9.33
IDACORP, Inc.	2.76	4.00	4.30	4.40	4.23	2.82	7.05
NorthWestern Corporation	4.33	2.00	3.10	4.50	3.20	4.40	7.60
OGE Energy Corporation	4.36	6.50	3.50	1.90	3.97	4.45	8.42
Portland General Electric Company	3.29	7.00	4.60	4.60	5.40	3.38	8.78
The Southern Company	3.92	5.50	4.00	6.20	5.23	4.02	9.25
Xcel Energy Inc.	2.86	6.00	6.40	6.90	6.43	2.95	9.38
						Average	<u>8.89</u> %
						Median	<u>9.21</u> %
						Average of Mean and Median	<u>9.05</u> %

NA = Not Available  
NMF = Non-Meaningful Figure

- (1) Indicated dividend at 03/18/2022 divided by the average closing price of the last 60 trading days ending 03/18/2022 for each company.
- (2) From pages 2 through 21 of this Schedule.
- (3) Average of columns 2 through 4 excluding negative growth rates.
- (4) This reflects a growth rate component equal to one-half the conclusion of growth rate (from column 5) x column 1 to reflect the periodic payment of dividends (Gordon Model) as opposed to the continuous payment. Thus, for Atmos Energy Corporation,  $2.53\% \times (1 + (1/2 \times 7.47\%)) = 2.62\%$ .
- (5) Column 5 + Column 6.

Source of Information:

Value Line Investment Survey.  
www.zacks.com Downloaded on 03/18/2022.  
www.yahoo.com Downloaded on 03/18/2022.

ATMOS ENERGY CORP. NYSE-ATO				RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE																									
				105.98	19.3 (Trailing: 20.0 Median: 20.0)	1.09	2.7%																										
TIMELINESS	3	Raised 2/18/22		High: 35.6 Low: 28.5	37.3 30.4	47.4 34.9	58.2 44.2	64.8 50.8	82.0 60.0	93.6 72.5	100.8 76.5	115.2 89.2	121.1 77.9	105.3 84.6	109.2 99.8	Target Price Range 2025 2026 2027																	
SAFETY	1	Raised 6/8/14		LEGENDS 0.50 x Dividends p sh divided by Interest Rate ..... Relative Price Strength Options: Yes Shaded area indicates recession																													
TECHNICAL	2	Raised 2/25/22																															
BETA	.80	(1.00 = Market)																															
18-Month Target Price Range																																	
Low-High																																	
Midpoint (% to Mid)																																	
\$81-\$123																																	
\$102 (-5%)																																	
2025-27 PROJECTIONS																																	
High	Price	Gain	Ann'l Total																														
Low	160	(+50%)	13%																														
	130	(+25%)	8%																														
Institutional Decisions																																	
to Buy	102021	202021	302021	Percent	24																												
to Sell	256	247	262	shares	16																												
Hld's(000)	107920	109549	114371	traded	8																												
				<table border="1"> <thead> <tr> <th>Year</th> <th>1 yr.</th> <th>3 yr.</th> <th>5 yr.</th> </tr> </thead> <tbody> <tr> <td>% TOT. RETURN 1/22</td> <td>23.7</td> <td>17.2</td> <td>56.8</td> </tr> <tr> <td>THIS STOCK INDEX</td> <td>15.7</td> <td>56.8</td> <td>75.5</td> </tr> <tr> <td>VL ARITH. INDEX</td> <td>15.7</td> <td>56.8</td> <td>75.5</td> </tr> </tbody> </table>													Year	1 yr.	3 yr.	5 yr.	% TOT. RETURN 1/22	23.7	17.2	56.8	THIS STOCK INDEX	15.7	56.8	75.5	VL ARITH. INDEX	15.7	56.8	75.5	
Year	1 yr.	3 yr.	5 yr.																														
% TOT. RETURN 1/22	23.7	17.2	56.8																														
THIS STOCK INDEX	15.7	56.8	75.5																														
VL ARITH. INDEX	15.7	56.8	75.5																														
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27														
75.27	66.03	79.52	53.69	53.12	48.15	38.10	42.88	49.22	40.82	32.23	26.01	28.00	24.32	22.41	25.73	26.45	27.90	Revenues per sh <sup>A</sup>	35.50														
4.26	4.14	4.19	4.29	4.64	4.72	4.76	5.14	5.42	5.81	6.19	6.62	7.24	7.57	8.03	8.64	9.30	9.95	"Cash Flow" per sh	11.95														
2.00	1.94	2.00	1.97	2.16	2.26	2.10	2.50	2.96	3.09	3.38	3.60	4.00	4.35	4.72	5.12	5.50	5.90	Earnings per sh <sup>AB</sup>	7.30														
1.26	1.28	1.30	1.32	1.34	1.36	1.38	1.40	1.48	1.56	1.68	1.80	1.94	2.10	2.30	2.50	2.72	2.92	Div'ds Decl'd per sh <sup>C</sup>	3.50														
5.20	4.39	5.20	5.51	6.02	6.90	8.12	9.32	8.32	9.61	10.46	10.72	13.19	14.19	15.38	14.87	17.75	17.60	Cap'l Spending per sh	18.00														
20.16	22.01	22.60	23.52	24.16	24.98	26.14	28.47	30.74	31.48	33.32	36.74	42.87	48.18	53.95	59.71	64.35	68.45	Book Value per sh	82.85														
81.74	89.33	90.81	92.55	90.16	90.30	90.24	90.64	100.39	101.48	103.93	106.10	111.27	119.34	125.88	132.42	138.00	142.00	Common Shs Outst'g <sup>D</sup>	155.00														
13.5	15.9	13.6	12.5	13.2	14.4	15.9	15.9	16.1	17.5	20.8	22.0	21.7	23.2	22.3	18.8	<b>Bold figures are Value Line estimates</b>		Avg Ann'l P/E Ratio	20.0														
.73	.84	.82	.83	.84	.90	1.01	.89	.85	.88	1.09	1.11	1.17	1.24	1.15	1.00			Relative P/E Ratio	1.10														
4.7%	4.2%	4.8%	5.3%	4.7%	4.2%	4.1%	3.5%	3.1%	2.9%	2.4%	2.3%	2.2%	2.1%	2.2%	2.6%			Avg Ann'l Div'd Yield	2.4%														
CAPITAL STRUCTURE as of 12/31/21																																	
Total Debt \$7956.6 mill. Due in 5 Yrs \$2410.0 mill.				3438.5																													
LT Debt \$5555.2 mill. LT Interest \$330.0 mill.				3886.3																													
(LT interest earned: 10.8x; total interest coverage: 10.8x)				4940.9																													
Leases, Uncapitalized Annual rentals \$41.8 mill.				4142.1																													
Pfd Stock None				3349.9																													
Pension Assets-9/21 \$596.8 mill. Oblig. \$596.0 mill.				2759.7																													
Common Stock 135,432,277 shs. as of 2/4/22				3115.5																													
MARKET CAP: \$14.4 billion (Large Cap)				2901.8																													
CURRENT POSITION (SMILL)				2821.1																													
Cash Assets				3407.5																													
Other				3650																													
Current Assets				3965																													
Accts Payable				6000																													
Debt Due				1130																													
Other				25.0%																													
Current Liab.				18.8%																													
Fix. Chg. Cov.				40.0%																													
ANNUAL RATES (per sh)				60.0%																													
Past 10 Yrs.				40.0%																													
Past 5 Yrs.				40.0%																													
Est'd '19-'21				40.0%																													
Revenues				40.0%																													
"Cash Flow"				40.0%																													
Earnings				40.0%																													
Dividends				40.0%																													
Book Value				40.0%																													
Fiscal Year Ends				40.0%																													
QUARTERLY REVENUES (\$ mill.) <sup>A</sup>				40.0%																													
Dec.31				40.0%																													
Mar.31				40.0%																													
Jun.30				40.0%																													
Sep.30				40.0%																													
Full Fiscal Year				40.0%																													
2019				40.0%																													
2020				40.0%																													
2021				40.0%																													
2022				40.0%																													
2023				40.0%																													
Fiscal Year Ends				40.0%																													
EARNINGS PER SHARE <sup>A B E</sup>				40.0%																													
Dec.31				40.0%																													
Mar.31				40.0%																													
Jun.30				40.0%																													
Sep.30				40.0%																													
Full Fiscal Year				40.0%																													
2019				40.0%																													
2020				40.0%																													
2021				40.0%																													
2022				40.0%																													
2023				40.0%																													
Cal-endar				40.0%																													
QUARTERLY DIVIDENDS PAID <sup>C</sup>				40.0%																													
Mar.31				40.0%																													
Jun.30				40.0%																													
Sep.30				40.0%																													
Dec.31				40.0%																													
Full Year				40.0%																													
2018				40.0%																													
2019				40.0%																													
2020				40.0%																													
2021				40.0%																													
2022				40.0%																													

(A) Fiscal year ends Sept. 30th. (B) Diluted shrs. Excl. nonrec. gains (loss): '10, '5c; '11, '1c; '18, \$1.43; '20, 17c. Excludes discontinued operations: '11, '10c; '12, '27c; '13, '14c; '17, '13c. Next egs. rpt. due early May. (C) Dividends historically paid in early March, June, Sept., and Dec. = Div. reinvestment plan. (D) In millions. (E) Qtrs may not add due to change in shrs outstanding. Direct stock purchase plan avail.

Company's Financial Strength A+  
Stock's Price Stability 95  
Price Growth Persistence 70  
Earnings Predictability 100

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**Atmos Energy started fiscal 2022 on a good note.** (Years conclude September 30th.) First-quarter share net of \$1.86 was 9% above the fiscal 2021 total of \$1.71. One supporting factor was the distribution division, aided by favorable rate case outcomes and an expanded customer base. What's more, results of the pipeline and storage unit received a boost from a GRIP filing approved in May, 2021. A significantly reduced effective income tax rate also helped the company. Even though pandemic-related uncertainties linger, we look for full-year earnings to advance around 7%, to \$5.50 a share, compared to fiscal 2021's \$5.12 tally. Concerning the following year, share net may grow at a similar percentage rate, to \$5.90, as operating margins expand further.

**There's enough liquidity to satisfy various commitments for a while.** When the first quarter ended, cash stood at \$264 million. Also, long-term debt was reasonable (40% of total capital) and short-term borrowings did not seem to be a big hurdle. Moreover, \$3.2 billion in common stock and/or debt securities remained available for issuance (out of \$5 billion

commercial; 3.6%, industrial; and 1.7% other. The company sold Atmos Energy Marketing, 1/17. Officers and directors own approximately .9% of common stock (12/21 Proxy). President and Chief Executive Officer: Kevin Akers. Incorporated: Texas. Address: Three Lincoln Centre, Suite 1800, 5430 LBJ Freeway, Dallas, Texas 75240. Telephone: 972-934-9227. Internet: www.atmosenergy.com.

under a shelf registration statement expiring in June, 2024. Lastly, Atmos can access four revolving credit facilities aggregating \$2.5 billion plus a \$1.5 billion commercial paper program.

**Capital expenditures for this year are anticipated to lie between \$2.4 billion and \$2.5 billion.** (That's 24% higher than the fiscal 2021 figure if the midpoint of this range is used.) Almost 90% of the funds are being utilized to enhance the safety and reliability of the company's natural gas distribution and transmission systems. Leadership adds that it projects total capital spending from fiscal 2022 through fiscal 2026 to be between \$13 billion and \$14 billion. A major portion of the investments will continue to be allocated to where they are presently. Assuming that finances stay healthy, Atmos ought to have little trouble achieving those goals.

**The stock possesses unspectacular long-term total return potential.** Given recent price strength, upside possibilities don't impress. Too, the dividend yield is below the average of Value Line's Natural Gas Utility group.

*Frederick L. Harris, III February 25, 2022*



NEW JERSEY RES. NYSE-NJR				RECENT PRICE	P/E RATIO	TRAILING P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE																	
<b>TIMELINESS</b> 3 Raised 2/18/22 <b>SAFETY</b> 2 Lowered 4/17/20 <b>TECHNICAL</b> 3 Raised 1/21/22 <b>BETA</b> 1.00 (1.00 = Market) <b>18-Month Target Price Range</b> Low-High Midpoint (% to Mid) \$27-\$49 \$38 (-5%) <b>2025-27 PROJECTIONS</b> High Low Price Gain Ann'l Total Return 55 40 (+35% (Nil) 17% 4% <b>Institutional Decisions</b> 10Q2021 2Q2021 3Q2021 to Buy 105 102 109 to Sell 139 130 121 Hld's(000) 68468 68609 66131 Percent shares traded 30 20 10				40.30	17.5	(Trailing: 16.9 Median: 17.0)	0.99	3.6%	Target Price Range 2025 2026 2027 80 60 50 40 30 25 20 15 10 7.5 % TOT. RETURN 1/22 THIS STOCK VL ARITH. 1 yr. 18.9 15.7 3 yr. -8.0 56.8 5 yr. 24.5 75.5																	
<b>LEGENDS</b> 0.40 x Dividends p sh divided by Interest Rate . . . . Relative Price Strength 2-for-1 split 3/15 Options: Yes Shaded area indicates recession																										
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27							
39.81	36.31	45.37	31.17	32.05	36.30	27.08	38.38	44.40	32.09	21.90	26.28	33.24	29.01	20.39	22.71	24.65	25.10	Revenues per sh <sup>A</sup>	27.20							
1.37	1.22	1.81	1.58	1.63	1.70	1.86	1.93	2.73	2.52	2.46	2.68	3.72	2.99	3.30	3.36	3.65	3.70	"Cash Flow" per sh	4.20							
.93	.78	1.35	1.20	1.23	1.29	1.36	1.37	2.08	1.78	1.61	1.73	2.72	1.96	2.07	2.16	2.30	2.35	Earnings per sh <sup>B</sup>	2.70							
.48	.51	.56	.62	.68	.72	.77	.81	.86	.93	.98	1.04	1.11	1.19	1.27	1.36	1.45	1.49	Div'ds Decl'd per sh <sup>C</sup>	1.70							
.64	.73	.86	.90	1.05	1.13	1.26	1.33	1.52	3.76	4.15	3.80	4.39	5.83	4.65	5.42	5.35	5.30	Cap'l Spending per sh	5.50							
7.50	7.75	8.64	8.29	8.81	9.36	9.80	10.65	11.48	12.99	13.58	14.33	16.18	17.37	19.26	17.18	18.70	19.80	Book Value per sh <sup>D</sup>	22.80							
82.88	83.22	84.12	83.17	82.35	82.89	83.05	83.32	84.20	85.19	85.88	86.32	87.69	89.34	95.80	94.95	98.00	99.00	Common Shs Outst'g <sup>E</sup>	100.00							
16.1	21.6	12.3	14.9	15.0	16.8	16.8	16.0	11.7	16.6	21.3	22.4	15.6	24.3	17.7	17.5	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	17.0							
.87	1.15	.74	.99	.95	1.05	1.07	.90	.62	.84	1.12	1.13	.84	1.29	.91	.94			Relative P/E Ratio	.95							
3.2%	3.0%	3.3%	3.5%	3.7%	3.3%	3.4%	3.7%	3.5%	3.1%	2.9%	2.7%	2.6%	2.5%	3.5%	3.6%			Avg Ann'l Div'd Yield	4.0%							
<b>CAPITAL STRUCTURE as of 12/31/21</b> Total Debt \$2836.6 mill. Due in 5 Yrs \$442.8 mill. LT Debt \$2274.2 mill. LT Interest \$78.6 mill. Incl. \$6.0 mill. capitalized leases. (LT interest earned: 5.0x; total interest coverage: 5.0x) Pension Assets-9/21 \$469.5 mill. Oblig. \$640.2 mill. Prfd Stock None Common Stock 96,061,402 shs. as of 1/31/22 MARKET CAP: \$3.9 billion (Mid Cap)				2248.9	3198.1	3738.1	2734.0	1880.9	2268.6	2915.1	2592.0	1953.7	2156.6	2415	2485	2415	2485	2415	2485	Revenues (\$mill) <sup>A</sup>	2715					
				112.4	113.7	176.9	153.7	138.1	149.4	240.5	175.0	196.2	207.7	225	235	225	235	225	235	Net Profit (\$mill)	270					
				7.1%	25.4%	30.2%	26.3%	15.5%	17.2%	--	--	NMF	10.3%	5.0%	5.0%	5.0%	5.0%	5.0%	Income Tax Rate	5.0%						
				5.0%	3.6%	4.7%	5.6%	7.3%	6.6%	8.2%	6.7%	10.0%	9.6%	9.4%	10.0%	9.4%	10.0%	9.4%	10.0%	Net Profit Margin	10.0%					
				39.2%	36.6%	38.2%	43.2%	47.7%	44.6%	45.4%	49.8%	55.1%	57.0%	57.5%	57.0%	57.5%	57.0%	57.0%	57.5%	Long-Term Debt Ratio	57.5%					
				60.8%	63.4%	61.8%	56.8%	52.3%	55.4%	54.6%	50.2%	44.9%	43.0%	42.5%	43.0%	42.5%	43.0%	42.5%	43.0%	Common Equity Ratio	42.5%					
				1339.0	1400.3	1564.4	1950.6	2230.1	2233.7	2599.6	3088.9	4104.2	3793.0	4335	4560	4335	4560	4335	4560	Total Capital (\$mill)	5230					
				1484.9	1643.1	1884.1	2128.3	2407.7	2609.7	2651.0	3041.2	3983.0	4213.5	4145	4225	4145	4225	4145	4225	Net Plant (\$mill)	4485					
				9.2%	9.0%	12.1%	8.6%	6.9%	7.7%	10.1%	6.4%	5.6%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	6.5%	Return on Total Cap'l	6.5%					
				13.8%	12.8%	18.3%	13.9%	11.8%	12.1%	16.9%	11.3%	10.6%	12.7%	12.5%	12.0%	12.5%	12.0%	12.5%	12.0%	Return on Shr. Equity	12.0%					
				13.8%	12.8%	18.3%	13.9%	11.8%	12.1%	16.9%	11.3%	10.6%	12.7%	12.5%	12.0%	12.5%	12.0%	12.5%	12.0%	Return on Com Equity	12.0%					
<b>CURRENT POSITION (SMILL.)</b> 2020 2021 12/31/21 Cash Assets 117.0 4.7 1.3 Other 505.3 629.6 759.0 Current Assets 622.3 634.3 760.3 Accts Payable 270.1 429.6 353.7 Debt Due 152.6 450.1 562.4 Other 111.0 171.7 181.7 Current Liab. 533.7 1051.4 1097.8 Fix. Chg. Cov. 545% 545% 550%				6.2%	5.2%	11.0%	7.0%	4.8%	5.0%	10.2%	4.6%	4.3%	5.6%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	Retained to Com Eq	4.5%				
				55%	59%	40%	50%	60%	59%	40%	59%	60%	60%	60%	60%	60%	63%	63%	63%	All Div'ds to Net Prof	63%					
<b>ANNUAL RATES</b> Past Past Est'd '19-'21 of change (per sh) 10 Yrs. 5 Yrs. to '25-'27 Revenues -3.0% -6.0% 2.0% "Cash Flow" 7.0% 4.5% 4.5% Earnings 5.0% 2.5% 4.5% Dividends 6.5% 6.5% 5.0% Book Value 7.5% 7.0% 4.0%				<b>BUSINESS:</b> New Jersey Resources Corp. is a holding company providing retail/wholesale energy svcs. to customers in NJ, and in states from the Gulf Coast to New England, and Canada. New Jersey Natural Gas had 564,000 cust. at 9/30/21. Fiscal 2021 volume: 112 bill. cu. ft. (20% interruptible, 61% residential, commercial & firm transportation, 19% other). N.J. Natural Energy subsidiary provides unregulated retail/wholesale natural gas and related energy svcs. 2021 dep. rate: 2.4%. Has 1,251 empls. Off/dir. own less than 1% of common; BlackRock, 15.3%; Vanguard, 10.6% (1/21 Proxy). CEO, President & Director: Steven D. Westhoven. Incorporated: New Jersey. Address: 1415 Wyckoff Road, Wall, NJ 07719. Telephone: 732-938-1480. Web: www.njresources.com.					<b>New Jersey Resources is off to a good start in fiscal 2022 (ends September 30th).</b> The company's top line advanced 48.8%, to \$675.8 million, handily besting our call of \$510 million. This sharp rise reflected hefty volume increases at the Natural Gas Distribution and Energy Services units. In fact, operating revenues in those divisions climbed 40% and 60%, respectively. Moreover, the NJNG utility business added 1,730 new customers during the quarter. The Clean Energy Ventures arm was also nicely complementary to the overall business mix. Alternatively, the Transportation & Storage segment registered a year-over-year decline in volumes. On the profitability front, total expenses increased 30 basis points as a percentage of the top line. On balance, these factors drove the bottom line 50% higher, to \$0.69 a share. This was well above our outlook of \$0.48.									an annual increase of about 12%. This ought to stem from solid improvements in both the Utility and Nonutility operations. The modest rise in volumes should help to improve overall cost absorption. And we continue to look for NJR to post a roughly 6.5% earnings gain this year, to \$2.30 a share, which is near the top end of management's reiterated guidance range of \$2.20-\$2.30. Meanwhile, we have initiated our fiscal 2023 top- and bottom-line estimates at \$2.485 billion and \$2.35 a share, respectively.								
<b>FISCAL YEAR ENDS</b> QUARTERLY REVENUES (\$mill.) <sup>A</sup> Dec.31 Mar.31 Jun.30 Sep.30 Full Fiscal Year 2019 811.8 866.2 434.9 479.1 2592.0 2020 615.0 639.6 299.0 400.1 1953.7 2021 454.3 802.2 367.6 532.5 2156.6 2022 675.8 855 430 454.2 2415 2023 690 875 445 475 2485				<b>EARNINGS PER SHARE <sup>A B</sup></b> Dec.31 Mar.31 Jun.30 Sep.30 Full Fiscal Year 2019 .61 1.27 d.20 .29 1.96 2020 .44 1.12 d.06 .57 2.07 2021 .46 1.77 d.15 .07 2.16 2022 .69 1.70 d.14 .05 2.30 2023 .70 1.72 d.13 .06 2.35					<b>At this juncture, shares of New Jersey Resources do not stand out for the short or long term.</b> Our Timeliness Ranking System has the stock pegged to mirror the broader market averages in the coming year. What's more, the equity is trading near the low end of our 3- to 5-year Target Price Range, suggesting that it offers limited upside potential over that time frame. Alternatively, income-seeking accounts may want to keep an eye on NJR. A near-term correction in the stock's price could present an attractive entry point into these already high-yielding shares.																	
<b>Cal-endar</b> QUARTERLY DIVIDENDS PAID <sup>C</sup> Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2018 .273 .273 .273 .2925 1.11 2019 .2925 .2925 .2925 .3125 1.19 2020 .3125 .3125 .3125 .3325 1.27 2021 .3325 .3325 .3325 .3625 1.36 2022 .3625				<b>The better-than-expected first-quarter results have prompted us to raise our revenue outlook for this year.</b> We have added \$165 million to our top-line estimate, bringing that figure to \$2.415 billion. Our revised figure would represent					Bryan J. Fong February 25, 2022																	
<b>(A)</b> Fiscal year ends Sept. 30th. <b>(B)</b> Diluted earnings. Qty. revenues and egs. may not sum to total due to rounding and change in shares outstanding. Next earnings report due early May. <b>(C)</b> Dividends historically paid in early Jan., April, July, and October. ■ Dividend reinvestment plan available.				<b>(D)</b> Includes regulatory assets in 2021: \$522.1 million, \$5.49/share. <b>(E)</b> In millions, adjusted for splits.					<b>Company's Financial Strength</b> A+ <b>Stock's Price Stability</b> 85 <b>Price Growth Persistence</b> 50 <b>Earnings Predictability</b> 55																	

NISOURCE INC. NYSE-NI				RECENT PRICE	P/E RATIO	TRAILING (21.0)	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE															
<b>TIMELINESS</b> 5 Lowered 12/17/21 <b>SAFETY</b> 3 Lowered 3/19/21 <b>TECHNICAL</b> 3 Raised 2/4/22 <b>BETA</b> .85 (1.00 = Market)				28.41	19.5	(Trailing: 21.0) (Median: 21.0)	1.10	3.3%																
<b>18-Month Target Price Range</b> Low-High Midpoint (% to Mid) \$20-\$31 \$26 (-10%)										<b>Target Price Range</b> 2025 2026 2027 80 60 50 40 30 25 20 15 10 7.5														
<b>2025-27 PROJECTIONS</b> High Price 55 (+95%) Low Price 35 (+25%) Ann'l Total Return 21% 9%										<b>% TOT. RETURN 1/22</b> THIS STOCK VS. ARITH. INDEX 1 yr. 36.6% vs 15.7% 3 yr. 17.1% vs 56.8% 5 yr. 51.6% vs 75.5%														
<b>Institutional Decisions</b> 10/2021 20/2021 30/2021 to Buy 252 256 230 to Sell 188 197 208 Hld's(000) 361696 367884 376481				<b>Percent shares traded</b> 30 20 10																				
				2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27	
				27.37	28.96	32.36	24.02	22.99	21.33	16.31	18.04	20.47	14.58	13.90	14.46	13.74	13.63	11.95	12.65	13.50	14.30	Revenues per sh	17.05	
				3.18	3.20	3.32	2.96	3.19	2.98	3.13	3.41	3.60	2.27	2.71	2.07	2.86	3.17	3.15	3.10	3.30	3.55	"Cash Flow" per sh	4.45	
				1.14	1.14	1.34	.84	1.06	1.05	1.37	1.57	1.67	.63	1.00	.39	1.30	1.31	1.32	1.35	1.50	1.65	Earnings per sh A	2.40	
				.92	.92	.92	.92	.92	.92	.94	.98	1.02	.83	.64	.70	.78	.80	.84	.88	.94	.98	Div'd Decl'd per sh B	1.08	
				2.33	2.88	3.54	2.81	2.88	3.99	4.83	5.99	6.42	4.26	4.57	5.03	4.88	4.72	4.24	4.55	4.50	4.45	4.45	Cap'l Spending per sh	4.35
				18.32	18.52	17.24	17.54	17.63	17.71	17.90	18.77	19.54	12.04	12.60	12.82	13.08	13.36	12.66	13.15	13.80	14.50	14.50	Book Value per sh C	17.70
				273.65	274.18	274.26	276.79	279.30	282.18	310.28	313.68	316.04	319.11	323.16	337.02	372.36	382.14	391.76	395.00	400.00	405.00	405.00	Common Shs Outst'g D	415.00
				19.2	18.8	12.1	14.3	15.3	19.4	17.9	18.9	22.7	37.3	23.2	64.4	19.3	21.3	18.7	18.2	19.0	19.0	19.0	Avg Ann'l P/E Ratio	19.0
				1.04	1.00	.73	.95	.97	1.22	1.14	1.06	1.19	1.88	1.22	3.24	1.04	1.13	.96	.95	1.00	1.00	1.00	Relative P/E Ratio	1.05
				4.2%	4.3%	5.7%	7.6%	5.7%	4.5%	3.8%	3.3%	2.7%	3.5%	2.8%	2.8%	3.1%	2.9%	3.4%	3.6%	3.6%	3.6%	3.6%	Avg Ann'l Div'd Yield	2.5%
<b>CAPITAL STRUCTURE as of 9/30/21</b> Total Debt \$9623.9 mill. Due in 5 Yrs \$2651 mill. LT Debt \$9188.2 mill. LT Interest \$379 mill. (Interest cov. earned: 2.2x) (58% of Cap'l)				5061.2	5657.3	6470.6	4651.8	4492.5	4874.6	5114.5	5208.9	4681.7	5000	5400	5780	Revenues (\$mill)	7080							
				410.6	490.9	530.7	198.6	328.1	128.6	478.3	549.8	562.6	525	595	660	Net Profit (\$mill)	990							
				34.4%	34.8%	36.9%	41.6%	35.7%	71.0%	17.0%	18.3%	19.0%	19.0%	19.0%	Income Tax Rate	19.0%								
				--	--	--	--	--	--	--	2.9%	2.0%	2.0%	2.0%	AFUDC % to Net Profit	2.0%								
<b>Leases, Uncapitalized</b> Annual rentals \$32.7 mill. <b>Pension Assets-12/20</b> \$2.1 bill. <b>Oblig.</b> \$2.1 bill.				55.1%	56.3%	56.9%	60.7%	59.8%	63.5%	55.3%	56.8%	61.2%	60.5%	59.5%	58.0%	Long-Term Debt Ratio	53.5%							
				44.9%	43.7%	43.1%	39.3%	40.2%	36.5%	37.9%	36.9%	32.9%	34.0%	35.0%	Common Equity Ratio	41.5%								
<b>Pfd Stock</b> \$880 mill. <b>Pfd Div'd</b> \$28.5 mill.				12373	13480	14331	9792.0	10129	11832	12856	13843	15058	15315	15680	16085	Total Capital (\$mill)	17680							
				12916	14365	16017	12112	13068	14360	15543	16912	16620	16750	17000	18000	Net Plant (\$mill)	20000							
				5.0%	5.2%	5.3%	4.0%	5.0%	2.6%	5.1%	5.3%	5.0%	3.5%	4.0%	4.0%	Return on Total Cap'l	5.5%							
				7.4%	8.3%	8.6%	5.2%	8.1%	3.0%	8.3%	9.2%	9.6%	8.5%	9.5%	10.0%	Return on Shr. Equity	12.0%							
				7.4%	8.3%	8.6%	5.2%	8.1%	3.0%	9.6%	9.7%	10.2%	8.5%	9.5%	10.0%	Return on Com Equity	12.0%							
				2.5%	3.1%	3.4%	NMF	3.0%	NMF	4.0%	3.8%	3.7%	2.5%	3.0%	3.5%	Retained to Com Eq	6.5%							
				67%	62%	61%	NMF	63%	NMF	60%	64%	67%	71%	68%	65%	All Div'ds to Net Prof	48%							
<b>ANNUAL RATES</b> Past 10 Yrs. Past 5 Yrs. Est'd '18-'20 to '25-'27 of change (per sh) Revenues -7.0% -6.0% 5.0% "Cash Flow" -0.5% -- 6.0% Earnings 2.0% 0.5% 10.5% Dividends -1.5% -3.0% 4.5% Book Value -3.0% -5.0% 5.0%				<b>BUSINESS:</b> NiSource Inc. is a holding company for Northern Indiana Public Service Company (NIPSCO), which supplies electricity and gas to the northern third of Indiana. Customers: 479,185 electric in Indiana, 3,200,000 million gas in Indiana, Ohio, Pennsylvania, Kentucky, Virginia, Maryland, through its Columbia subsidiaries. Revenue breakdown, 2020: electrical, 31%; gas, 69%; other, less than 1%. Generating sources, coal, 69.4%; purchased & other, 30.6%. 2020 reported depreciation rates: 2.9% electric, 2.2% gas. Has 7,304 employees. Chairman: Richard L. Thompson. President & Chief Executive Officer: Lloyd Yates. Incorporated: Indiana. Address: 801 East 86th Avenue, Merrillville, Indiana 46410. Telephone: 877-647-5990. Internet: www.nisource.com.																				
<b>Since our November review, NiSource stock has climbed higher.</b> In fact, over that time frame, the equity's price has advanced more than 11%. <b>Meanwhile, the company likely registered modest gains last year.</b> (Note: The utility provider was expected to issue its annual financials shortly after this report went to press.) Revenues probably advanced nearly 7%, to \$5.0 billion, reflecting continually increasing contributions from the Electricity and Gas Distribution divisions. The Northern Indiana Public Service Company (NIPSCO) electric utility has been performing well over the past 12 months, and logging steady volume gains. However, we think there was some margin compression last year, as the company continued to operate in a challenging business environment. On balance, these factors ought to have translated to a modest bottom-line advance of about 2.5%, to \$1.35 per share.				<b>named Lloyd Yates as the company's new President and CEO.</b> This shift went into effect on February 14th. <b>We look for revenue and earnings growth momentum to improve this year.</b> The NIPSCO utility recently filed for a \$115 million increase in its annual base rate. Once finalized, that hike will go toward infrastructure modernization and system reliability upgrades. Meanwhile, there are pending rate cases filed in Ohio, Pennsylvania, Kentucky, and Maryland, which should help the company to recoup prior capital growth initiatives, as well as forge the way for future expansion. NiSource has roughly \$10 billion in planned CAPEX spending through 2024. Too, we are introducing our 2023 top- and bottom-line estimates at \$5.8 billion and \$1.65 a share, respectively. <b>Our Timeliness Ranking System suggests NiSource shares will lag the broader market averages in the year ahead.</b> However, a near-term correction may afford an attractive entry point into these high-yielding shares that currently offer about average upside potential.																				
<b>Some changes have been made in the C-suite.</b> Joe Hamrock has decided to retire after an accomplished 10-year career with NiSource. The succession plan, which had been in place for some time,				<b>Bryan J. Fong</b> <i>February 25, 2022</i>																				
<b>QUARTERLY REVENUES (\$ mill.)</b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2019 1869.8 1010.4 931.5 1397.2 5208.9 2020 1605.5 962.7 902.5 1211.0 4681.7 2021 1545.6 986.0 959.4 1509 5000 2022 1645 1085 1060 1610 5400 2023 1740 1180 1155 1705 5780				<b>QUARTERLY DIVIDENDS PAID B</b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2018 .195 .195 .195 .195 .78 2019 .200 .200 .200 .200 .80 2020 .21 .21 .21 .21 .84 2021 .22 .22 .22 .22 .88 2022 .235																				
<b>EARNINGS PER SHARE A</b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2019 .82 .05 -- .45 1.31 2020 .76 .13 .09 .34 1.32 2021 .77 .13 .11 .34 1.35 2022 .80 .17 .15 .38 1.50 2023 .84 .21 .19 .41 1.65				<b>Company's Financial Strength</b> B+ <b>Stock's Price Stability</b> 100 <b>Price Growth Persistence</b> 20 <b>Earnings Predictability</b> 45																				
<b>ANNUAL RATES</b> Past 10 Yrs. Past 5 Yrs. Est'd '18-'20 to '25-'27 of change (per sh) Revenues -7.0% -6.0% 5.0% "Cash Flow" -0.5% -- 6.0% Earnings 2.0% 0.5% 10.5% Dividends -1.5% -3.0% 4.5% Book Value -3.0% -5.0% 5.0%				<b>© 2022 Value Line, Inc. All rights reserved. Factual material is obtained from sources believed to be reliable and is provided without warranties of any kind. THE PUBLISHER IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS HEREIN. This publication is strictly for subscriber's own, non-commercial, internal use. No part of it may be reproduced, resold, stored or transmitted in any printed, electronic or other form, or used for generating or marketing any printed or electronic publication, service or product.</b>																				

N.W. NATURAL NYSE: NWN					RECENT PRICE	P/E RATIO		RELATIVE P/E RATIO		DIV'D YLD		VALUE LINE								
					46.63	17.6 (Trailing: 17.0; Median: 24.0)		0.99		4.1%										
TIMELINESS	5	Lowered 11/19/21		High: 49.0	50.8	46.6	52.6	52.3	66.2	69.5	71.8	74.1	77.3	56.8	50.1	Target Price Range				
SAFETY	3	Lowered 3/19/21		Low: 39.6	41.0	40.0	40.1	42.0	48.9	56.5	51.5	57.2	42.3	41.7	45.9	2025 2026 2027				
TECHNICAL	3	Raised 2/18/22		LEGENDS 0.60 x Dividends p sh divided by Interest Rate ... Relative Price Strength Options: Yes Shaded area indicates recession																
BETA	.80	(1.00 = Market)		18-Month Target Price Range																
Low-High		Midpoint (% to Mid)																		
\$41-\$65		\$53 (15%)																		
2025-27 PROJECTIONS																				
High	Price	Gain	Ann'l Total Return																	
Low	95	(+105%)	22%																	
	65	(+40%)	12%																	
Institutional Decisions																				
to Buy		10Q2021	2Q2021	3Q2021																
to Sell		103	114	95																
Hid's(000)		21451	21444	21597																
					Percent shares traded															
					15	10														
					5															
© VALUE LINE PUB. LLC 25-27																				
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Revenues per sh		32.65
37.20	39.13	39.16	38.17	30.56	31.72	27.14	28.02	27.64	26.39	23.61	26.52	24.45	24.49	25.29	26.75	27.75	29.05	"Cash Flow" per sh		7.25
4.76	5.41	5.31	5.20	5.18	5.00	4.94	5.04	5.05	4.91	4.93	1.04	5.28	5.15	5.69	5.75	6.10	6.40	Earnings per sh <sup>A</sup>		3.35
2.35	2.76	2.57	2.83	2.73	2.39	2.22	2.24	2.16	1.96	2.12	d1.94	2.33	2.19	2.30	2.50	2.70	2.85	Div'ds Decl'd per sh <sup>B</sup>		1.96
1.39	1.44	1.52	1.60	1.68	1.75	1.79	1.83	1.85	1.86	1.87	1.88	1.89	1.90	1.91	1.92	1.93	1.94	Cap'l Spending per sh		9.40
3.56	4.48	3.92	5.09	9.35	3.76	4.91	5.13	4.40	4.37	4.87	7.43	7.43	7.95	9.18	8.40	8.70	9.05	Book Value per sh <sup>D</sup>		42.75
22.01	22.52	23.71	24.88	26.08	26.70	27.23	27.77	28.12	28.47	29.71	25.85	26.41	28.42	29.05	33.95	36.05	37.95	Common Shs Outst'g <sup>C</sup>		32.00
27.24	26.41	26.50	26.53	26.58	26.76	26.92	27.08	27.28	27.43	28.63	28.74	28.88	30.47	30.59	31.00	31.00	31.00	Avg Ann'l P/E Ratio		24.0
15.9	16.7	18.1	15.2	17.0	19.0	21.1	19.4	20.7	23.7	26.9	--	26.6	30.9	25.0	20.0	Bold figures are Value Line estimates		Relative P/E Ratio		1.35
.86	.89	1.09	1.01	1.08	1.19	1.34	1.09	1.09	1.19	1.41	--	1.44	1.65	1.28	1.04			Avg Ann'l Div'd Yield		2.6%
3.7%	3.1%	3.3%	3.7%	3.6%	3.9%	3.8%	4.2%	4.1%	4.0%	3.3%	3.0%	3.0%	2.8%	3.3%	3.8%					
CAPITAL STRUCTURE as of 9/30/21					730.6	758.5	754.0	723.8	676.0	762.2	706.1	746.4	773.7	830	860	900	Revenues (\$mill)		1045	
Total Debt \$1315.8 mill. Due in 5 Yrs \$360.2 mill.					59.9	60.5	58.7	53.7	58.9	d55.6	67.3	65.3	70.3	75.0	85.0	90.0	Net Profit (\$mill)		105	
LT Debt \$916.0 mill. LT Interest \$43.1 mill.					42.4%	40.8%	41.5%	40.0%	40.9%	--	26.4%	16.2%	23.1%	21.0%	21.0%	21.0%	Income Tax Rate		21.0%	
(Total interest coverage: 3.1x)					8.2%	8.0%	7.8%	7.4%	8.7%	NMF	9.5%	8.8%	9.1%	9.0%	9.9%	10.0%	Net Profit Margin		10.0%	
Pension Assets-12/20 \$373.9 mill.					48.5%	47.6%	44.8%	42.5%	44.4%	47.9%	48.1%	48.2%	49.2%	49.0%	46.5%	44.5%	Long-Term Debt Ratio		44.5%	
Oblig. \$595.2 mill.					51.5%	52.4%	55.2%	57.5%	55.6%	52.1%	51.9%	51.8%	50.8%	51.0%	53.5%	55.5%	Common Equity Ratio		55.5%	
Pfd Stock None					1424.7	1433.6	1389.0	1357.7	1529.8	1426.0	1468.9	1672.0	1748.8	2065	2090	2120	Total Capital (\$mill)		2465	
Common Stock 30,730,274 shares as of 10/27/21					1973.6	2062.9	2121.6	2182.7	2260.9	2255.0	2421.4	2438.9	2654.8	2640	2750	2865	Net Plant (\$mill)		3235	
MARKET CAP \$1.4 billion (Mid Cap)					5.7%	5.8%	5.8%	5.5%	5.1%	NMF	5.8%	5.2%	5.2%	4.0%	4.0%	4.0%	Return on Total Cap'l		4.5%	
CURRENT POSITION					8.2%	8.1%	7.6%	6.9%	6.9%	NMF	8.8%	7.5%	7.9%	7.5%	7.5%	8.0%	Return on Shr. Equity		8.0%	
2019					8.2%	8.1%	7.6%	6.9%	6.9%	NMF	8.8%	7.5%	7.9%	7.5%	8.0%	Return on Com Equity		8.0%		
2020					1.6%	1.5%	1.1%	.6%	.9%	NMF	2.1%	1.4%	1.7%	1.5%	2.0%	Retained to Com Eq		3.0%		
9/30/21					80%	81%	85%	92%	87%	NMF	76%	82%	79%	77%	72%	All Div'ds to Net Prof		59%		
CASH ASSETS					9.6	30.2	19.5	BUSINESS: Northwest Natural Holding Co. distributes natural gas pipeline system. Owns local underground storage. Rev. break-down: residential, 37%; commercial, 22%; industrial, gas transportation, 41%. Employs 1,167. BlackRock Inc. owns 16.4% of shares; State Street, 15.4%; Off./Dir., 1.03% (4/21 proxy). CEO: David H. Anderson. Inc.: Oregon. Address: 220 NW 2nd Ave., Portland, OR 97209. Tel.: 503-226-4211. Internet: www.nwnatural.com.												
OTHER ASSETS					284.1	293.0	338.7	Since our November review, shares of Northwest Natural Holding Co. have held firm. In fact, over this time frame, the stock's price remained relatively unchanged. By comparison, the S&P 500 Index has declined roughly 4.5% in price over this same period.												
CURRENT ASSETS					293.7	323.2	358.2	Meanwhile, we look for the distributor of natural gas to post solid financial results for 2021. (Note: The company was expected to issue its fourth-quarter and annual earnings release shortly after this report went to press.) To that point, NWN appeared well positioned to register a top-line increase of approximately 7.5%, to \$830 million. This uptick in volumes ought to have stemmed from the more-than-12,000 new customer accounts added over the past year. The company's final tally should show even more natural gas meters added in the fourth quarter. At the same time, pending rate cases in Oregon and Washington have set graduated increases that augur well for prospects. The rate hikes should pave the way for reliability and growth projects. All told, NWN's earnings probably advanced about 8.5% last year, to \$2.50 a share.												
ACCTS PAYABLE					113.4	97.9	97.9	Meanwhile, we look for similar bottom-line growth to persist in 2022. Finally, we have introduced our 2023 revenue and share-net estimates at \$900 million and \$2.85, respectively.												
DEBT DUE					224.2	399.9	399.8	The balance sheet is in good shape. At the end of the September-quarter, the last period for which financial data were available, cash reserves sat at \$19.5 million. And the long-term debt load sat at 51% of total capital, which is on the lower side for the industry.												
OTHER					144.6	129.3	237.2	Short-term investors will probably want to steer clear of Northwest Natural Holdings. Indeed, our Timeliness Ranking System has the stock pegged to lag the broader market averages in the coming year, Timeliness: 5 (Lowest).												
CURRENT LIAB.					482.2	627.1	734.9	However, these shares have appeal as an income vehicle. The recent increase in the quarterly dividend may have been modest, but Northwest Natural's yield is still well above the Value Line median. What's more, patient accounts with an eye on income generation may appreciate the substantial recovery potential out to 2025-2027.												
FIX. CHG. COV.					336%	335%	312%	Bryan J. Fong February 25, 2022												
ANNUAL RATES					Past 10 Yrs.	Past 5 Yrs.	Est'd '18-'20 to '25-'27													
of change (per sh)																				
Revenues					-3.5%	-2.0%	4.0%													
"Cash Flow"					0.5%	1.5%	4.5%													
Earnings					-1.5%	1.5%	6.0%													
Dividends					1.5%	0.5%	.5%													
Book Value					1.0%	--	5.5%													
QUARTERLY REVENUES (\$ mill.)					Full Year															
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31																
2019	285.4	123.4	90.3	247.3	746.4															
2020	285.2	135.0	93.3	260.2	773.7															
2021	315.9	148.9	101.4	263.8	830															
2022	320	150	110	280	860															
2023	330	160	120	290	900															
EARNINGS PER SHARE <sup>A</sup>					Full Year															
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31																
2019	1.50	.07	d.61	1.26	2.19															
2020	1.58	d.17	d.61	1.50	2.30															
2021	1.94	d.02	d.67	1.25	2.50															
2022	1.96	.01	d.57	1.30	2.70															
2023	2.00	.05	d.55	1.35	2.85															
QUARTERLY DIVIDENDS PAID <sup>B</sup>					Full Year															
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31																
2018	.4725	.4725	.4725	.475	1.89															
2019	.475	.475	.475	.4775	1.90															
2020	.4775	.4775	.4775	.48	1.91															
2021	.48	.48	.48	.483	1.92															
2022	.483																			

(A) Diluted earnings per share. Excludes non-recurring items: '06, (\$0.06); '08, (\$0.03); '09, \$0.06; May not sum due to rounding. Next earnings report due in early May.

(B) Dividends historically paid in mid-February, May, August, and November.  
 ■ Dividend reinvestment plan available.

(C) In millions.

(D) Includes intangibles. In 2020: \$69.2 million, \$2.26/share.

Company's Financial Strength A  
 Stock's Price Stability 90  
 Price Growth Persistence 35  
 Earnings Predictability 10

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ONE GAS, INC. NYSE-OGS		RECENT PRICE	74.98	P/E RATIO	18.6	(Trailing: 19.6 Median: NMF)	RELATIVE P/E RATIO	1.05	DIV/D YLD	3.4%	VALUE LINE																																																																																																																																																																																																																																																																																																																								
<b>TIMELINESS</b> 4 Lowered 6/11/21		High: 44.3	51.8	67.4	79.5	87.8	96.7	97.0	81.9	81.6	Target Price Range 2025 2026 2027																																																																																																																																																																																																																																																																																																																								
<b>SAFETY</b> 2 New 6/2/17		Low: 31.9	38.9	48.0	61.4	62.2	75.8	63.7	62.5	73.4																																																																																																																																																																																																																																																																																																																									
<b>TECHNICAL</b> 3 Raised 2/25/22		<b>LEGENDS</b> — 0.50 x Dividends p sh divided by Interest Rate ... Relative Price Strength Options: Yes Shaded area indicates recession																																																																																																																																																																																																																																																																																																																																	
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<p>The shares of ONE Gas, Inc. began trading "regular-way" on the New York Stock Exchange on February 3, 2014. That happened as a result of the separation of ONEOK's natural gas distribution operation. Regarding the details of the spinoff, on January 31, 2014, ONEOK distributed one share of OGS common stock for every four shares of ONEOK common stock held by ONEOK shareholders of record as of the close of business on January 21. It should be mentioned that ONEOK did not retain any ownership interest in the new company.</p>																																																																																																																																																																																																																																																																																																																																			
<p><b>CAPITAL STRUCTURE as of 9/30/21</b> Total Debt \$4019.1 mill. Due in 5 Yrs \$1020.0 mill. LT Debt \$3683.1 mill. LT Interest \$150.0 mill. (LT interest earned: 4.8x; total interest coverage: 4.8x) Leases, Uncapitalized Annual rentals \$7.9 mill. Pfd Stock None Pension Assets-12/20 \$987.6 mill. Obliq. \$1077.6 mill. Common Stock 53,587,508 shs. as of 10/25/21 MARKET CAP: \$4.0 billion (Mid Cap)</p>																																																																																																																																																																																																																																																																																																																																			
<p><b>CURRENT POSITION</b> 2019 2020 9/30/21 (\$MILL.)</p> <table border="1"> <tr> <td>Cash Assets</td> <td>17.9</td> <td>8.0</td> <td>6.5</td> </tr> <tr> <td>Other</td> <td>488.3</td> <td>531.9</td> <td>746.4</td> </tr> <tr> <td>Current Assets</td> <td>506.2</td> <td>539.9</td> <td>752.9</td> </tr> <tr> <td>Accts Payable</td> <td>120.5</td> <td>152.3</td> <td>127.5</td> </tr> <tr> <td>Debt Due</td> <td>516.5</td> <td>418.2</td> <td>336.0</td> </tr> <tr> <td>Other</td> <td>235.7</td> <td>226.6</td> <td>256.6</td> </tr> <tr> <td>Current Liab.</td> <td>872.7</td> <td>797.1</td> <td>720.1</td> </tr> <tr> <td>Fix. Chg. Cov.</td> <td>567%</td> <td>587%</td> <td>600%</td> </tr> </table>												Cash Assets	17.9	8.0	6.5	Other	488.3	531.9	746.4	Current Assets	506.2	539.9	752.9	Accts Payable	120.5	152.3	127.5	Debt Due	516.5	418.2	336.0	Other	235.7	226.6	256.6	Current Liab.	872.7	797.1	720.1	Fix. Chg. Cov.	567%	587%	600%																																																																																																																																																																																																																																																																																								
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<p><b>ANNUAL RATES</b> Past Past Est'd '18-'20 of change (per sh) 10 Yrs. 5 Yrs. to '25-'20</p> <table border="1"> <tr> <td>Revenues</td> <td>--</td> <td>-1.0%</td> <td>6.0%</td> </tr> <tr> <td>"Cash Flow"</td> <td>--</td> <td>8.0%</td> <td>6.5%</td> </tr> <tr> <td>Earnings</td> <td>--</td> <td>10.0%</td> <td>6.0%</td> </tr> <tr> <td>Dividends</td> <td>--</td> <td>14.5%</td> <td>6.5%</td> </tr> <tr> <td>Book Value</td> <td>--</td> <td>3.0%</td> <td>8.5%</td> </tr> </table>												Revenues	--	-1.0%	6.0%	"Cash Flow"	--	8.0%	6.5%	Earnings	--	10.0%	6.0%	Dividends	--	14.5%	6.5%	Book Value	--	3.0%	8.5%																																																																																																																																																																																																																																																																																																				
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<p><b>BUSINESS:</b> ONE Gas, Inc. provides natural gas distribution services to more than two million customers. There are three divisions: Oklahoma Natural Gas, Kansas Gas Service, and Texas Gas Service. The company purchased 153 Bcf of natural gas supply in 2020, compared to 174 Bcf in 2019. Total volumes delivered by customer (fiscal 2020): transportation, 58.3%; residential, 31.7%; commercial &amp; industrial, 9.4%; other, .6%. ONE Gas has around 3,600 employees. BlackRock owns 11.9% of common stock; The Vanguard Group, 9.7%; American Century Investment, 7.6%; officers and directors, 1.9% (4/21 Proxy). CEO: Robert S. McAnnally. Incorporated: Oklahoma. Address: 15 East Fifth Street, Tulsa, Oklahoma 74103. Tel.: 918-947-7000. Internet: www.onegas.com.</p>																																																																																																																																																																																																																																																																																																																																			
<p><b>ONE Gas stands to generate increased profits, once again, in 2022.</b> (Last year's fourth-quarter figures were expected to be available shortly after this report went to press.) That improvement should be made possible partly by benefits from new rates. Another plus is a growing customer base, especially in Texas and Oklahoma. Operating expenses ought to continue to rise, but that's to be expected as the company expands. If there are no significant pandemic-related disruptions, full-year share net may advance around 5%, to \$4.05, relative to our 2021 target of \$3.85. Concerning next year, the bottom line ought to increase at a similar percentage rate, to \$4.25 a share, as operating margins widen further. <b>This year's capital spending budget, including asset removal costs, is anticipated to be around \$650 million.</b> (That would be about 20% higher than the 2021 estimate of \$540 million.) More than 65% of the funds are being deployed to system integrity and pipeline replacement projects. It's worth mentioning that the energy firm projects total expenditures to be some \$3.5 billion (\$650 million—\$750 million annually) between 2022 and 2026, with roughly the same percentage of capital allocated to where it is currently. These goals appear achievable assuming, of course, that corporate finances remain adequate. <b>The quarterly dividend was just increased several pennies, to \$0.62 a share.</b> That was brought about, of course, by ONE Gas' solid capital position. What's more, our 3- to 5-year projections indicate that additional steady hikes in the distribution will take place. The payout ratio during that period ought to be in the neighborhood of 60%, which is manageable. Even so, the yield does not stand out from the average yield in our Natural Gas Utility group. <b>These good-quality shares have rallied around 10% in price since our last full-page review in November.</b> We think that movement stems, to a certain degree, from the company's favorable business prospects this year. Too, capital gains potential over the 2025-2027 span looks solid, versus the Value Line median. But the stock is untimely. <i>Frederick L. Harris, III February 25, 2022</i></p>																																																																																																																																																																																																																																																																																																																																			
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estimates</i>		23.5	--	--	.94	1.00	1.19	1.18	1.25	1.35	1.11	1.01			1.30	--	--	2.3%	2.7%	2.3%	2.4%	2.5%	2.3%	2.7%	3.2%			2.5%	--	--	1818.9	1547.7	1427.2	1539.6	1633.7	1652.7	1530.3	1715	1830	1950	2600	--	--	109.8	119.0	140.1	159.9	172.2	186.7	196.4	205	215	230	300	--	--	38.4%	38.0%	37.8%	36.4%	23.7%	18.7%	17.5%	17.0%	17.5%	17.5%	22.0%	--	--	6.0%	7.7%	9.8%	10.4%	10.5%	11.3%	12.8%	12.0%	11.7%	11.8%	11.5%	--	--	40.1%	39.5%	38.7%	37.8%	38.6%	37.7%	41.5%	61.5%	60.0%	58.0%	52.0%	--	--	59.9%	60.5%	61.3%	62.1%	61.4%	62.3%	58.5%	38.5%	40.0%	42.0%	48.0%	--	--	2995.3	3042.9	3080.7	3153.5	3328.1	3415.5	3815.7	6400	6620	6840	8500	--	--	3293.7	3511.9	3731.6	4007.6	4283.7	4565.2	4867.1	5150	5380	5615	6300	--	--	4.4%	4.7%	5.2%	5.8%	5.9%	6.4%	6.0%	5.0%	5.0%	5.0%	5.0%	--	--	6.1%	6.5%	7.4%	8.2%	8.4%	8.8%	8.8%	8.5%	8.0%	8.0%	7.5%	--	--	6.1%	6.5%	7.4%	8.2%	8.4%	8.8%	8.8%	8.5%	8.0%	8.0%	7.5%	--	--	3.7%	3.1%	3.5%	3.7%	3.7%	3.8%	3.7%	3.5%	3.0%	3.0%	3.0%	--	--	4.0%	5.1%	5.2%	5.5%	5.6%	5.6%	5.8%	61%	62%	62%	59%
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<p><b>(A)</b> Diluted EPS. Excludes nonrecurring gain: 2017, \$0.06. Next earnings report due early May. Quarterly EPS for 2018 don't add up due to rounding.</p>																																																																																																																																																																																																																																																																																																																																			
<p><b>(B)</b> Dividends historically paid in early March, June, Sept., and Dec. ■ Dividend reinvestment plan. Direct stock purchase plan.</p>																																																																																																																																																																																																																																																																																																																																			
<p><b>(C)</b> In millions.</p>																																																																																																																																																																																																																																																																																																																																			
<p>© 2022 Value Line, Inc. All rights reserved. Factual material is obtained from sources believed to be reliable and is provided without warranties of any kind. THE PUBLISHER IS NOT RESPONSIBLE FOR ANY ERRORS OR OMISSIONS HEREIN. This publication is strictly for subscriber's own, non-commercial, internal use. No part of it may be reproduced, resold, stored or transmitted in any printed, electronic or other form, or used for generating or marketing any printed or electronic publication, service or product.</p>																																																																																																																																																																																																																																																																																																																																			
<p><b>Company's Financial Strength</b> B++ <b>Stock's Price Stability</b> 95 <b>Price Growth Persistence</b> 60 <b>Earnings Predictability</b> 100</p>											<p><b>To subscribe call 1-800-VALUELINE</b></p>																																																																																																																																																																																																																																																																																																																								

SPIRE INC. NYSE-SR				RECENT PRICE	P/E RATIO	TRAILING (14.9)	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE								
<b>TIMELINESS</b> 4 Lowered 8/20/21 <b>SAFETY</b> 2 Raised 6/20/03 <b>TECHNICAL</b> 4 Raised 2/25/22 <b>BETA</b> .85 (1.00 = Market)				High: 42.8 Low: 32.9	44.0	48.5	55.2	61.0	71.2	82.9	81.1	88.0	88.0	77.9	67.1	61.9	Target Price Range 2025 2026 2027
<b>18-Month Target Price Range</b> Low-High Midpoint (% to Mid) \$47-\$75 \$61 (-5%)														% TOT. RETURN 1/22 THIS STOCK V.L. ARITH. INDEX 1 yr. 11.9 15.7 3 yr. -7.7 56.8 5 yr. 19.8 75.5			
<b>2025-27 PROJECTIONS</b> High Price Gain Ann'l Total Low 95 (+100%) 22% 95 (+45%) 13%														© VALUE LINE PUB. LLC 25-27			
<b>Institutional Decisions</b> to Buy 102021 202021 302021 124 112 125 to Sell 139 126 113 Hid's(000) 42475 42992 42729				Percent shares traded 18 12 6										Revenues per sh <sup>A</sup> 63.65 "Cash Flow" per sh 10.90 Earnings per sh <sup>A B</sup> 5.50 Div'ds Decl'd per sh <sup>C</sup> 3.30 Cap'l Spending per sh 11.50 Book Value per sh <sup>D</sup> 67.10 Common Shs Outst'g <sup>E</sup> 55.00 Avg Ann'l P/E Ratio 20.5 Relative P/E Ratio 1.15 Avg Ann'l Div'd Yield 3.0%			
<b>CAPITAL STRUCTURE as of 12/31/21</b> Total Debt \$4084.0 mill. Due in 5 Yrs \$1520.0 mill. LT Debt \$3206.8 mill. LT Interest \$145.0 mill. (Total interest coverage: 4.2x)				2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023										Revenues (Smill) <sup>A</sup> 3500 Net Profit (Smill) 300 Income Tax Rate 25.0% Net Profit Margin 8.6% Long-Term Debt Ratio 51.0% Common Equity Ratio 45.0% Total Capital (Smill) 8200 Net Plant (Smill) 7100 Return on Total Cap'l 5.0% Return on Shr. Equity 8.0% Return on Com Equity 8.0% Retained to Com Eq 3.0% All Div'ds to Net Prof 65%			
<b>Leases, Uncapitalized Annual rentals \$8.8 mill.</b> <b>Pension Assets-9/21 \$945.7 mill.</b> <b>Pfd Stock \$242.0 mill.</b> <b>Common Stock 51,750,217 shs. as of 1/28/22</b>				2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023										Revenues per sh <sup>A</sup> 63.65 "Cash Flow" per sh 10.90 Earnings per sh <sup>A B</sup> 5.50 Div'ds Decl'd per sh <sup>C</sup> 3.30 Cap'l Spending per sh 11.50 Book Value per sh <sup>D</sup> 67.10 Common Shs Outst'g <sup>E</sup> 55.00 Avg Ann'l P/E Ratio 20.5 Relative P/E Ratio 1.15 Avg Ann'l Div'd Yield 3.0%			
<b>MARKET CAP: \$3.3 billion (Mid Cap)</b>				2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023										Revenues (Smill) <sup>A</sup> 3500 Net Profit (Smill) 300 Income Tax Rate 25.0% Net Profit Margin 8.6% Long-Term Debt Ratio 51.0% Common Equity Ratio 45.0% Total Capital (Smill) 8200 Net Plant (Smill) 7100 Return on Total Cap'l 5.0% Return on Shr. Equity 8.0% Return on Com Equity 8.0% Retained to Com Eq 3.0% All Div'ds to Net Prof 65%			
<b>CURRENT POSITION</b> 2020 2021 12/31/21 (SMILL.)				2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023										Revenues (Smill) <sup>A</sup> 3500 Net Profit (Smill) 300 Income Tax Rate 25.0% Net Profit Margin 8.6% Long-Term Debt Ratio 51.0% Common Equity Ratio 45.0% Total Capital (Smill) 8200 Net Plant (Smill) 7100 Return on Total Cap'l 5.0% Return on Shr. Equity 8.0% Return on Com Equity 8.0% Retained to Com Eq 3.0% All Div'ds to Net Prof 65%			
<b>ANNUAL RATES</b> Past Past Est'd '19-'21 of change (per sh) 10 Yrs. 5 Yrs. to '25-'27				2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023										Revenues -6.5% 8.5% "Cash Flow" 5.0% 7.5% Earnings 2.0% 9.0% Dividends 4.5% 5.0% Book Value 6.5% 7.0%			
<b>QUARTERLY REVENUES (\$ mill.)<sup>A</sup></b> Full Fiscal Year				2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023										Revenues (Smill) <sup>A</sup> 3500 Net Profit (Smill) 300 Income Tax Rate 25.0% Net Profit Margin 8.6% Long-Term Debt Ratio 51.0% Common Equity Ratio 45.0% Total Capital (Smill) 8200 Net Plant (Smill) 7100 Return on Total Cap'l 5.0% Return on Shr. Equity 8.0% Return on Com Equity 8.0% Retained to Com Eq 3.0% All Div'ds to Net Prof 65%			
<b>EARNINGS PER SHARE<sup>A B F</sup></b> Full Fiscal Year				2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023										Revenues (Smill) <sup>A</sup> 3500 Net Profit (Smill) 300 Income Tax Rate 25.0% Net Profit Margin 8.6% Long-Term Debt Ratio 51.0% Common Equity Ratio 45.0% Total Capital (Smill) 8200 Net Plant (Smill) 7100 Return on Total Cap'l 5.0% Return on Shr. Equity 8.0% Return on Com Equity 8.0% Retained to Com Eq 3.0% All Div'ds to Net Prof 65%			
<b>QUARTERLY DIVIDENDS PAID<sup>C</sup></b> Full Year				2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023										Revenues (Smill) <sup>A</sup> 3500 Net Profit (Smill) 300 Income Tax Rate 25.0% Net Profit Margin 8.6% Long-Term Debt Ratio 51.0% Common Equity Ratio 45.0% Total Capital (Smill) 8200 Net Plant (Smill) 7100 Return on Total Cap'l 5.0% Return on Shr. Equity 8.0% Return on Com Equity 8.0% Retained to Com Eq 3.0% All Div'ds to Net Prof 65%			
<b>BUSINESS:</b> Spire Inc., formerly known as the Laclede Group, Inc., is a holding company for natural gas utilities, which distributes natural gas across Missouri, including the cities of St. Louis and Kansas City, Alabama, and Mississippi. Has roughly 1.7 million customers. Acquired Missouri Gas 9/13, Alabama Gas Co 9/14. Utility terms sold and transported in fiscal 2021: 3.3 bill. Revenue mix for regulated operations: residential, 58%; commercial and industrial, 28%; transportation, 6%; other, 8%. Has about 3,710 employees. Officers and directors own 3.0% of common shares; BlackRock, 11.5% (1/22 proxy). Chairman: Edward Glotzbach; CEO: Suzanne Sitherwood, Inc.: Missouri. Address: 700 Market Street, St. Louis, Missouri 63101. Tel.: 314-342-0500. Internet: www.spireenergy.com.				<b>Spire Inc. began fiscal 2022 (which concludes September 30th) on a sour note.</b> Indeed, first-quarter share net of \$1.01 plunged nearly 40%, relative to the previous-year total of \$1.65. That was attributable primarily to the Gas Utility segment, squeezed by unseasonably warm temperatures across the service territories plus heightened depreciation & amortization expenses. To make matters worse, the performance of the Gas Marketing division was hurt by less favorable market conditions and diminished storage margins. <b>It appears that profits will fall substantially for the year as a whole.</b> There ought to be a challenging second-quarter share-net matchup. Moreover, the company was disappointed with a Missouri rate proceeding, particularly regarding recovery of overhead costs. So, the annual pre-tax impact on results is estimated to range between \$20 million and \$30 million. At the time of this report, there were plans to file a new rate case in that state that will, hopefully, remedy the situation. Lastly, the company is authorized by the Federal Energy Regulatory Commission to operate the important										Revenues (Smill) <sup>A</sup> 3500 Net Profit (Smill) 300 Income Tax Rate 25.0% Net Profit Margin 8.6% Long-Term Debt Ratio 51.0% Common Equity Ratio 45.0% Total Capital (Smill) 8200 Net Plant (Smill) 7100 Return on Total Cap'l 5.0% Return on Shr. Equity 8.0% Return on Com Equity 8.0% Retained to Com Eq 3.0% All Div'ds to Net Prof 65%			
<b>Spire STL Pipeline, temporarily, while it reviews whether permanent approval should be granted.</b> (Management expects the process to continue into calendar 2023.) All told, full-year earnings may plummet over 30%, to \$3.40 a share, relative to fiscal 2021's \$4.96 tally. Please be aware that our fiscal 2023 target of \$3.90 a share is tentative, given the aforesaid uncertainties. <b>This year's capital spending budget is anticipated to be roughly \$570 million.</b> (That is about 9% lower than the fiscal 2021 figure of \$624.8 million.) Investments are being deployed to such segments as infrastructure upgrades at the utilities and new business development initiatives. Leadership adds that it expects total expenditures from fiscal 2022 through fiscal 2026 to be in the neighborhood of \$3 billion. If finances stay in good shape, Spire should have little trouble achieving those objectives. <b>These shares, though unfavorably ranked for Timeliness, ought to draw the attention of total return-oriented investors with a long-term bent.</b> <i>Frederick L. Harris, III February 25, 2022</i>				2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023										Revenues (Smill) <sup>A</sup> 3500 Net Profit (Smill) 300 Income Tax Rate 25.0% Net Profit Margin 8.6% Long-Term Debt Ratio 51.0% Common Equity Ratio 45.0% Total Capital (Smill) 8200 Net Plant (Smill) 7100 Return on Total Cap'l 5.0% Return on Shr. Equity 8.0% Return on Com Equity 8.0% Retained to Com Eq 3.0% All Div'ds to Net Prof 65%			
<b>Company's Financial Strength</b> B++ <b>Stock's Price Stability</b> 95 <b>Price Growth Persistence</b> 50 <b>Earnings Predictability</b> 45				2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023										Revenues (Smill) <sup>A</sup> 3500 Net Profit (Smill) 300 Income Tax Rate 25.0% Net Profit Margin 8.6% Long-Term Debt Ratio 51.0% Common Equity Ratio 45.0% Total Capital (Smill) 8200 Net Plant (Smill) 7100 Return on Total Cap'l 5.0% Return on Shr. Equity 8.0% Return on Com Equity 8.0% Retained to Com Eq 3.0% All Div'ds to Net Prof 65%			

(A) Fiscal year ends Sept. 30th. (B) Based on diluted shares outstanding. Excludes nonrecurring loss: '06, 7c. Excludes gain from discontinued operations: '08, 94c. Next earnings report due late April. (C) Dividends paid in early January, April, July, and October. (D) Dividend reinvestment plan available. (E) In millions. (F) Qly. egs. may not sum due to rounding or change in shares outstanding.

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ALLIANT ENERGY NDQ-LNT				RECENT PRICE	58.40	P/E RATIO	21.9 (Trailing: 22.3 Median: 20.0)	RELATIVE P/E RATIO	1.22	DIV'D YLD	3.0%	VALUE LINE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
<b>TIMELINESS</b> 3	Raised 10/29/21	High: 22.2	23.8	27.1	34.9	35.4	41.0	45.6	46.6	55.4	60.3	62.3	61.9	Target Price Range 2025 2026 2027																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
<b>SAFETY</b> 2	Raised 9/28/07	Low: 17.0	20.9	21.9	25.0	27.1	30.4	36.6	36.8	40.8	37.7	46.0	54.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
<b>TECHNICAL</b> 3	Lowered 3/11/22	<b>LEGENDS</b> 0.70 x Dividends p sh divided by Interest Rate . . . . Relative Price Strength 2-for-1 split 5/16 Options: Yes Shaded area indicates recession																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
<b>BETA</b> .85	(1.00 = Market)	<b>18-Month Target Price Range</b> Low-High Midpoint (% to Mid) \$50-\$78 \$64 (10%)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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LLC</th> <th>25-27</th> </tr> </thead> <tbody> <tr> <td>14.46</td> <td>15.57</td> <td>16.67</td> <td>15.51</td> <td>15.40</td> <td>16.51</td> <td>13.94</td> <td>14.77</td> <td>15.10</td> <td>14.34</td> <td>14.58</td> <td>14.62</td> <td>14.97</td> <td>14.89</td> <td>13.67</td> <td>14.65</td> <td>15.55</td> <td>16.10</td> <td>Revenues per sh</td> <td>17.75</td> </tr> <tr> <td>2.16</td> <td>2.56</td> <td>2.28</td> <td>2.10</td> <td>2.60</td> <td>2.75</td> <td>2.95</td> <td>3.34</td> <td>3.49</td> <td>3.45</td> <td>3.43</td> <td>3.97</td> <td>4.32</td> <td>4.59</td> <td>4.92</td> <td>5.25</td> <td>5.55</td> <td>5.90</td> <td>"Cash Flow" per sh</td> <td>7.00</td> </tr> <tr> <td>1.03</td> <td>1.35</td> <td>1.27</td> <td>.95</td> <td>1.38</td> <td>1.38</td> <td>1.53</td> <td>1.65</td> <td>1.74</td> <td>1.69</td> <td>1.65</td> <td>1.99</td> <td>2.19</td> <td>2.33</td> <td>2.47</td> <td>2.63</td> <td>2.75</td> <td>2.90</td> <td>Earnings per sh <sup>A</sup></td> <td>3.25</td> </tr> <tr> <td>.58</td> <td>.64</td> <td>.70</td> <td>.75</td> <td>.79</td> <td>.85</td> <td>.90</td> <td>.94</td> <td>1.02</td> <td>1.10</td> <td>1.18</td> <td>1.26</td> <td>1.34</td> <td>1.42</td> <td>1.52</td> <td>1.61</td> <td>1.71</td> <td>1.81</td> <td>Div'd Decl'd per sh <sup>B</sup> = †</td> <td>2.15</td> </tr> <tr> <td>1.71</td> <td>2.46</td> <td>3.98</td> <td>5.43</td> <td>3.91</td> <td>3.03</td> <td>5.22</td> <td>3.32</td> <td>3.78</td> <td>4.25</td> <td>5.26</td> <td>6.34</td> <td>6.92</td> <td>6.69</td> <td>5.47</td> <td>4.67</td> <td>5.90</td> <td>5.90</td> <td>Cap'l Spending per sh</td> <td>6.25</td> </tr> <tr> <td>11.42</td> <td>12.15</td> <td>12.78</td> <td>12.54</td> <td>13.05</td> <td>13.57</td> <td>14.12</td> <td>14.79</td> <td>15.54</td> <td>16.41</td> <td>16.96</td> <td>18.08</td> <td>19.43</td> <td>21.24</td> <td>22.76</td> <td>23.91</td> <td>25.00</td> <td>26.15</td> <td>Book Value per sh <sup>C</sup></td> <td>29.75</td> </tr> <tr> <td>232.25</td> <td>220.72</td> <td>220.90</td> <td>221.31</td> <td>221.79</td> <td>222.04</td> <td>221.97</td> <td>221.89</td> <td>221.87</td> <td>226.92</td> <td>227.67</td> <td>231.35</td> <td>236.06</td> <td>245.02</td> <td>249.87</td> <td>250.47</td> <td>251.00</td> <td>251.50</td> <td>Common Shs Outst'g <sup>D</sup></td> <td>253.00</td> </tr> <tr> <td>16.8</td> <td>15.1</td> <td>13.4</td> <td>13.9</td> <td>12.5</td> <td>14.5</td> <td>14.5</td> <td>15.3</td> <td>16.6</td> <td>18.1</td> <td>22.3</td> <td>20.6</td> <td>19.1</td> <td>21.2</td> <td>21.2</td> <td>21.2</td> <td>21.2</td> <td>21.2</td> <td>Avg Ann'l P/E Ratio</td> <td>18.0</td> </tr> <tr> <td>.91</td> <td>.80</td> <td>.81</td> <td>.93</td> <td>.80</td> <td>.91</td> <td>.92</td> <td>.86</td> <td>.87</td> <td>.91</td> <td>1.17</td> <td>1.04</td> <td>1.03</td> <td>1.13</td> <td>1.13</td> <td>1.13</td> <td>1.13</td> <td>1.13</td> <td>Relative P/E Ratio</td> <td>1.00</td> </tr> <tr> <td>3.3%</td> <td>3.1%</td> <td>4.1%</td> <td>5.7%</td> <td>4.6%</td> <td>4.3%</td> <td>4.1%</td> <td>3.7%</td> <td>3.5%</td> <td>3.6%</td> <td>3.2%</td> <td>3.1%</td> <td>3.2%</td> <td>2.9%</td> <td>2.9%</td> <td>2.9%</td> <td>2.9%</td> <td>2.9%</td> <td>Avg Ann'l Div'd Yield</td> <td>3.7%</td> </tr> <tr> <td colspan="4"> <b>CAPITAL STRUCTURE as of 12/31/21</b>            Total Debt \$7883 mill. Due in 5 Yrs \$2665 mill.            LT Debt \$6735 mill. LT Interest \$256 mill.            (LT interest earned: 3.2x)         </td> <td>3094.5</td> <td>3276.8</td> <td>3350.3</td> <td>3253.6</td> <td>3320.0</td> <td>3382.2</td> <td>3534.5</td> <td>3647.7</td> <td>3416.0</td> <td>3669.0</td> <td>3900</td> <td>4050</td> <td>Revenues (\$mill)</td> <td>4500</td> </tr> <tr> <td colspan="4"> <b>Leases, Uncapitalized Annual rentals \$2 mill.</b> </td> <td>337.8</td> <td>382.1</td> <td>395.7</td> <td>390.9</td> <td>384.0</td> <td>466.1</td> <td>522.3</td> <td>567.4</td> <td>624.0</td> <td>674.0</td> <td>695</td> <td>730</td> <td>Net Profit (\$mill)</td> <td>845</td> </tr> <tr> <td colspan="4"> <b>Pension Assets-12/21 \$1011 mill. Oblig \$1251 mill.</b> </td> <td>21.5%</td> <td>12.4%</td> <td>10.1%</td> <td>15.3%</td> <td>13.4%</td> <td>12.5%</td> <td>10.8%</td> <td>10.8%</td> <td>10.8%</td> <td>10.8%</td> <td>4.0%</td> <td>4.0%</td> <td>Income Tax Rate</td> <td>4.0%</td> </tr> <tr> <td colspan="4"> <b>Pfd Stock None</b> </td> <td>6.5%</td> <td>8.1%</td> <td>8.8%</td> <td>9.4%</td> <td>16.3%</td> <td>10.7%</td> <td>14.5%</td> <td>16.3%</td> <td>8.8%</td> <td>3.7%</td> <td>4.0%</td> <td>5.0%</td> <td>AFUDC % to Net Profit</td> <td>6.0%</td> </tr> <tr> <td colspan="4"> <b>Common Stock 250,478,681 shs. as of 1/31/22</b> </td> <td>48.4%</td> <td>46.1%</td> <td>49.7%</td> <td>47.3%</td> <td>51.5%</td> <td>47.8%</td> <td>52.3%</td> <td>50.6%</td> <td>53.5%</td> <td>52.9%</td> <td>55.0%</td> <td>55.0%</td> <td>Long-Term Debt Ratio</td> <td>56.0%</td> </tr> <tr> <td colspan="4"> <b>MARKET CAP: \$15 billion (Large Cap)</b> </td> <td>48.4%</td> <td>50.8%</td> <td>47.5%</td> <td>50.0%</td> <td>46.1%</td> <td>49.8%</td> <td>45.7%</td> <td>47.6%</td> <td>44.9%</td> <td>47.1%</td> <td>45.0%</td> <td>45.0%</td> <td>Common Equity Ratio</td> <td>44.0%</td> </tr> <tr> <td colspan="4"> <b>ELECTRIC OPERATING STATISTICS</b> </td> <td>6476.6</td> <td>6461.0</td> <td>7257.2</td> <td>7446.3</td> <td>8377.6</td> <td>8392.8</td> <td>10032</td> <td>10938</td> <td>12657</td> <td>12725</td> <td>14000</td> <td>14550</td> <td>Total Capital (\$mill)</td> <td>17100</td> </tr> <tr> <td colspan="4"> <b>ANNUAL RATES</b> </td> <td>7838.0</td> <td>7147.3</td> <td>6442.0</td> <td>8970.2</td> <td>9809.9</td> <td>10798</td> <td>12462</td> <td>13527</td> <td>14336</td> <td>14987</td> <td>16000</td> <td>17000</td> <td>Net Plant (\$mill)</td> <td>19900</td> </tr> <tr> <td colspan="4"> <b>2019 2020 2021</b> </td> <td>6.3%</td> <td>7.0%</td> <td>6.5%</td> <td>6.3%</td> <td>5.6%</td> <td>6.7%</td> <td>6.3%</td> <td>6.3%</td> <td>5.9%</td> <td>6.3%</td> <td>6.0%</td> <td>6.0%</td> <td>Return on Total Cap'l</td> <td>6.0%</td> </tr> <tr> <td colspan="4"> <b>% Change Retail Sales (KWH)</b> </td> <td>10.1%</td> <td>11.0%</td> <td>10.8%</td> <td>10.0%</td> <td>9.5%</td> <td>10.6%</td> <td>10.9%</td> <td>10.5%</td> <td>10.6%</td> <td>11.3%</td> <td>11.0%</td> <td>11.0%</td> <td>Return on Shr. Equity</td> <td>11.0%</td> </tr> <tr> <td colspan="4"> <b>Avg. Indust. Use (MWH)</b> </td> <td>10.3%</td> <td>11.3%</td> <td>11.2%</td> <td>10.2%</td> <td>9.7%</td> <td>10.9%</td> <td>11.2%</td> <td>10.7%</td> <td>10.8%</td> <td>11.0%</td> <td>11.0%</td> <td>11.0%</td> <td>Return on Com Equity <sup>E</sup></td> <td>11.0%</td> </tr> <tr> <td colspan="4"> <b>Avg. Indust. Revs. per KWH (c)</b> </td> <td>3.9%</td> <td>4.9%</td> <td>4.6%</td> <td>3.6%</td> <td>2.8%</td> <td>4.0%</td> <td>4.4%</td> <td>4.2%</td> <td>4.2%</td> <td>4.3%</td> <td>4.0%</td> <td>4.0%</td> <td>Retained to Com Eq</td> <td>4.0%</td> </tr> <tr> <td colspan="4"> <b>Capacity at Peak (Mw)</b> </td> <td>64%</td> <td>57%</td> <td>60%</td> <td>66%</td> <td>72%</td> <td>64%</td> <td>62%</td> <td>61%</td> <td>62%</td> <td>62%</td> <td>62%</td> <td>All Div's to Net Prof</td> <td>64%</td> </tr> <tr> <td colspan="4"> <b>Peak Load, Summer (Mw)</b> </td> <td colspan="16"> <b>BUSINESS:</b> Alliant Energy Corporation (formerly Interstate Energy) is a holding company formed through the merger of WPL Holdings, IES Industries, and Interstate Power. Supplies electricity to 984,000 customers and gas to 423,000 customers in Wisconsin, Iowa, and Minnesota. Electric revenue by state: WI, 43%; IA, 56%; MN, 1%. Electric revenue: residential, 36%; commercial, 25%; industrial, 29%; wholesale, 8%; other, 2%. Generating sources: coal, 32%; gas, 32%; wind, 16%; other, 1%; purchased, 19%. Fuel costs: 25% of revs. '21 reported deprec. rates: 2.9%-6.1%. Has 3,300 employees. Chairman, President &amp; CEO: John O. Larsen. Inc.: Wisconsin. Address: 4902 N. Blittmore Lane, Madison, Wisconsin 53718-2148. Tel.: 608-458-3311. Internet: www.alliantenergy.com.         </td> </tr> <tr> <td colspan="4"> <b>Annual Load Factor (%)</b> </td> <td colspan="16"> <b>Alliant Energy's utility subsidiary in Wisconsin received electric and gas rate increases at the start of 2022.</b> Wisconsin Power and Light was granted hikes of \$114 million for electricity and \$15 million for gas. (The electric increase was above the initial settlement agreement of \$70 million due to anticipated increases in fuel costs this year.) The allowed return on equity remained at 10% and the common-equity ratio was boosted from 52.5% to 53.8%. Note that WPL is operating under a mechanism that will share a portion of its earnings if its earned ROE is greater than 10.25%. Rate relief is a key factor in the earnings growth we expect this year. Our estimate is within Alliant Energy's targeted range of \$2.67-\$2.81 a share, up slightly from management's previous guidance of \$2.65-\$2.79 thanks to increased capital spending on solar power, which will be recovered through a rider (surcharge) on customers' bills.         </td> </tr> <tr> <td colspan="4"> <b>% Change Customers (yr-end)</b> </td> <td colspan="16"> <b>We look for further profit growth in 2023.</b> The additions of renewable capacity should help. Our earnings estimate would produce an increase of 5%, which is within the company's goal of 5%-7% annually.         </td> </tr> <tr> <td colspan="4"> <b>Fixed Charge Cov. (%)</b> </td> <td colspan="16"> <b>Alliant Energy's utilities are seeking approval from the regulators in Wisconsin and Iowa to add renewable-energy projects.</b> In the first half of 2022, WPL expects a ruling on its request for a certificate of need to add up to 414 megawatts of solar capacity. The utility also plans to ask the Wisconsin commission to approve up to an additional 300 mw of renewable capacity. In Iowa, the company expects a decision in the second half of 2022 on its proposed addition of up to 400 mw of solar capacity and 75 mw of battery storage.         </td> </tr> <tr> <td colspan="4"> <b>ANNUAL RATES</b> </td> <td colspan="16"> <b>The board of directors raised the dividend in the first quarter.</b> The company had signaled that the increase would be \$0.10 a share (6.2%) annually, and this is what occurred.         </td> </tr> <tr> <td colspan="4"> <b>of change (per sh)</b> </td> <td colspan="16"> <b>Alliant Energy stock is expensively priced.</b> The dividend yield is below the utility average. The stock does not stand out for the next 18 months, and with the recent quotation well within our 2025-2027 Target Price Range, total return potential over that time frame is unspic-tacular.         </td> </tr> <tr> <td colspan="4"> <b>Revenues</b> </td> <td colspan="16"> <i>Paul E. Debbas, CFA</i> <span style="float: right;"><i>March 11, 2022</i></span> </td> </tr> <tr> <td colspan="4"> <b>"Cash Flow"</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>Earnings</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>Dividends</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>Book Value</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>Quarterly Revenues (\$ mill.)</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>Quarterly Earnings per Share <sup>A</sup></b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>Quarterly Dividends Paid <sup>B</sup> = †</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>Full Year</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>2019</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>2020</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>2021</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>2022</b> </td> <td colspan="16"> </td> </tr> <tr> <td colspan="4"> <b>2023</b> </td> <td colspan="16"> </td> </tr> </tbody> </table>													2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27	14.46	15.57	16.67	15.51	15.40	16.51	13.94	14.77	15.10	14.34	14.58	14.62	14.97	14.89	13.67	14.65	15.55	16.10	Revenues per sh	17.75	2.16	2.56	2.28	2.10	2.60	2.75	2.95	3.34	3.49	3.45	3.43	3.97	4.32	4.59	4.92	5.25	5.55	5.90	"Cash Flow" per sh	7.00	1.03	1.35	1.27	.95	1.38	1.38	1.53	1.65	1.74	1.69	1.65	1.99	2.19	2.33	2.47	2.63	2.75	2.90	Earnings per sh <sup>A</sup>	3.25	.58	.64	.70	.75	.79	.85	.90	.94	1.02	1.10	1.18	1.26	1.34	1.42	1.52	1.61	1.71	1.81	Div'd Decl'd per sh <sup>B</sup> = †	2.15	1.71	2.46	3.98	5.43	3.91	3.03	5.22	3.32	3.78	4.25	5.26	6.34	6.92	6.69	5.47	4.67	5.90	5.90	Cap'l Spending per sh	6.25	11.42	12.15	12.78	12.54	13.05	13.57	14.12	14.79	15.54	16.41	16.96	18.08	19.43	21.24	22.76	23.91	25.00	26.15	Book Value per sh <sup>C</sup>	29.75	232.25	220.72	220.90	221.31	221.79	222.04	221.97	221.89	221.87	226.92	227.67	231.35	236.06	245.02	249.87	250.47	251.00	251.50	Common Shs Outst'g <sup>D</sup>	253.00	16.8	15.1	13.4	13.9	12.5	14.5	14.5	15.3	16.6	18.1	22.3	20.6	19.1	21.2	21.2	21.2	21.2	21.2	Avg Ann'l P/E Ratio	18.0	.91	.80	.81	.93	.80	.91	.92	.86	.87	.91	1.17	1.04	1.03	1.13	1.13	1.13	1.13	1.13	Relative P/E Ratio	1.00	3.3%	3.1%	4.1%	5.7%	4.6%	4.3%	4.1%	3.7%	3.5%	3.6%	3.2%	3.1%	3.2%	2.9%	2.9%	2.9%	2.9%	2.9%	Avg Ann'l Div'd Yield	3.7%	<b>CAPITAL STRUCTURE as of 12/31/21</b> Total Debt \$7883 mill. Due in 5 Yrs \$2665 mill. LT Debt \$6735 mill. LT Interest \$256 mill. (LT interest earned: 3.2x)				3094.5	3276.8	3350.3	3253.6	3320.0	3382.2	3534.5	3647.7	3416.0	3669.0	3900	4050	Revenues (\$mill)	4500	<b>Leases, Uncapitalized Annual rentals \$2 mill.</b>				337.8	382.1	395.7	390.9	384.0	466.1	522.3	567.4	624.0	674.0	695	730	Net Profit (\$mill)	845	<b>Pension Assets-12/21 \$1011 mill. Oblig \$1251 mill.</b>				21.5%	12.4%	10.1%	15.3%	13.4%	12.5%	10.8%	10.8%	10.8%	10.8%	4.0%	4.0%	Income Tax Rate	4.0%	<b>Pfd Stock None</b>				6.5%	8.1%	8.8%	9.4%	16.3%	10.7%	14.5%	16.3%	8.8%	3.7%	4.0%	5.0%	AFUDC % to Net Profit	6.0%	<b>Common Stock 250,478,681 shs. as of 1/31/22</b>				48.4%	46.1%	49.7%	47.3%	51.5%	47.8%	52.3%	50.6%	53.5%	52.9%	55.0%	55.0%	Long-Term Debt Ratio	56.0%	<b>MARKET CAP: \$15 billion (Large Cap)</b>				48.4%	50.8%	47.5%	50.0%	46.1%	49.8%	45.7%	47.6%	44.9%	47.1%	45.0%	45.0%	Common Equity Ratio	44.0%	<b>ELECTRIC OPERATING STATISTICS</b>				6476.6	6461.0	7257.2	7446.3	8377.6	8392.8	10032	10938	12657	12725	14000	14550	Total Capital (\$mill)	17100	<b>ANNUAL RATES</b>				7838.0	7147.3	6442.0	8970.2	9809.9	10798	12462	13527	14336	14987	16000	17000	Net Plant (\$mill)	19900	<b>2019 2020 2021</b>				6.3%	7.0%	6.5%	6.3%	5.6%	6.7%	6.3%	6.3%	5.9%	6.3%	6.0%	6.0%	Return on Total Cap'l	6.0%	<b>% Change Retail Sales (KWH)</b>				10.1%	11.0%	10.8%	10.0%	9.5%	10.6%	10.9%	10.5%	10.6%	11.3%	11.0%	11.0%	Return on Shr. Equity	11.0%	<b>Avg. Indust. Use (MWH)</b>				10.3%	11.3%	11.2%	10.2%	9.7%	10.9%	11.2%	10.7%	10.8%	11.0%	11.0%	11.0%	Return on Com Equity <sup>E</sup>	11.0%	<b>Avg. Indust. Revs. per KWH (c)</b>				3.9%	4.9%	4.6%	3.6%	2.8%	4.0%	4.4%	4.2%	4.2%	4.3%	4.0%	4.0%	Retained to Com Eq	4.0%	<b>Capacity at Peak (Mw)</b>				64%	57%	60%	66%	72%	64%	62%	61%	62%	62%	62%	All Div's to Net Prof	64%	<b>Peak Load, Summer (Mw)</b>				<b>BUSINESS:</b> Alliant Energy Corporation (formerly Interstate Energy) is a holding company formed through the merger of WPL Holdings, IES Industries, and Interstate Power. Supplies electricity to 984,000 customers and gas to 423,000 customers in Wisconsin, Iowa, and Minnesota. Electric revenue by state: WI, 43%; IA, 56%; MN, 1%. Electric revenue: residential, 36%; commercial, 25%; industrial, 29%; wholesale, 8%; other, 2%. Generating sources: coal, 32%; gas, 32%; wind, 16%; other, 1%; purchased, 19%. Fuel costs: 25% of revs. '21 reported deprec. rates: 2.9%-6.1%. Has 3,300 employees. Chairman, President & CEO: John O. Larsen. Inc.: Wisconsin. Address: 4902 N. Blittmore Lane, Madison, Wisconsin 53718-2148. Tel.: 608-458-3311. Internet: www.alliantenergy.com.																<b>Annual Load Factor (%)</b>				<b>Alliant Energy's utility subsidiary in Wisconsin received electric and gas rate increases at the start of 2022.</b> Wisconsin Power and Light was granted hikes of \$114 million for electricity and \$15 million for gas. (The electric increase was above the initial settlement agreement of \$70 million due to anticipated increases in fuel costs this year.) The allowed return on equity remained at 10% and the common-equity ratio was boosted from 52.5% to 53.8%. Note that WPL is operating under a mechanism that will share a portion of its earnings if its earned ROE is greater than 10.25%. Rate relief is a key factor in the earnings growth we expect this year. Our estimate is within Alliant Energy's targeted range of \$2.67-\$2.81 a share, up slightly from management's previous guidance of \$2.65-\$2.79 thanks to increased capital spending on solar power, which will be recovered through a rider (surcharge) on customers' bills.																<b>% Change Customers (yr-end)</b>				<b>We look for further profit growth in 2023.</b> The additions of renewable capacity should help. Our earnings estimate would produce an increase of 5%, which is within the company's goal of 5%-7% annually.																<b>Fixed Charge Cov. (%)</b>				<b>Alliant Energy's utilities are seeking approval from the regulators in Wisconsin and Iowa to add renewable-energy projects.</b> In the first half of 2022, WPL expects a ruling on its request for a certificate of need to add up to 414 megawatts of solar capacity. The utility also plans to ask the Wisconsin commission to approve up to an additional 300 mw of renewable capacity. In Iowa, the company expects a decision in the second half of 2022 on its proposed addition of up to 400 mw of solar capacity and 75 mw of battery storage.																<b>ANNUAL RATES</b>				<b>The board of directors raised the dividend in the first quarter.</b> The company had signaled that the increase would be \$0.10 a share (6.2%) annually, and this is what occurred.																<b>of change (per sh)</b>				<b>Alliant Energy stock is expensively priced.</b> The dividend yield is below the utility average. The stock does not stand out for the next 18 months, and with the recent quotation well within our 2025-2027 Target Price Range, total return potential over that time frame is unspic-tacular.																<b>Revenues</b>				<i>Paul E. Debbas, CFA</i> <span style="float: right;"><i>March 11, 2022</i></span>																<b>"Cash Flow"</b>																				<b>Earnings</b>																				<b>Dividends</b>																				<b>Book Value</b>																				<b>Quarterly Revenues (\$ mill.)</b>																				<b>Quarterly Earnings per Share <sup>A</sup></b>																				<b>Quarterly Dividends Paid <sup>B</sup> = †</b>																				<b>Full Year</b>																				<b>2019</b>																				<b>2020</b>																				<b>2021</b>																				<b>2022</b>																				<b>2023</b>																			
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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2.16	2.56	2.28	2.10	2.60	2.75	2.95	3.34	3.49	3.45	3.43	3.97	4.32	4.59	4.92	5.25	5.55	5.90	"Cash Flow" per sh	7.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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1.71	2.46	3.98	5.43	3.91	3.03	5.22	3.32	3.78	4.25	5.26	6.34	6.92	6.69	5.47	4.67	5.90	5.90	Cap'l Spending per sh	6.25																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
11.42	12.15	12.78	12.54	13.05	13.57	14.12	14.79	15.54	16.41	16.96	18.08	19.43	21.24	22.76	23.91	25.00	26.15	Book Value per sh <sup>C</sup>	29.75																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
232.25	220.72	220.90	221.31	221.79	222.04	221.97	221.89	221.87	226.92	227.67	231.35	236.06	245.02	249.87	250.47	251.00	251.50	Common Shs Outst'g <sup>D</sup>	253.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
16.8	15.1	13.4	13.9	12.5	14.5	14.5	15.3	16.6	18.1	22.3	20.6	19.1	21.2	21.2	21.2	21.2	21.2	Avg Ann'l P/E Ratio	18.0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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<b>CAPITAL STRUCTURE as of 12/31/21</b> Total Debt \$7883 mill. Due in 5 Yrs \$2665 mill. LT Debt \$6735 mill. LT Interest \$256 mill. (LT interest earned: 3.2x)				3094.5	3276.8	3350.3	3253.6	3320.0	3382.2	3534.5	3647.7	3416.0	3669.0	3900	4050	Revenues (\$mill)	4500																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>Leases, Uncapitalized Annual rentals \$2 mill.</b>				337.8	382.1	395.7	390.9	384.0	466.1	522.3	567.4	624.0	674.0	695	730	Net Profit (\$mill)	845																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>Pension Assets-12/21 \$1011 mill. Oblig \$1251 mill.</b>				21.5%	12.4%	10.1%	15.3%	13.4%	12.5%	10.8%	10.8%	10.8%	10.8%	4.0%	4.0%	Income Tax Rate	4.0%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>Pfd Stock None</b>				6.5%	8.1%	8.8%	9.4%	16.3%	10.7%	14.5%	16.3%	8.8%	3.7%	4.0%	5.0%	AFUDC % to Net Profit	6.0%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>Common Stock 250,478,681 shs. as of 1/31/22</b>				48.4%	46.1%	49.7%	47.3%	51.5%	47.8%	52.3%	50.6%	53.5%	52.9%	55.0%	55.0%	Long-Term Debt Ratio	56.0%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>MARKET CAP: \$15 billion (Large Cap)</b>				48.4%	50.8%	47.5%	50.0%	46.1%	49.8%	45.7%	47.6%	44.9%	47.1%	45.0%	45.0%	Common Equity Ratio	44.0%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>ELECTRIC OPERATING STATISTICS</b>				6476.6	6461.0	7257.2	7446.3	8377.6	8392.8	10032	10938	12657	12725	14000	14550	Total Capital (\$mill)	17100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>ANNUAL RATES</b>				7838.0	7147.3	6442.0	8970.2	9809.9	10798	12462	13527	14336	14987	16000	17000	Net Plant (\$mill)	19900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>2019 2020 2021</b>				6.3%	7.0%	6.5%	6.3%	5.6%	6.7%	6.3%	6.3%	5.9%	6.3%	6.0%	6.0%	Return on Total Cap'l	6.0%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>% Change Retail Sales (KWH)</b>				10.1%	11.0%	10.8%	10.0%	9.5%	10.6%	10.9%	10.5%	10.6%	11.3%	11.0%	11.0%	Return on Shr. Equity	11.0%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>Avg. Indust. Use (MWH)</b>				10.3%	11.3%	11.2%	10.2%	9.7%	10.9%	11.2%	10.7%	10.8%	11.0%	11.0%	11.0%	Return on Com Equity <sup>E</sup>	11.0%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>Avg. Indust. Revs. per KWH (c)</b>				3.9%	4.9%	4.6%	3.6%	2.8%	4.0%	4.4%	4.2%	4.2%	4.3%	4.0%	4.0%	Retained to Com Eq	4.0%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
<b>Capacity at Peak (Mw)</b>				64%	57%	60%	66%	72%	64%	62%	61%	62%	62%	62%	All Div's to Net Prof	64%																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
<b>Peak Load, Summer (Mw)</b>				<b>BUSINESS:</b> Alliant Energy Corporation (formerly Interstate Energy) is a holding company formed through the merger of WPL Holdings, IES Industries, and Interstate Power. Supplies electricity to 984,000 customers and gas to 423,000 customers in Wisconsin, Iowa, and Minnesota. Electric revenue by state: WI, 43%; IA, 56%; MN, 1%. Electric revenue: residential, 36%; commercial, 25%; industrial, 29%; wholesale, 8%; other, 2%. Generating sources: coal, 32%; gas, 32%; wind, 16%; other, 1%; purchased, 19%. Fuel costs: 25% of revs. '21 reported deprec. rates: 2.9%-6.1%. Has 3,300 employees. Chairman, President & CEO: John O. Larsen. Inc.: Wisconsin. Address: 4902 N. Blittmore Lane, Madison, Wisconsin 53718-2148. Tel.: 608-458-3311. Internet: www.alliantenergy.com.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
<b>Annual Load Factor (%)</b>				<b>Alliant Energy's utility subsidiary in Wisconsin received electric and gas rate increases at the start of 2022.</b> Wisconsin Power and Light was granted hikes of \$114 million for electricity and \$15 million for gas. (The electric increase was above the initial settlement agreement of \$70 million due to anticipated increases in fuel costs this year.) The allowed return on equity remained at 10% and the common-equity ratio was boosted from 52.5% to 53.8%. Note that WPL is operating under a mechanism that will share a portion of its earnings if its earned ROE is greater than 10.25%. Rate relief is a key factor in the earnings growth we expect this year. Our estimate is within Alliant Energy's targeted range of \$2.67-\$2.81 a share, up slightly from management's previous guidance of \$2.65-\$2.79 thanks to increased capital spending on solar power, which will be recovered through a rider (surcharge) on customers' bills.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
<b>% Change Customers (yr-end)</b>				<b>We look for further profit growth in 2023.</b> The additions of renewable capacity should help. Our earnings estimate would produce an increase of 5%, which is within the company's goal of 5%-7% annually.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
<b>Fixed Charge Cov. (%)</b>				<b>Alliant Energy's utilities are seeking approval from the regulators in Wisconsin and Iowa to add renewable-energy projects.</b> In the first half of 2022, WPL expects a ruling on its request for a certificate of need to add up to 414 megawatts of solar capacity. The utility also plans to ask the Wisconsin commission to approve up to an additional 300 mw of renewable capacity. In Iowa, the company expects a decision in the second half of 2022 on its proposed addition of up to 400 mw of solar capacity and 75 mw of battery storage.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
<b>ANNUAL RATES</b>				<b>The board of directors raised the dividend in the first quarter.</b> The company had signaled that the increase would be \$0.10 a share (6.2%) annually, and this is what occurred.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
<b>of change (per sh)</b>				<b>Alliant Energy stock is expensively priced.</b> The dividend yield is below the utility average. The stock does not stand out for the next 18 months, and with the recent quotation well within our 2025-2027 Target Price Range, total return potential over that time frame is unspic-tacular.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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(A) Diluted EPS. Excl. nonrecurring losses: '11, 1c; '12, 8c. '20 & '21 EPS don't sum due to rounding. Next earnings report due early May. (B) Dividends historically paid in mid-Feb. (C) May, Aug., and Nov. = Dividend reinvestment plan avail. † Shareholder investment plan avail. (D) Incl. deferred charges. In '21: \$1980 mill., \$7.91/sh. (E) In millions, adj. for split. (F) Rate base: Orig. cost. Rates all'd on com. eq. in IA in '20: various; in WI in '22: 10%; earned on avg. com. eq., '21: 11.3%. Regulatory Climate: Wisconsin, Above Average; Iowa, Average.

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AMEREN NYSE-AEE				RECENT PRICE	85.95	P/E RATIO	21.1 (Trailing: 22.4 Median: 19.0)	RELATIVE P/E RATIO	1.18	DIV'D YLD	2.8%	VALUE LINE							
<b>TIMELINESS</b> 4 Lowered 12/10/21	High: 34.1	35.3	37.3	48.1	46.8	54.1	64.9	70.9	80.9	87.7	90.8	89.5	Target Price Range 2025 2026 2027						
<b>SAFETY</b> 1 Raised 9/10/21	Low: 25.5	28.4	30.6	35.2	37.3	41.5	51.4	51.9	63.1	58.7	69.8	81.8							
<b>TECHNICAL</b> 2 Lowered 3/11/22	<b>LEGENDS</b> 0.64 x Dividends p sh divided by Interest Rate . . . . Relative Price Strength Options: Yes Shaded area indicates recession																		
<b>BETA</b> .80 (1.00 = Market)	<b>18-Month Target Price Range</b> Low-High Midpoint (% to Mid) \$75-\$107 \$91 (5%)																		
<b>2025-27 PROJECTIONS</b> High Price 100 Gain Ann'l Total Low 80 (-15%) Return 7% 2%																			
<b>Institutional Decisions</b> 202021 3Q2021 4Q2021 to Buy 273 248 308 to Sell 226 246 227 Hld's(000) 194886 199566 198495 Percent shares traded 30 20 10																			
<b>© VALUE LINE PUB. LLC 25-27</b> % TOT. RETURN 2/22 THIS STOCK INDEX VL ARITH.* 1 yr. 25.4 15.1 3 yr. 29.4 61.1 5 yr. 79.1 84.2																			
<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>Revenues per sh</b>	<b>27.75</b>
33.30	36.23	36.92	29.87	31.77	31.04	28.14	24.06	24.95	25.13	25.04	25.46	25.73	24.00	22.87	24.81	<b>25.35</b>	<b>25.85</b>	"Cash Flow" per sh	<b>11.75</b>
6.02	6.76	6.44	6.06	6.33	5.87	5.87	5.25	5.77	6.08	6.59	6.80	7.64	7.83	8.08	8.89	<b>9.35</b>	<b>9.90</b>	Earnings per sh <sup>A</sup>	<b>5.25</b>
2.66	2.98	2.88	2.78	2.77	2.47	2.41	2.10	2.40	2.38	2.68	2.77	3.32	3.35	3.50	3.84	<b>4.10</b>	<b>4.35</b>	Div'd Decl'd per sh <sup>B</sup>	<b>3.10</b>
2.54	2.54	2.54	1.54	1.54	1.56	1.60	1.60	1.61	1.66	1.72	1.78	1.85	1.92	2.00	2.20	<b>2.36</b>	<b>2.52</b>	Cap'l Spending per sh	<b>13.00</b>
4.99	6.96	9.75	7.51	4.66	4.50	5.49	5.87	7.66	8.12	8.05	9.56	9.92	13.02	13.67	<b>12.90</b>	<b>12.55</b>	Book Value per sh <sup>C</sup>	<b>51.50</b>	
31.86	32.41	32.80	33.08	32.15	32.64	27.27	26.97	27.67	28.63	29.27	29.61	31.21	32.73	35.29	37.64	<b>40.25</b>	<b>42.90</b>	Common Shs Outst'g <sup>D</sup>	<b>280.00</b>
206.60	208.30	212.30	237.40	240.40	242.60	242.63	242.63	242.63	242.63	242.63	242.63	244.50	246.20	253.30	257.70	<b>262.50</b>	<b>267.00</b>	Avg Ann'l P/E Ratio	<b>17.5</b>
19.4	17.4	14.2	9.3	9.7	11.9	13.4	16.5	16.7	17.5	18.3	20.6	18.3	22.1	22.2	21.4	<b>21.4</b>	<b>21.4</b>	Relative P/E Ratio	<b>.95</b>
1.05	.92	.85	.62	.62	.75	.85	.93	.88	.88	.96	1.04	.99	1.18	1.14	1.14	<b>1.14</b>	<b>1.14</b>	Avg Ann'l Div'd Yield	<b>3.4%</b>
4.9%	4.9%	6.2%	6.0%	5.8%	5.3%	5.0%	4.6%	4.0%	4.0%	3.5%	3.1%	3.0%	2.6%	2.6%	2.7%	<b>2.7%</b>	<b>2.7%</b>	<i>Bold figures are Value Line estimates</i>	
<b>CAPITAL STRUCTURE as of 12/31/21</b>				Total Debt \$13612 mill. Due in 5 Yrs \$2890 mill. LT Debt \$12562 mill. LT Interest \$436 mill. (LT interest earned: 3.8x) Pension Assets-12/21 \$5745 mill. Oblig \$5457 mill.															
Pfd Stock \$129 mill. Pfd Div'd \$5 mill.				6828.0 5838.0 6053.0 6098.0 6076.0 6177.0 6291.0 5910.0 5794.0 6394.0 <b>6650</b> <b>6900</b> Revenues (\$mill) <b>7800</b> 589.0 518.0 593.0 585.0 659.0 683.0 821.0 834.0 877.0 995.0 <b>1080</b> <b>1165</b> Net Profit (\$mill) <b>1500</b> 36.9% 37.5% 38.9% 38.3% 36.7% 38.2% 22.4% 17.9% 15.0% 13.6% <b>12.0%</b> <b>12.0%</b> Income Tax Rate <b>12.0%</b> 6.1% 7.1% 5.7% 5.1% 4.1% 5.6% 6.9% 5.8% 5.5% 6.0% <b>5.0%</b> <b>5.0%</b> AFUDC % to Net Profit <b>4.0%</b> 49.5% 45.2% 47.2% 49.3% 47.7% 49.2% 50.3% 52.1% 55.0% 56.1% <b>55.5%</b> <b>53.5%</b> Long-Term Debt Ratio <b>51.0%</b> 49.4% 53.7% 51.7% 49.7% 51.3% 49.8% 48.8% 47.1% 44.3% 43.3% <b>44.0%</b> <b>46.0%</b> Common Equity Ratio <b>48.5%</b> 13384 12190 12975 13968 13840 14420 15632 17116 20158 22391 <b>23900</b> <b>24950</b> Total Capital (\$mill) <b>29600</b> 16096 16205 17424 18799 20113 21466 22810 24376 26807 29261 <b>31250</b> <b>33125</b> Net Plant (\$mill) <b>38800</b>															
Common Stock 257,724,783 shs. as of 1/31/22				6.0% 5.6% 5.8% 5.3% 6.0% 6.0% 6.4% 6.0% 5.3% 5.3% <b>5.5%</b> <b>5.5%</b> Return on Total Cap'l <b>6.0%</b> 8.7% 7.7% 8.7% 8.3% 9.1% 9.3% 10.6% 10.2% 9.7% 10.1% <b>10.0%</b> <b>10.0%</b> Return on Shr. Equity <b>10.5%</b> 8.8% 7.8% 8.7% 8.3% 9.2% 9.4% 10.7% 10.3% 9.7% 10.2% <b>10.0%</b> <b>10.0%</b> Return on Com Equity <sup>E</sup> <b>10.5%</b> 3.0% 1.9% 2.9% 2.5% 3.3% 3.4% 4.8% 4.4% 4.2% 4.4% <b>4.5%</b> <b>4.5%</b> Retained to Com Eq <b>4.5%</b> 66% 76% 67% 70% 64% 64% 58% 57% 57% 57% <b>57%</b> <b>58%</b> All Div'ds to Net Prof <b>58%</b>															
<b>MARKET CAP: \$22 billion (Large Cap)</b>				<b>BUSINESS:</b> Ameren Corporation is a holding company formed through the merger of Union Electric and CIPSCO. Has 1.2 million electric and 127,000 gas customers in Missouri; 1.2 million electric and 813,000 gas customers in Illinois. Discontinued unregulated power-generation operation in '13. Electric revenue breakdown: residential, 49%; commercial, 34%; industrial, 8%; other, 9%. Generating sources: coal, 73%; nuclear, 11%; hydro & other, 9%; purchased, 7%. Fuel costs: 25% of revenues. '21 reported deprec. rates: 3%-4%. Has 9,100 employees. Chairman: Warner L. Baxter. President & CEO: Martin J. Lyons, Jr. Inc.: Missouri. Address: One Ameren Plaza, 1901 Chouteau Ave., P.O. Box 66149, St. Louis, MO 63166-6149. Tel.: 314-621-3222. Internet: www.ameren.com.															
<b>ELECTRIC OPERATING STATISTICS</b>				<b>Ameren received rate orders in Missouri.</b> The commission approved settlements that raised electric and gas rates by \$220 million and \$5 million, respectively. An allowed return on equity was not specified, but the common equity ratio for electric was set at 52%. New tariffs took effect on February 28th.															
% Change Retail Sales (KWH) 2019 2020 2021 Avg. Indust. Use (MWH) -3.5 -5.6 +2.1 Avg. Indust. Revs. per KWH (c) NA NA NA Capacity at Peak (Mw) NA NA NA Peak Load, Summer (Mw) NA NA NA Annual Load Factor (%) NA NA NA % Change Customers (yr-end) NA NA NA				<b>Earnings will likely advance in 2022.</b> The rate increases in Missouri will be a key factor. Also, growth in the utility's rate base will boost the company's earning power. Ameren's transmission business and electric operations in Illinois operate under formula rate plans. Ameren will pick up a few cents a share from having a full year of a gas rate hike that was granted in Illinois last year. These factors should outweigh the effects of higher operating and maintenance costs, depreciation, and average shares outstanding. We are sticking with our 2022 estimate of \$4.10 a share, which is within management's targeted range of \$3.95-\$4.15.															
Fixed Charge Cov. (%) 307 291 325 <b>ANNUAL RATES</b> Past Past Est'd '19-'21 of change (per sh) 10 Yrs. 5 Yrs. to '25-'27 Revenues -2.5% -1.0% 2.5% "Cash Flow" 3.0% 6.0% 6.0% Earnings 3.0% 7.5% 6.5% Dividends 3.0% 4.0% 7.0% Book Value 1.0% 4.5% 6.5%				<b>We expect further growth in 2023.</b> Ameren will have a full year's effect of rate relief in Missouri and will continue to benefit from rate base growth. The company's goal for yearly profit growth is 6%-8%, and our estimate would produce an increase within this range.															
<b>QUARTERLY REVENUES (\$ mill.)</b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2019 1556 1379 1659 1316 5910.0 2020 1440 1398 1628 1328 5794.0 2021 1566 1472 1811 1545 6394.0 2022 <b>1700 1500 1850 1600 6650</b> 2023 <b>1750 1550 1950 1650 6900</b>				<b>There is a risk to the company's earning power.</b> The Federal Energy Regulatory Commission (FERC) is considering the removal of a half percentage point incentive "adder" on the allowed ROE for electric transmission. This would cut Ameren's annual earning power by \$0.05 a share. The timing of FERC's decision is unknown. Our estimates and projections are based on the utility maintaining its allowed ROE for transmission of 10.52%.															
<b>EARNINGS PER SHARE <sup>A</sup></b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2019 .78 .72 1.47 .38 3.35 2020 .59 .98 1.47 .46 3.50 2021 .91 .80 1.65 .48 3.84 2022 <b>.90 .85 1.85 .50 4.10</b> 2023 <b>.95 .90 1.95 .55 4.35</b>				<b>The board of directors raised the dividend in the first quarter.</b> The hike was \$0.04 a share (7.3%) quarterly. Dividend growth will likely be in line with profit growth. Ameren's target for the payout ratio is 55%-70%, and this figure is near the lower end of this range.															
<b>QUARTERLY DIVIDENDS PAID <sup>B</sup></b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2018 .4575 .4575 .4575 .475 1.85 2019 .475 .475 .475 .495 1.92 2020 .495 .495 .495 .515 2.00 2021 .55 .55 .55 .55 2.20 2022 .59				<b>The dividend yield of this untimely but high-quality stock is below the utility mean.</b> The equity's prospects for the next 18 months and the 3- to 5-year period are subpar. The recent quotation is within our 2025-2027 Target Price Range.															
<b>STOCK'S PRICE STABILITY</b> 100 <b>PRICE GROWTH PERSISTENCE</b> 75 <b>EARNINGS PREDICTABILITY</b> 95				<b>Paul E. Debbas, CFA</b> March 11, 2022															
<b>(A)</b> Diluted EPS. Excl. nonrec. gain (losses): '10, (\$2.19); '11, (\$2c); '12, (\$6.42); '17, (63c); gain (loss) from discontinued ops.: '13, (92c); '15, 21c. Next earnings report due early May.				<b>(B)</b> Div'ds paid late Mar., June, Sept., & Dec. Div'd reinvest. plan avail. <b>(C)</b> Incl. intang. In '21: \$6.60/sh. <b>(D)</b> In mill. <b>(E)</b> Rate base. Orig. cost depr. Rate allowed on com. eq. in MO in				<b>'22:</b> elec. & gas, none specified; in IL: electric, varies; in '21: gas, 9.67%; earned on avg. com. eq., '21: 10.6%. Regulatory Climate: MO, Average; IL, Below Average.				<b>Company's Financial Strength</b> A <b>Stock's Price Stability</b> 100 <b>Price Growth Persistence</b> 75 <b>Earnings Predictability</b> 95							

AMERICAN ELEC. PWR. NDQ-AEP				RECENT PRICE	90.65	P/E RATIO	17.9 (Trailing: 18.3 Median: 17.0)	RELATIVE P/E RATIO	1.00	DIV'D YLD	3.6%	VALUE LINE																																																																																																																																																																																																																												
<b>TIMELINESS</b> 4 Lowered 3/4/22	High: 41.7	45.4	51.6	63.2	65.4	71.3	78.1	81.1	96.2	105.0	91.5	91.7	Target Price Range 2025 2026 2027																																																																																																																																																																																																																											
<b>SAFETY</b> 1 Raised 3/17/17	Low: 33.1	37.0	41.8	45.8	52.3	56.8	61.8	62.7	72.3	65.1	74.8	84.2																																																																																																																																																																																																																												
<b>TECHNICAL</b> 2 Lowered 3/11/22	<b>LEGENDS</b> 0.67 x Dividends p sh divided by Interest Rate . . . . Relative Price Strength Options: Yes Shaded area indicates recession																																																																																																																																																																																																																																							
<b>BETA</b> .75 (1.00 = Market)																																																																																																																																																																																																																																								
<b>18-Month Target Price Range</b>	<b>2025-27 PROJECTIONS</b> <table border="1"> <thead> <tr> <th>High</th> <th>Price</th> <th>Gain</th> <th>Ann'l Total</th> </tr> <tr> <th>Low</th> <th>120</th> <th>(+30%)</th> <th>Return</th> </tr> <tr> <th></th> <th>100</th> <th>(+10%)</th> <th>10%</th> </tr> <tr> <th></th> <th></th> <th></th> <th>6%</th> </tr> </thead> </table>												High	Price	Gain	Ann'l Total	Low	120	(+30%)	Return		100	(+10%)	10%				6%																																																																																																																																																																																																												
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<b>CAPITAL STRUCTURE as of 12/31/21</b> Total Debt \$36069 mill. Due in 5 Yrs \$12120 mill. LT Debt \$31301 mill. LT Interest \$1083 mill. Incl. \$603.5 mill. securitized bonds. Incl. \$500.7 mill. finance leases. (LT interest earned: 3.2x) Leases, Uncapitalized Annual rentals \$119.6 mill. Pension Assets-12/21 \$5352.9 mill. Oblig \$5187.0 mill.													Revenues (\$mill) 20000																																																																																																																																																																																																																											
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<b>BUSINESS:</b> American Electric Power Company Inc. (AEP), through 10 operating utilities, serves 5.5 million customers in Arkansas, Kentucky, Indiana, Louisiana, Michigan, Ohio, Oklahoma, Tennessee, Texas, Virginia, & West Virginia. Has a transmission subsidiary. Electric revenue breakdown: residential, 43%; commercial, 23%; industrial, 18%; wholesale, 10%; other, 6%. Sold commercial													AFUDC % to Net Profit 7.0%																																																																																																																																																																																																																											
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<b>American Electric Power's sale of its Kentucky Power subsidiary is likely to be completed in the second quarter.</b> The sale would raise \$1.45 billion after taxes and transaction costs, and would offset the company's expected equity needs for 2022. (The estimated rise in the share count this year is due to the conversion of \$805 million of equity units.)													Return on Shr. Equity 11.0%																																																																																																																																																																																																																											
<b>The company wants to sell its nonregulated contracted renewable-energy assets.</b> The company would reinvest the proceeds in regulated wind and solar projects and allocate to its transmission business capital that otherwise would have been used for nonregulated renewable expansion. Any gains on these sales will be included in our earnings presentation, although we have not assumed any in our estimates. AEP already has a presence in regulated renewables, and will soon complete the third phase of a \$2 billion, 1,484-megawatt wind project.													Return on Com Equity E 11.0%																																																																																																																																																																																																																											
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<b>in the second quarter.</b> The utility is trying to reach a settlement in Louisiana, where it had requested \$73 million, based on a 10.35% ROE and a 50.8% common-equity ratio. The Texas commission granted SWEPCO \$23 million, based on a 9.25% ROE and a 49.4% common-equity ratio. The Indiana commission approved a settlement for Indiana Michigan Power calling for a \$61 million increase, based on a 9.7% ROE and a 50% common-equity ratio.													All Div'ds to Net Prof 62%																																																																																																																																																																																																																											
<b>We estimate modest profit growth this year and a larger increase in 2023.</b> The comparison with the 2021 tally is tough because mark-to-market accounting gains added \$0.14 to share net. Our estimate is within the company's targeted range of \$4.87-\$5.07 a share. Management narrowed its goal for annual earnings growth from 5%-7% to 6%-7%, and our 2023 estimate is within this range. Rate relief and volume growth are key factors boosting AEP's earning power.													<b>This untimely but high-quality stock has an average dividend yield for a utility.</b> The issue doesn't stand out for the next 18 months or the 2025-2027 period.																																																																																																																																																																																																																											
<b>Paul E. Debbas, CFA</b>													<b>March 11, 2022</b>																																																																																																																																																																																																																											
<b>Company's Financial Strength</b> A+ <b>Stock's Price Stability</b> 100 <b>Price Growth Persistence</b> 60 <b>Earnings Predictability</b> 95																																																																																																																																																																																																																																								

(A) Diluted EPS. Excl. nonrec. gains (losses): '06, (20c); '07, (20c); '08, 40c; '10, (7c); '11, 89c; '12, (38c); '13, (14c); '16, (\$2.99); '17, 26c; '19, (20c); gains (loss) from disc. ops.: '06, 2c; '08, 3c; '15, 58c; '16, (1c). Next earnings report due late April. (B) Div'ds paid early Mar., June, Sept., & Dec. ■ Div'd reinvestment plan avail. (C) Incl. intang. ln '21: \$17.04/sh. (D) In mill. (E) Rate base: various. Rates allowed on com. eq.: 9.3%-10.9%; earned on avg. com. eq.: '21: 11.6%. Regulatory Climate: Average.

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DUKE ENERGY NYSE-DUK				RECENT PRICE	P/E RATIO	TRAILING P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE													
<b>TIMELINESS</b> 4 Raised 12/24/21 <b>SAFETY</b> 2 New 6/1/07 <b>TECHNICAL</b> 3 Raised 1/14/22 <b>BETA</b> .85 (1.00 = Market) <b>18-Month Target Price Range</b> Low-High \$82-\$116 Midpoint (% to Mid) \$99 (-5%) <b>2025-27 PROJECTIONS</b> High Price 130 Gain (+25%) Ann'l Total Return 9% Low Price 95 Gain (-10%) Return 2% <b>Institutional Decisions</b> 10/2021 2/2021 3/2021 to Buy 796 823 803 to Sell 681 623 615 Hld's(000) 483371 483062 481215 Percent shares traded 15 10 5				105.06	19.6	(Trailing: 27.1; Median: 18.0)	1.11	3.8%	Target Price Range 2025 2026 2027 320 200 160 120 80 40 % TOT. RETURN 1/22 THIS STOCK INDEX VL ARITH. 1 yr. 16.2 15.7 3 yr. 34.2 56.8 5 yr. 63.6 75.5													
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27			
25.32	30.24	31.15	29.18	32.22	32.63	27.88	34.84	33.84	34.10	32.49	33.66	33.73	34.21	31.04	32.40	33.30	34.30	Revenues per sh	37.50			
7.86	8.11	7.34	7.58	8.49	8.68	6.80	8.56	9.11	9.40	9.20	10.01	10.49	12.13	10.89	12.40	13.30	14.00	"Cash Flow" per sh	16.50			
2.76	3.60	3.03	3.39	4.02	4.14	3.71	3.98	4.13	4.10	3.71	4.22	4.13	5.07	3.92	4.95	5.45	5.80	Earnings per sh <sup>A</sup>	7.00			
--	2.58	2.70	2.82	2.91	2.97	3.03	3.09	3.15	3.24	3.36	3.49	3.64	3.75	3.82	3.90	3.98	4.06	Div'd Decl'd per sh <sup>B</sup>	4.35			
8.07	7.43	10.35	9.85	10.84	9.80	7.81	7.83	7.62	9.83	11.29	11.50	12.91	15.17	12.88	13.60	16.60	15.70	Cap'l Spending per sh	15.50			
62.30	50.40	49.51	49.85	50.84	51.14	58.04	58.54	57.81	57.74	58.62	59.63	60.27	61.20	59.82	60.90	62.40	64.15	Book Value per sh <sup>C</sup>	71.00			
418.96	420.62	423.96	436.29	442.96	445.29	704.00	706.00	707.00	688.00	700.00	700.00	727.00	733.00	769.00	770.00	770.00	770.00	Common Shs Outst'g <sup>D</sup>	770.00			
--	16.1	17.3	13.3	12.7	13.8	17.5	17.4	17.9	18.2	21.3	19.9	19.4	17.7	22.4	20.1	20.1	20.1	Avg Ann'l P/E Ratio	16.0			
--	.85	1.04	.89	.81	.87	1.11	.98	.94	.92	1.12	1.00	1.05	.94	1.15	1.05	1.05	1.05	Relative P/E Ratio	.90			
--	4.4%	5.2%	6.2%	5.7%	5.2%	4.7%	4.4%	4.3%	4.3%	4.3%	4.2%	4.5%	4.2%	4.4%	3.9%	3.9%	3.9%	Avg Ann'l Div'd Yield	3.9%			
<b>CAPITAL STRUCTURE as of 9/30/21</b>				19624	24598	23925	23459	22743	23565	24521	25079	23868	24950	25650	26400	Revenues (\$mill)	28850					
Total Debt \$64900 mill. Due in 5 Yrs \$19594 mill.				2136.0	2813.0	2934.0	2854.0	2560.0	2963.0	2928.0	3755.0	2996.0	3910	4320	4565	Net Profit (\$mill)	5415					
LT Debt \$57929 mill. LT Interest \$2211 mill.				30.2%	32.6%	30.6%	32.2%	31.0%	30.4%	14.2%	12.7%	4.9%	7.5%	7.0%	7.0%	Income Tax Rate	7.0%					
Incl. \$845 mill. finance leases. (LT interest earned: 2.1x)				22.3%	8.8%	7.2%	9.2%	11.7%	12.3%	13.0%	7.9%	8.9%	8.0%	7.0%	7.0%	AFUDC % to Net Profit	6.0%					
Leases, Uncapitalized Annual rentals \$229 mill.				47.0%	48.0%	47.7%	48.6%	52.6%	54.0%	53.8%	54.0%	53.7%	54.5%	54.5%	55.0%	Long-Term Debt Ratio	55.0%					
Pension Assets-12/20 \$9337 mill.				52.9%	52.0%	52.3%	51.4%	47.4%	46.0%	44.2%	44.1%	44.4%	44.0%	43.5%	43.5%	Common Equity Ratio	43.5%					
Oblig \$8634 mill.				77307	79482	78088	77222	86609	90774	94940	101807	103589	106950	110075	113525	Total Capital (\$mill)	125600					
Pfd Stock \$1962 mill. Pfd Div'd \$107 mill.				68558	69490	70046	75709	82520	86391	91694	102127	106782	111500	118275	124025	Net Plant (\$mill)	138800					
40 mill. shs. 5.75%, cum., \$25 liq. value, redeemable at \$25.50 prior to 6/15/24; 1 mill. shs. 4.875%, cum., \$1000 liq. value.				3.6%	4.6%	4.8%	4.8%	4.0%	4.3%	4.2%	4.8%	3.9%	4.5%	5.0%	5.0%	Return on Total Cap'l	5.5%					
Common Stock 769,343,372 shs. as of 10/31/21				5.2%	6.8%	7.2%	7.2%	6.2%	7.1%	6.7%	8.0%	6.2%	8.0%	8.5%	9.0%	Return on Shr. Equity	9.5%					
MARKET CAP: \$81 billion (Large Cap)				5.2%	6.8%	7.2%	7.2%	6.2%	7.1%	6.7%	8.3%	6.3%	8.0%	9.0%	9.0%	Return on Com Equity <sup>E</sup>	9.5%					
<b>ELECTRIC OPERATING STATISTICS</b>				.9%	1.5%	1.7%	1.5%	.6%	1.2%	1.0%	2.4%	.4%	1.5%	2.5%	2.5%	Retained to Com Eq	3.5%					
2018 2019 2020				82%	78%	79%	79%	91%	83%	84%	71%	71%	79%	73%	71%	All Div'ds to Net Prof	64%					
% Change Retail Sales (KWH)				+3.9	-9	-2.3	<b>BUSINESS:</b> Duke Energy Corporation is a holding company for utilities with 7.6 mill. elec. customers in NC, FL, IN, SC, OH, & KY, and 1.6 mill. gas customers in OH, KY, NC, SC, and TN. Owns independent power plants & has 25% stake in National Methanol in Saudi Arabia. Acq'd Progress Energy 7/12; Piedmont Natural Gas 10/16; discontinued most intl' ops. in '16. Elec. rev. breakdown: residential, 45%; commercial, 28%; industrial, 13%; other, 14%. Generating sources: gas, 31%; nuclear, 30%; coal, 18%; other, 2%; purchased, 19%. Fuel costs: 27% of revs. '20 reported deprec. rate: 3.0%. Has 27,500 employees. Chairman, President & CEO: Lynn J. Good. Inc.: DE. Address: 550 South Tryon St., Charlotte, NC 28202-1803. Tel.: 704-382-3853. Internet: www.duke-energy.com.															
Avg. Indust. Use (MWH)				2953	2934	NA	<b>Duke Energy's earnings will likely advance significantly in 2022.</b> The comparison shouldn't be difficult, especially in the June quarter, when the company took an \$0.18-a-share charge for a workforce realignment in 2021. Duke will benefit from increased rates. A \$67 million hike took effect in Florida at the start of 2022. Piedmont Natural Gas received a \$67 million increase on November 1st. Duke received a small gas hike in Kentucky at the start of 2022. The company should get a partial year of rate relief in Ohio (see below). Duke also obtains revenues every year from riders (surcharges) on customers' bills. Finally, the utility is benefiting from healthy growth in volume (especially from the industrial sector) and customers. Management put forth its expectations for the current year shortly before this report went to press.															
Avg. Indust. Revs. per KWH (c)				NA	NA	NA	<b>An electric rate case is pending in Ohio.</b> Duke is seeking an increase of \$55 million (3.3%), based on a 10.3% return on equity. An order is expected this summer. <b>We look for another year of solid profit growth in 2023.</b> Duke will get the next phase of multiyear rate relief (\$49 million)															
Capacity at Peak (Mw)				NA	NA	NA	<b>in Florida at the start of the year.</b> The company will benefit from a full year of rate relief in Ohio. We estimate a bottom-line increase of 6%, within management's annual target of 5%-7%. <b>Duke is awaiting regulatory outcomes in North Carolina.</b> This involves performance-based ratemaking and securitization for coal-fired assets that will be retired early. Developments from the state commission should come forth as the year progresses. <b>Duke entered into a cooperation agreement with Elliott Investment Management.</b> This involves the addition of two board members and a standstill agreement through November 13, 2022 (the one-year anniversary of the cooperation agreement). Elliott had been critical of Duke's management. There is some speculative interest for stockholders once the cooperation agreement expires. <b>The untimely stock has a dividend yield that is a bit above the utility mean.</b> But, dividend growth potential is low, and the stock lacks appeal for the next 18 months and the 2025-2027 period. <i>Paul E. Debbas, CFA February 11, 2022</i>															
Peak Load, Summer (Mw)				NA	NA	NA																
Annual Load Factor (%)				NA	NA	NA																
% Change Customers (avg.)				+1.4	+1.5	NA																
Fixed Charge Cov. (%)				218	233	183																
<b>ANNUAL RATES</b>				Past 10 Yrs	Past 5 Yrs	est'd '18-'20																
of change (per sh)				5%	-1.0%	2.0%																
Revenues				3.5%	4.5%	5.5%																
"Cash Flow"				2.5%	1.5%	7.0%																
Earnings				3.0%	3.5%	2.0%																
Dividends				2.0%	1.0%	2.5%																
Book Value																						
Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year																	
	Mar.31	Jun.30	Sep.30	Dec.31																		
2019	6163	5873	6940	6103	25079																	
2020	5949	5421	6721	5777	23868																	
2021	6150	5758	6951	6091	24950																	
2022	6350	5900	7150	6250	25650																	
2023	6550	6050	7130	6450	26400																	
Cal-endar	EARNINGS PER SHARE <sup>A</sup>				Full Year																	
	Mar.31	Jun.30	Sep.30	Dec.31																		
2019	1.24	1.12	1.82	.89	5.07																	
2020	1.24	1.08	1.74	d.13	3.92																	
2021	1.25	.96	1.79	.95	4.95																	
2022	1.35	1.15	1.90	1.05	5.45																	
2023	1.45	1.25	2.00	1.10	5.80																	
Cal-endar	QUARTERLY DIVIDENDS PAID <sup>B</sup>				Full Year																	
	Mar.31	Jun.30	Sep.30	Dec.31																		
2018	.89	.89	.9275	.9275	3.64																	
2019	.9275	.9275	.945	.945	3.75																	
2020	.945	.945	.965	.965	3.82																	
2021	.965	.965	.985	.985	3.90																	
2022	.985																					

(A) Dil. EPS. Excl. nonrec. losses: '12, 70c; '13, 24c; '14, 67c; '17, 15c; '18, 41c; '20, \$2.21; losses on disc. ops.: '14, 80c; '16, 60c. '20 EPS don't sum due to rounding. Next eps. due early May. (B) Div'ds paid mid-Mar., June, Sept., & Dec. (C) Div'd rein. plan avail. (D) Incl. intang. In '20: \$41.25/sh. (E) In mill., adj. for rev. split. (F) Rate base: Net org. cost. Rate all'd on com. eq. in '21 in NC: 9.6%; in '19 in SC: 9.5%; in '20 in FL: 9.5%-11.5%; in '20 in IN: 9.7%; earn. on avg. com. eq., '20: 9.9%. Reg. Clim.: NC, SC Avg.; OH, IN Above Avg.

Company's Financial Strength A  
 Stock's Price Stability 95  
 Price Growth Persistence 35  
 Earnings Predictability 85

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EDISON INTERNAT'L NYSE-EIX				RECENT PRICE	65.64	P/E RATIO	34.0 (Trailing: 32.2 Median: 15.0)	RELATIVE P/E RATIO	1.78	DIV'D YLD	4.3%	VALUE LINE							
<b>TIMELINESS</b> 3 Raised 9/17/21	High: 39.4	41.6	48.0	54.2	68.7	69.6	78.7	83.4	71.0	76.4	78.9	68.6	Target Price Range 2024 2025 2026						
<b>SAFETY</b> 3 Lowered 11/23/18	Low: 30.4	32.6	39.6	44.3	44.7	55.2	58.0	62.7	45.5	53.4	43.6	53.9							
<b>TECHNICAL</b> 2 Raised 1/21/22	<b>LEGENDS</b> 0.70 x Dividends p sh divided by Interest Rate . . . . Relative Price Strength Options: Yes Shaded area indicates recession																		
<b>BETA</b> .95 (1.00 = Market)	<b>18-Month Target Price Range</b> Low-High Midpoint (% to Mid) \$53-\$87 \$70 (5%)																		
<b>2024-26 PROJECTIONS</b> High Price 110 Gain (+70%) Ann'l Total Return 17% Low Price 70 Gain (+5%) Return 6%																			
<b>Institutional Decisions</b> 10Q2021 2Q2021 3Q2021 to Buy 289 320 298 to Sell 261 249 263 Hld's(000) 330900 330984 332161 Percent shares traded 30 20 10																			
<b>% TOT. RETURN 12/21</b> THIS STOCK VL ARITH' INDEX 1 yr. 13.6 25.4 3 yr. 36.3 84.2 5 yr. 15.2 88.5																			
<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	© VALUE LINE PUB. LLC	<b>24-26</b>
36.38	38.74	40.25	43.31	37.98	38.09	39.16	36.41	38.61	41.17	35.37	36.43	37.81	38.85	34.11	35.83	38.95	39.25	Revenues per sh	44.25
6.99	7.25	7.60	8.08	7.96	8.41	9.03	9.63	8.80	9.95	10.35	10.43	11.03	4.69	9.15	7.94	7.95	10.95	"Cash Flow" per sh	12.50
3.34	3.28	3.32	3.68	3.24	3.35	3.23	4.55	3.78	4.33	4.15	3.94	4.51	d1.26	3.98	1.72	1.60	4.50	Earnings per sh <sup>A</sup>	5.25
1.02	1.10	1.18	1.23	1.25	1.27	1.29	1.31	1.37	1.48	1.73	1.98	2.23	2.43	2.48	2.58	2.69	2.84	Div'd Decl'd per sh <sup>B</sup>	3.35
5.73	7.78	8.67	8.67	10.07	13.94	14.76	12.73	11.05	11.99	12.97	11.46	11.75	13.84	13.47	14.47	14.30	15.90	Cap'l Spending per sh	17.50
20.30	23.66	25.92	29.21	30.20	32.44	30.86	28.95	30.50	33.64	34.89	36.82	35.82	32.10	36.75	37.08	36.40	38.45	Book Value per sh <sup>C</sup>	43.75
325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	325.81	361.99	378.91	385.00	390.00	Common Shs Outst'g <sup>D</sup>	390.00
11.7	13.0	16.0	12.4	9.7	10.3	11.8	9.7	12.7	13.0	14.8	17.9	17.2	--	16.7	34.9	37.1	--	Avg Ann'l P/E Ratio	17.0
.62	.70	.85	.75	.65	.66	.74	.62	.71	.68	.75	.94	.87	--	.89	1.79	2.00	--	Relative P/E Ratio	.95
2.6%	2.6%	2.2%	2.7%	4.0%	3.7%	3.4%	3.0%	2.8%	2.6%	2.8%	2.8%	2.9%	3.8%	3.7%	4.3%	4.5%	--	Avg Ann'l Div'd Yield	3.7%
<b>CAPITAL STRUCTURE as of 9/30/21</b>				12760	11862	12581	13413	11524	11869	12320	12657	12347	13578	15000	15300	Revenues (\$mill)	17250		
Total Debt \$27160 mill. Due in 5 Yrs \$11170 mill.				1112.0	1594.0	1344.0	1539.0	1480.0	1422.0	1603.0	d290.0	1477.0	1477.0	775.0	770	1915	Net Profit (\$mill)	2200	
LT Debt \$23342 mill. LT Interest \$948 mill. (LT interest earned: 1.5x)				25.7%	14.3%	25.2%	22.4%	6.6%	11.1%	5.0%	--	--	--	5.0%	5.0%	5.0%	Income Tax Rate	5.0%	
Leases, Uncapitalized Annual rentals \$39 mill. Pension Assets-12/20 \$4171 mill. Oblig \$4476 mill.				14.8%	8.5%	7.8%	5.8%	8.0%	6.8%	7.2%	--	11.1%	22.5%	23.0%	9.0%	9.0%	AFUDC % to Net Profit	8.0%	
Pfd Stock \$3136 mill. Pfd Div'd \$172 mill. 350,000 sh. 6.25%, \$1000 liq. value; 638,020 sh. 5.0%-5.75%, \$2500 liq. value; 1,250,000 sh. 5.375%, \$1000 liq. value, all cumulative. Common Stock 379,908,256 shs. as of 10/26/21				55.3%	45.2%	45.7%	44.1%	45.0%	41.8%	45.6%	53.6%	53.5%	55.2%	54.5%	55.0%	55.0%	Long-Term Debt Ratio	58.0%	
<b>MARKET CAP: \$25 billion (Large Cap)</b>				40.6%	46.2%	46.2%	47.2%	46.7%	49.2%	45.8%	39.3%	39.9%	39.5%	35.5%	35.5%	35.5%	Long-Term Equity Ratio	34.0%	
<b>ELECTRIC OPERATING STATISTICS</b>				24773	20422	21516	23216	24352	24362	25506	27284	33360	35581	39475	42025	Total Capital (\$mill)	50000		
% Change Retail Sales (KWH)				32116	30273	30455	32981	35085	37000	39050	41348	44285	47839	50900	54575	Net Plant (\$mill)	64900		
Avg. Indust. Use (MWH)				6.0%	8.9%	7.3%	7.7%	7.1%	6.9%	7.3%	.1%	5.6%	3.4%	3.0%	5.5%	Return on Total Cap'l	5.5%		
Avg. Indust. Revs. per KWH (c)				10.0%	14.2%	11.5%	11.9%	11.1%	10.0%	11.6%	NMF	9.5%	4.9%	4.5%	10.0%	Return on Shr. Equity	10.5%		
Capacity at Peak (Mw)				10.5%	15.9%	12.5%	13.0%	12.0%	10.8%	12.7%	NMF	10.2%	4.6%	4.5%	11.0%	Return on Com Equity <sup>E</sup>	12.0%		
Peak Load, Summer (Mw)				6.3%	11.4%	8.1%	8.8%	7.2%	5.6%	6.6%	NMF	4.1%	NMF	NMF	4.0%	Retained to Com Eq	4.5%		
Annual Load Factor (%)				43%	32%	40%	37%	44%	53%	52%	NMF	63%	NMF	NMF	66%	All Div's to Net Prof	67%		
% Change Customers (yr-end)				<b>BUSINESS:</b> Edison International (formerly SCECorp) is a holding company for Southern California Edison Company (SCE), which supplies electricity to 5.2 mill. customers in a 50,000-sq.-mi. area in central, coastal, & southern CA (excl. Los Angeles & San Diego). Edison Energy is an energy svcs. co. Disc. Edison Mission Energy (independent power producer) in '12. Elec. rev. breakdown: residential, 42%; commercial, 40%; industrial, 4%; other, 14%. Generating sources: nuclear, 8%; gas, 5%; hydro, 4%; purchased, 83%. Fuel costs: 36% of revs. '20 reported depr. rate: 3.6%. Has 13,400 empl's. Chairman: William P. Sullivan. Pres. & CEO: Pedro J. Pizarro. Inc.: CA. Address: 2244 Walnut Grove Ave., P.O. Box 976, Rosemead, CA 91770. Tel.: 626-302-2222. Web: www.edison.com.															
Fixed Charge Cov. (%)				<b>Edison International and its Southern California Edison utility subsidiary have increased the estimated liability stemming from wildfires and mudslides in 2017 and 2018.</b> Previously, this figure was \$6.2 billion, with \$1.4 billion yet to be resolved. Now, the utility has raised this to \$7.5 billion, with \$2.2 billion yet to be resolved. Accordingly, the company took an aftertax charge of \$899 million (\$2.37 a share) against September-quarter results, part of which is for fines and penalties stemming from the wildfires. As is the case with previous charges, we included this in our earnings presentation. Thus, we slashed our 2021 share-earnings estimate from \$4.15 to \$1.60. We are not assuming any more charges in our 2022 estimate of \$4.50 a share. <b>The utility has increased its capital spending plans.</b> SCE intends to add some \$900 million of battery storage in 2022. This will probably necessitate some debt and equity issuances. The amount, timing, and form of the new equity are to be determined. Note that SCE issued \$2 billion of preferred equity last year, so additional preferred issuances would come as no surprise. <b>A cost-of-capital application is pending.</b> Based on a provision in the current cost-of-capital mechanism, SCE's allowed return on equity for 2022 will be reduced from 10.3% to 9.72%, reducing revenues by \$179 million. However, the utility argues that the provision should not apply due to the interest-rate cuts stemming from the government's reaction to the coronavirus. SCE has two counterproposals, one of which would result in no revenue loss and the other that would lower revenues by \$50 million. When this matter will be resolved is unknown. <b>The board of directors raised the dividend.</b> The move occurred in early December, effective with the payment in January. The increase was \$0.15 a share (5.7%) annually. <b>This stock has an above-average dividend yield, even for a utility.</b> This reflects the wildfire-related uncertainties that the company faces. Total return potential is unspectacular for the next 18 months but decent for the 3- to 5-year period. <i>Paul E. Debbas, CFA January 21, 2022</i>															
ANNUAL RATES				<b>ANNUAL RATES</b> Past 10 Yrs. Past 5 Yrs. to '24-'26 Revenues -1.0% -1.0% 3.5% "Cash Flow" -1.0% -5.5% 9.5% Earnings -8.0% -18.5% NMF Dividends 7.0% 10.5% 5.0% Book Value 1.5% 1.5% 3.5%															
QUARTERLY REVENUES (\$ mill.)				<b>QUARTERLY REVENUES (\$ mill.)</b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2018 2564 2815 4269 3009 12657 2019 2824 2812 3741 2970 12347 2020 2790 2987 4644 3157 13578 2021 2960 3315 5299 3426 15000 2022 3100 3450 5300 3450 15300															
EARNINGS PER SHARE <sup>A</sup>				<b>EARNINGS PER SHARE <sup>A</sup></b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2018 .82 .84 1.57 d4.49 d1.26 2019 .64 1.57 1.35 .45 3.98 2020 .50 .85 d.76 1.13 1.72 2021 .68 .84 d.90 .98 1.60 2022 .80 1.05 1.60 1.08 4.50															
QUARTERLY DIVIDENDS PAID <sup>B</sup>				<b>QUARTERLY DIVIDENDS PAID <sup>B</sup></b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2018 .605 .605 .605 .605 2.42 2019 .6125 .6125 .6125 .6125 2.45 2020 .6375 .6375 .6375 .6375 2.55 2021 .6625 .6625 .6625 .6625 2.65 2022 .70															

(A) Dil. EPS. Excl. nonrec. gains (losses): '09, (64c); '10, 54c; '11, (\$3.33); '13, (\$1.12); '15, (\$1.18); '17, (\$1.37); '18, (15c); '19, (21c); '20, 25c; gains (loss) from disc. ops.: '12, (\$5.11); '13, 11c; '14, 57c; '15, 11c; '18, 10c. '19 EPS don't sum due to change in shs. Next earnings report due late Feb. (B) Div'ds paid late Jan., Apr., July, & Oct. (C) Div'd rein. plan avail. (C) Incl. def'd chgs. In '20: \$18.79/sh. (D) In mill. (E) Rate base: net orig. cost. Rate all'd on com. eq. in '20: 10.3%; earned on avg. com. eq., '20: 4.7%. Regulatory Climate: Average.

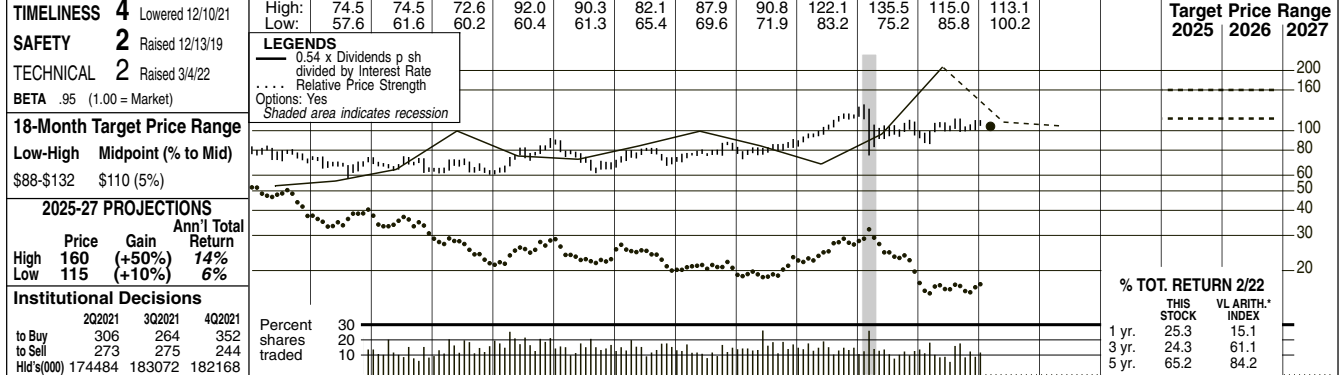
Company's Financial Strength B++  
 Stock's Price Stability 75  
 Price Growth Persistence 40  
 Earnings Predictability 5

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# ENERGY CORP. NYSE-ETR

RECENT PRICE **105.21** P/E RATIO **15.4** (Trailing: 15.3 Median: 14.0) RELATIVE P/E RATIO **0.86** DIV'D YLD **3.9%** VALUE LINE



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27
53.94	59.47	69.15	56.82	64.27	63.67	57.94	63.86	69.71	64.54	60.55	61.35	58.23	54.63	50.51	57.95	54.85	55.00	Revenues per sh	59.25
10.69	11.73	12.89	13.29	16.54	17.53	15.98	16.25	17.68	17.71	18.72	16.70	16.50	17.19	18.21	17.90	17.75	18.50	"Cash Flow" per sh	21.25
5.36	5.60	6.20	6.30	6.66	7.55	6.02	4.96	5.77	5.81	6.88	5.19	5.88	6.30	6.90	6.87	6.30	6.70	Earnings per sh <sup>A</sup>	8.00
2.16	2.58	3.00	3.00	3.24	3.32	3.32	3.32	3.32	3.34	3.42	3.50	3.58	3.66	3.74	3.86	4.09	4.30	Div'd Decl'd per sh <sup>B</sup> = †	5.10
9.44	10.29	13.92	12.99	13.33	15.21	18.18	15.73	14.82	16.79	17.28	22.07	22.45	21.72	24.52	30.86	18.15	19.00	Cap'l Spending per sh	19.75
40.45	40.71	42.07	45.54	47.53	50.81	51.73	54.00	55.83	51.89	45.12	44.28	46.78	51.34	54.56	57.42	60.20	63.45	Book Value per sh <sup>C</sup>	73.00
202.67	193.12	189.36	189.12	178.75	176.36	177.81	178.37	179.24	178.39	179.13	180.52	189.06	199.15	200.24	202.65	206.00	209.00	Common Shs Outst'g <sup>D</sup>	214.00
14.3	19.3	16.6	12.0	11.6	9.1	11.2	13.2	12.9	12.5	10.9	15.0	13.8	16.5	15.3	15.0	Bold figures are Value Line estimates		Avg Ann'l P/E Ratio	17.0
.77	1.02	1.00	.80	.74	.57	.71	.74	.68	.63	.57	.75	.75	.88	.79	.80			Relative P/E Ratio	.95
2.8%	2.4%	2.9%	4.0%	4.2%	4.9%	4.9%	5.1%	4.5%	4.6%	4.6%	4.5%	4.4%	3.5%	3.6%	3.7%			Avg Ann'l Div'd Yield	3.7%

CAPITAL STRUCTURE as of 12/31/21		2019	2020	2021	2022	2023	Revenues (\$mill)	2024
Total Debt	\$27082 mill. Due in 5 Yrs \$10975 mill.	10302	11391	12495	11513	10846	11074	11009
LT Debt	\$24842 mill. LT Interest \$780.0 mill.	1091.9	904.5	1060.0	1061.2	1249.8	950.7	1092.1
Incl.	\$83.6 mill. of securitization bonds. (LT interest earned: 3.0x)	13.0%	26.7%	37.8%	2.2%	11.3%	1.8%	NMF
Leases, Uncapitalized	Annual rentals \$65.3 mill.	11.9%	10.1%	9.3%	7.4%	8.1%	14.7%	17.5%
Pension Assets-12/21	\$6993.1 mill. Oblig \$8409.6 mill.	55.8%	55.1%	54.9%	57.8%	63.6%	63.2%	62.0%
Pfd Stock	\$254.4 mill. Pfd Div'd \$18.3 mill.	42.9%	43.6%	43.8%	40.8%	35.5%	35.5%	37.1%
200,000 shs.	6.25%-7.5%, \$100 par; 250,000 shs. 8.75%, 1.4 mill. shs. 5.375%; all cum., without sinking fund.	21432	22109	22842	22714	22777	22528	24602
Common Stock	203,027,662 shs. as of 1/31/22	27299	27882	28723	27824	27921	29664	31974
MARKET CAP:	\$21 billion (Large Cap)	6.4%	5.4%	6.0%	6.0%	6.9%	5.7%	5.8%
		11.5%	9.1%	10.3%	11.1%	15.1%	11.6%	12.0%
		11.6%	9.2%	10.4%	11.2%	15.2%	11.7%	12.2%
		5.2%	3.0%	4.4%	4.8%	7.7%	3.9%	4.9%
		56%	68%	58%	58%	50%	68%	61%

ELECTRIC OPERATING STATISTICS		2019	2020	2021
% Change Retail Sales (KWH)		-1.4	-4.1	+3.2
Avg. Indust. Use (MWH)		1070	1017	1015
Avg. Indust. Revs. per KWH(c)		5.24	4.95	5.91
Capacity at Peak (Mw)		23887	25665	NA
Peak Load, Summer (Mw)		21598	21340	NA
Annual Load Factor (%)		64	62	NA
% Change Customers (yr-end)		+8	+1.0	+1.0

ANNUAL RATES		Past 10 Yrs.	Past 5 Yrs.	Est'd '19-'21
Revenues	-1.0%	-3.5%	1.5%	
"Cash Flow"	1.0%	-5%	3.0%	
Earnings	-	1.5%	3.0%	
Dividends	1.5%	2.0%	5.0%	
Book Value	1.5%	1.5%	5.0%	

Cal-endar	QUARTERLY REVENUES (\$ mill.)				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2019	2610	2666	3141	2462	10879
2020	2427	2413	2904	2370	10114
2021	2845	2822	3353	2723	11743
2022	2700	2700	3200	2700	11000
2023	2750	2750	3250	2750	11500

Cal-endar	EARNINGS PER SHARE <sup>A</sup>				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2019	1.32	1.22	1.82	1.94	6.30
2020	.59	1.79	2.59	1.93	6.90
2021	1.66	1.30	2.63	1.28	6.87
2022	1.25	1.60	2.70	.75	6.30
2023	1.35	1.70	2.85	.80	6.70

Cal-endar	QUARTERLY DIVIDENDS PAID <sup>B</sup> = †				Full Year
	Mar.31	Jun.30	Sep.30	Dec.31	
2018	.89	.89	.89	.91	3.58
2019	.91	.91	.91	.93	3.66
2020	.93	.93	.93	.95	3.74
2021	.95	.95	.95	1.01	3.86
2022	1.01				

**ENERGY IS SEEKING TO RECOVER COSTS ASSOCIATED WITH SEVERE STORMS IN 2020 AND 2021.** In 2020, three hurricanes caused more than \$2 billion of damage in Louisiana and Texas. Hurricane Ida last year resulted in restoration costs of \$2.7 billion, above the previous estimate of \$2.1 billion-\$2.5 billion. In the coming months, Entergy will issue more than \$3 billion of securitized bonds, which includes \$1 billion for Hurricane Ida. The utility will seek recovery from the regulatory commissions in Louisiana and New Orleans (regulated separately from the rest of the state) for the remainder of the costs from Hurricane Ida. However, Entergy received criticism last year in New Orleans for its performance following the hurricane, which might affect the regulatory process.

**The company's exit from the merchant power business should be completed by mid-2022.** Entergy has closed and sold its nonregulated nuclear units over the past few years. Its last nonutility nuclear plant, Palisades in Michigan, will be shut down in May. The sale of the plant is expected to close in midyear. (The point of these deals is that the buyer gets the base: Net original cost. Allowed ROE (blended): 9.95%; earned on avg. com. eq., '21: 12.1%. Regulatory Climate: Average.

**commercial, 24%; industrial, 27%; other, 12%. Generating sources: gas, 46%; nuclear, 30%; coal, 6%; purchased, 18%. Fuel costs: 32% of revenues. '21 reported depreciation rate: 2.7%. Has 12,400 employees. Chairman & CEO: Leo P. Denault. Incorporated: Delaware. Address: 639 Loyola Avenue, P.O. Box 61000, New Orleans, Louisiana 70161. Tel.: 504-576-4000. Internet: www.entergy.com.**

**nuclear decommissioning trust at a sizable discount and the seller is relieved of the responsibility of decommissioning the facility.) Entergy's business risk has lessened as the company winds down its presence in nonregulated power generation.**

**An earnings decline is likely in 2022, followed by improvement in 2023.** Entergy's nonutility subsidiary contributed \$0.61 to share net last year, so this income will likely be less this year. Another negative factor will be an increase in average shares outstanding. Our 2022 estimate is at the midpoint of Entergy's targeted range of \$6.15-\$6.45 a share. Even so, Entergy's industrial sector is experiencing an economic recovery, and the company is benefiting from rate relief in several jurisdictions (much of which comes via formula rate plans). We think profits will advance to \$6.70 a share in 2023. Management's guidance for next year is \$6.55-\$6.85.

**This untimely stock has a dividend yield that is slightly above the utility average.** Total return prospects are sub-par for the next 18 months and don't stand out for the 3- to 5-year period.

*Paul E. Debbas, CFA* *March 11, 2022*

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	40
Earnings Predictability	70



EVERSOURCE ENERGY NYSE-ES				RECENT PRICE	P/E RATIO		RELATIVE P/E RATIO		DIV'D YLD		VALUE LINE								
				89.49	22.8 (Trailing: 26.0; Median: 19.0)		1.29		2.9%										
<b>TIMELINESS</b> 3	Raised 1/14/22	High: 36.5	40.9	45.7	56.7	56.8	60.4	66.1	70.5	86.6	99.4	92.7	90.9	Target Price Range 2025 2026 2027					
<b>SAFETY</b> 1	Raised 5/22/15	Low: 30.0	33.5	38.6	41.3	44.6	50.0	54.1	52.8	63.1	60.7	76.6	84.0						
<b>TECHNICAL</b> 2	Lowered 2/11/22	<b>LEGENDS</b> 0.80 x Dividends p sh divided by Interest Rate . . . . Relative Price Strength Options: Yes Shaded area indicates recession																	
<b>BETA</b> .90	(1.00 = Market)	<b>18-Month Target Price Range</b> Low-High Midpoint (% to Mid) \$72-\$121 \$97 (10%)																	
<b>2025-27 PROJECTIONS</b> High Price 105 Gain (+15%) Ann'l Total Return 7% Low 85 (-5%) 2%																			
<b>Institutional Decisions</b> 10/2021 20/2021 30/2021 to Buy 331 360 328 to Sell 369 326 308 Hld's(000) 266387 266114 272358 Percent shares traded 30 20 10																			
<b>% TOT. RETURN 1/22</b> THIS STOCK VL ARITH.* 1 yr. 5.2 15.7 3 yr. 40.1 56.8 5 yr. 87.4 75.5																			
2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	© VALUE LINE PUB. LLC	25-27
44.64	37.27	37.22	30.97	27.76	25.21	19.98	23.16	24.42	25.08	24.11	24.46	26.66	25.85	25.96	28.45	28.80	29.50	Revenues per sh	32.25
3.69	4.82	6.16	4.96	5.68	4.88	4.03	5.22	4.56	4.94	5.46	5.84	6.64	6.65	6.89	6.80	7.55	7.85	"Cash Flow" per sh	9.25
.82	1.59	1.86	1.91	2.10	2.22	1.89	2.49	2.58	2.76	2.96	3.11	3.25	3.45	3.55	3.45	4.05	4.25	Earnings per sh A	5.00
.73	.78	.83	.95	1.03	1.10	1.32	1.47	1.57	1.67	1.78	1.90	2.02	2.14	2.27	2.41	2.56	2.72	Div'd Decl'd per sh B	3.20
5.49	7.14	8.06	5.17	5.41	6.08	4.69	4.62	5.06	5.44	6.24	7.41	7.96	8.83	8.58	10.25	10.20	10.10	Cap'l Spending per sh	8.50
18.14	18.65	19.38	20.37	21.60	22.65	29.41	30.49	31.47	32.64	33.80	34.99	36.25	38.29	41.01	42.20	44.05	46.00	Book Value per sh C	52.25
154.23	156.22	155.83	175.62	176.45	177.16	314.05	315.27	316.98	317.19	316.89	316.89	316.89	329.88	342.95	344.30	347.00	351.00	Common Shs Outst'g D	360.00
27.1	18.7	13.7	12.0	13.4	15.4	19.9	16.9	17.9	18.1	18.7	19.5	18.7	22.1	24.3	24.8	24.8	24.8	Bold figures are Value Line estimates	19.5
1.46	.99	.82	.80	.85	.97	1.27	.95	.94	.91	.98	.98	1.01	1.18	1.25	1.35	1.35	1.35	Relative P/E Ratio	1.10
3.3%	2.6%	3.2%	4.2%	3.6%	3.2%	3.5%	3.5%	3.4%	3.3%	3.2%	3.1%	3.3%	2.8%	2.6%	2.8%	2.8%	2.8%	Avg Ann'l Div'd Yield	3.3%
<b>CAPITAL STRUCTURE as of 9/30/21</b>				6273.8	7301.2	7741.9	7954.8	7639.1	7752.0	8448.2	8526.5	8904.4	9800	10000	10350	Revenues (\$mill)	11650		
Total Debt \$19427 mill. Due in 5 Yrs \$7090.6 mill.				533.0	793.7	827.1	886.0	949.8	995.5	1040.5	1121.0	1212.7	1195	1405	1485	Net Profit (\$mill)	1800		
LT Debt \$17874 mill. LT Interest \$619.8 mill.				34.0%	35.0%	36.2%	37.9%	36.9%	36.8%	21.7%	19.7%	22.2%	24.5%	20.0%	20.0%	Income Tax Rate	20.0%		
(LT interest earned: 3.7x)				2.3%	1.4%	2.4%	2.9%	3.9%	4.7%	6.1%	6.3%	5.4%	5.0%	5.0%	4.0%	AFUDC % to Net Profit	4.0%		
Leases, Uncapitalized Annual rentals \$11.4 mill.				43.7%	44.3%	45.9%	45.6%	44.8%	51.2%	52.4%	52.8%	52.4%	55.0%	55.5%	55.5%	Long-Term Debt Ratio	57.0%		
Pension Assets-12/20 \$5409.2 mill.				55.4%	54.8%	53.2%	53.6%	54.4%	48.2%	46.9%	46.6%	47.1%	44.5%	44.0%	44.0%	Common Equity Ratio	42.5%		
Oblig \$7045.3 mill.				16675	17544	18738	19313	19697	23018	24474	27097	29842	32700	34675	36825	Total Capital (\$mill)	44000		
Pfd Stock \$155.6 mill. Pfd Div'd \$7.6 mill.				16605	17576	18647	19892	21351	23617	25610	27585	30883	33400	35875	38300	Net Plant (\$mill)	43900		
Incl. 2,324,000 shs \$1.90-\$3.28 rates (\$50 par) not subject to mandatory redemption, call. at \$50.50-\$54.00; 430,000 shs 4.25%-4.78% not subject to mandatory redemption, call. at \$102.80-\$103.63.				4.2%	5.5%	5.3%	5.5%	5.8%	5.2%	5.2%	5.1%	5.0%	5.0%	5.0%	5.0%	5.0%	Return on Total Cap'l	5.0%	
Common Stock 343,805,812 shs. as of 10/31/21				5.7%	8.1%	8.2%	8.4%	8.7%	8.9%	8.9%	8.8%	8.5%	8.5%	9.0%	9.0%	9.0%	Return on Shr. Equity	9.5%	
MARKET CAP: \$31 billion (Large Cap)				5.7%	8.2%	8.2%	8.5%	8.8%	8.9%	9.0%	8.8%	8.6%	8.5%	9.0%	9.0%	9.0%	Return on Com Equity E	9.5%	
<b>ELECTRIC OPERATING STATISTICS</b>				1.6%	3.4%	3.5%	3.4%	3.5%	3.5%	3.4%	3.6%	3.3%	2.5%	3.5%	3.5%	3.5%	Retained to Com Eq	3.5%	
2018 2019 2020				72%	59%	58%	61%	60%	61%	62%	60%	62%	70%	64%	64%	All Div's to Net Prof	64%		
% Change Retail Sales (KWH)				+2.2	-3.3	-2.7	<b>BUSINESS:</b> Eversource Energy (formerly Northeast Utilities) is the parent of utilities with 3.2 mill. electric, 881,000 gas, 216,000 water customers. Supplies power to most of Connecticut and gas to part of Connecticut; supplies power to 3/4 of New Hampshire's population; supplies power to western Massachusetts and parts of eastern MA & gas to central & eastern MA; supplies water to CT, MA, & NH.												
Avg. Indust. Use (MWH)				NA	NA	NA	Acq'd NSTAR 4/12; Aquarion 12/17; Columbia Gas 10/20. Electric rev. breakdown: residential, 56%; commercial, 33%; industrial, 5%; other, 6%. Fuel costs: 34% of revs. '20 reported deprec. rate: 3.0%. Has 9,300 employees. Chairman: James J. Judge, President & CEO: Joe Nolan, Inc.: MA. Address: 300 Cadwell Drive, Springfield, MA 01104. Tel.: 413-785-5871. Internet: www.eversource.com.												
Avg. Indust. Revs. per KWH (c)				NA	NA	NA	<b>The board of trustees will likely post a significant earnings increase in 2022.</b> The comparison is easy. In 2021, the company took a charge of \$0.07 a share in the first quarter for a service-related penalty in Connecticut (stemming from an outage in August of 2020) and a charge of \$0.17 a share in the third period to reflect bill credits and assistance. In addition, costs associated with the acquisition of a gas utility lowered the bottom line by \$0.05 a share in the first nine months of 2021. Besides the absence of these costs, Eversource should continue to benefit from investments in its electric transmission system. The utility will have a full year's benefit from a gas rate hike in Massachusetts that took effect on November 1, 2021 and a partial year of an increase taking effect on November 1, 2022. All told, we figure profits will exceed \$4.00 a share.												
Capacity at Peak (Mw)				NA	NA	NA	<b>We look for further growth in 2023.</b> Ongoing transmission investment should be a factor, although we note that there is some lingering uncertainty about transmission rates. Our estimate would produce an increase of 5%, within Eversource's annual goal of 5%-7%.												
Peak Load, Winter (Mw)				NA	NA	NA	<b>The board of trustees will likely post a significant earnings increase in 2022.</b> This is the usual timing of the board's announcement. We estimate an increase of \$0.15 a share (6.2%) annually. Eversource's target for yearly dividend growth is 5%-7%, the same as for profit growth.												
Annual Load Factor (%)				NA	NA	NA	<b>Eversource has several significant projects in various stages of development.</b> Most notably, the company is planning to add 1,758 megawatts of offshore wind through a joint venture with Orsted, a European company, by 2025. This is expected to enhance its annual earnings growth rate, but also entails construction risk. The company also wants to add advanced meters in Connecticut at an expected cost of \$475 million and in Massachusetts at an expected cost of \$575 million. NSTAR Gas and Yankee Gas are replacing old gas mains. All of this will result in debt and equity financing.												
% Change Customers (yr-end)				+5	+7	+8	<b>This high-quality stock's dividend yield is below the mean for the electric utility industry.</b> Total return potential does not stand out for the next 18 months or the 3- to 5-year period.												
Fixed Charge Cov. (%)				319	319	345	Paul E. Debbas, CFA February 11, 2022												
<b>ANNUAL RATES</b>				<b>2018-2020</b>															
of change (per sh)				10 Yrs.	5 Yrs.	Est'd '18-'20 to '25-'27													
Revenues				-2.0%	1.5%	3.0%													
"Cash Flow"				2.0%	6.5%	4.5%													
Earnings				5.5%	5.5%	5.5%													
Dividends				8.5%	6.5%	6.0%													
Book Value				6.5%	4.0%	4.5%													
<b>QUARTERLY REVENUES (\$ mill.)</b>																			
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year														
2019	2415	1884	2175	2050	8526.5														
2020	2373	1953	2343	2233	8904.4														
2021	2826	2122	2461	2391	9800														
2022	2850	2200	2550	2400	10000														
2023	2950	2250	2650	2500	10350														
<b>EARNINGS PER SHARE A</b>																			
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year														
2019	.97	.74	.98	.76	3.45														
2020	1.01	.75	1.01	.78	3.55														
2021	1.06	.77	.82	.80	3.45														
2022	1.17	.87	1.08	.93	4.05														
2023	1.25	.90	1.13	.97	4.25														
<b>QUARTERLY DIVIDENDS PAID B</b>																			
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year														
2018	.505	.505	.505	.505	2.02														
2019	.535	.535	.535	.535	2.14														
2020	.5675	.5675	.5675	.5675	2.27														
2021	.6025	.6025	.6025	.6025	2.41														
2022																			
<b>Company's Financial Strength</b>				A															
<b>Stock's Price Stability</b>				85															
<b>Price Growth Persistence</b>				65															
<b>Earnings Predictability</b>				100															

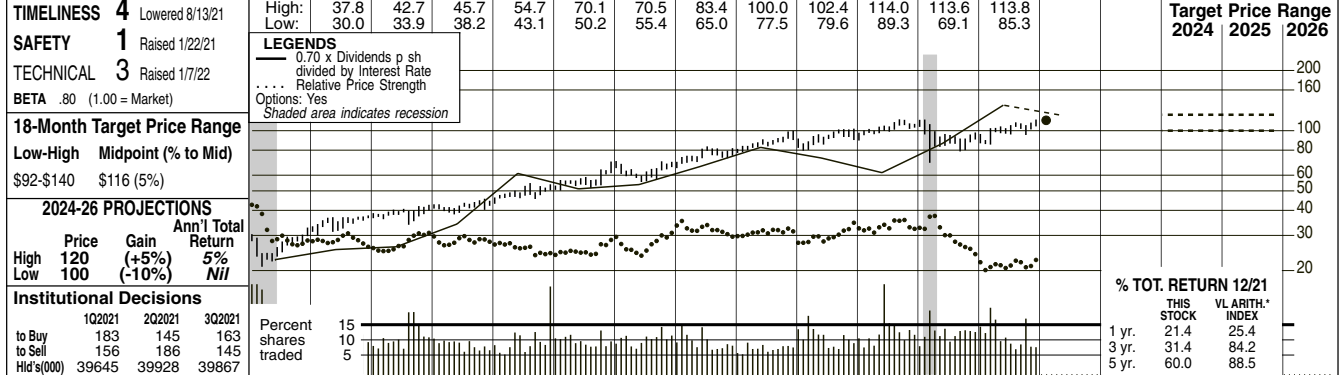
(A) Diluted EPS. Excl. nonrecurring gain (losses): '08, (19c); '10, 9c; '19, (64c). Next earnings report due late Feb. (B) Div's historically paid late Mar., June, Sept., & Dec. (C) Reinvestment plan avail. (D) Incl. deferred charges. In '20: \$9939.3 mill., \$28.98/sh. (E) Rate allowed on com. eq. in MA: (elec.) '18, 10.0%; (gas) '20, 9.7%-9.9%; in CT: (elec.) '18, 9.25%; (gas) '18, 9.3%; in NH: '21, 9.3%; earned on avg. com. eq., '20: 9.0%. Regulatory Climate: CT, Below Average; NH, Average; MA, Above Average.

Company's Financial Strength A  
Stock's Price Stability 85  
Price Growth Persistence 65  
Earnings Predictability 100

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<b>IDACORP, INC. NYSE-IDA</b>										<b>RECENT PRICE</b> 112.66	<b>P/E RATIO</b> 23.3 (Trailing: 22.8 Median: 17.0)	<b>RELATIVE P/E RATIO</b> 1.22	<b>DIV'D YLD</b> 2.7%	<b>VALUE LINE</b>
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2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	© VALUE LINE PUB. LLC	24-26	
20.15	21.23	19.51	20.47	21.92	20.97	20.55	21.55	24.81	25.51	25.23	25.04	26.76	27.19	26.70	26.77	28.95	29.75	Revenues per sh	32.75	
3.87	4.58	4.11	4.27	5.07	5.35	5.84	5.93	6.29	6.58	6.70	6.86	7.50	7.85	8.19	8.50	8.80	8.80	"Cash Flow" per sh	10.00	
1.75	2.35	1.86	2.18	2.64	2.95	3.36	3.37	3.64	3.85	3.87	3.94	4.21	4.49	4.61	4.69	4.90	5.10	Earnings per sh <sup>A</sup>	5.75	
1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.37	1.57	1.76	1.92	2.08	2.24	2.40	2.56	2.72	2.88	3.05	Div'd Decl'd per sh <sup>B</sup> +	3.70	
4.53	5.16	6.39	5.19	5.26	6.85	6.76	4.78	4.68	5.45	5.84	5.89	5.66	5.51	5.53	6.16	7.25	7.70	Cap'l Spending per sh	10.00	
24.04	25.77	26.79	27.76	29.17	31.01	33.19	35.07	36.84	38.85	40.88	42.74	44.65	47.01	48.88	50.73	52.80	54.85	Book Value per sh <sup>C</sup>	61.25	
42.66	43.63	45.06	46.92	47.90	49.41	49.95	50.16	50.23	50.27	50.34	50.40	50.42	50.42	50.42	50.42	50.46	50.45	50.45	Common Shs Outst'g <sup>D</sup>	50.45
16.7	15.1	18.2	13.9	10.2	11.8	11.5	12.4	13.4	14.7	16.2	19.1	20.6	20.5	22.3	19.9	20.6	20.6	Avg Ann'l P/E Ratio	19.0	
.89	.82	.97	.84	.68	.75	.72	.79	.75	.77	.82	1.00	1.04	1.11	1.19	1.02	1.10	1.10	Relative P/E Ratio	1.05	
4.1%	3.4%	3.5%	4.0%	4.5%	3.4%	3.1%	3.3%	3.2%	3.1%	3.1%	2.8%	2.6%	2.6%	2.5%	2.9%	2.9%	2.9%	Avg Ann'l Div'd Yield	3.4%	

CAPITAL STRUCTURE as of 9/30/21				2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Revenues (\$mill)	1650
Total Debt \$2000.6 mill. Due in 5 Yrs \$144.7 mill.				1026.8	1080.7	1246.2	1282.5	1270.3	1262.0	1349.5	1370.8	1346.4	1350.7	1460	1500	Revenues (\$mill)	1650						
LT Debt \$2000.6 mill. LT Interest \$83.4 mill.				166.9	168.9	182.4	193.5	194.7	198.3	212.4	226.8	232.9	237.4	250	255	Net Profit (\$mill)	290						
(LT interest earned: 3.9x)				--	13.4%	28.3%	8.0%	19.0%	15.5%	18.6%	7.1%	9.5%	10.8%	10.5%	10.5%	Income Tax Rate	10.5%						
Pension Assets-12/20 \$871.6 mill.				23.3%	20.3%	12.3%	13.6%	16.3%	16.3%	13.9%	15.2%	16.2%	17.3%	17.0%	17.0%	AFUDC % to Net Profit	17.0%						
Oblig \$1337.4 mill.				45.6%	45.5%	46.6%	45.3%	45.6%	44.8%	43.7%	43.6%	41.3%	43.9%	44.5%	44.5%	Long-Term Debt Ratio	49.0%						
Prd Stock None				54.4%	54.5%	53.4%	54.7%	54.4%	55.2%	56.3%	56.4%	58.7%	56.1%	55.5%	55.5%	Common Equity Ratio	51.0%						
Common Stock 50,516,479 shs. as of 10/22/21				3045.2	3225.4	3465.9	3567.6	3783.3	3898.5	3997.5	4205.1	4201.3	4560.4	4815	4990	Total Capital (\$mill)	6025						
MARKET CAP: \$5.7 billion (Large Cap)				3406.6	3536.0	3665.0	3833.5	3992.4	4172.0	4283.9	4395.7	4531.5	4709.5	4895	5095	Net Plant (\$mill)	6000						
ELECTRIC OPERATING STATISTICS				6.8%	6.5%	6.4%	6.6%	6.2%	6.1%	6.3%	6.4%	6.5%	6.1%	6.0%	6.0%	Return on Total Cap'l	6.0%						
2018 2019 2020				10.1%	9.6%	9.9%	9.9%	9.5%	9.2%	9.4%	9.6%	9.4%	9.3%	9.5%	9.5%	Return on Shr. Equity	9.5%						
% Change Retail Sales (KWH)				10.1%	9.6%	9.9%	9.9%	9.5%	9.2%	9.4%	9.6%	9.4%	9.3%	9.5%	9.5%	Return on Com Equity <sup>E</sup>	9.5%						
Avg. Indust. Use (MWH)				6.5%	5.7%	5.6%	5.4%	4.8%	4.3%	4.4%	4.4%	4.2%	3.9%	4.0%	3.5%	Retained to Com Eq	3.5%						
Avg. Indust. Revs. per KWH (c)				36%	41%	43%	46%	50%	53%	53%	54%	54%	58%	59%	60%	All Div'ds to Net Prof	64%						
Capacity at Peak (Mw)				<p><b>BUSINESS:</b> IDACORP, Inc. is a holding company for Idaho Power Company, a regulated electric utility that serves 583,000 customers throughout a 24,000-square-mile area in southern Idaho and eastern Oregon (population: 1.2 million). Most of the company's revenues are derived from the Idaho portion of its service area. Revenue breakdown: residential, 42%; commercial, 22%; industrial, 14%; irrigation, 12%; other, 10%. Generating sources: hydro, 39%; coal, 21%; gas, 12%; purchased, 28%. Fuel costs: 32% of revenues. '20 reported depreciation rate: 2.9%. Has 1,900 employees. Chairman: Richard J. Dahl. President &amp; CEO: Lisa Grow. Incorporated: Idaho. Address: 1221 W. Idaho St., Boise, Idaho 83702. Telephone: 208-388-2200. Internet: www.idacorpinc.com.</p>																			
Peak Load, Summer (Mw)				<p><b>The year that just ended was a good one for IDACORP, and we look for further growth in 2022.</b> We think earnings in 2021 reached the upper end of the company's targeted range of \$4.80-\$4.90 a share. This would provide a 4% profit increase over the 2020 tally, which also was a solid year. The company's utility subsidiary, Idaho Power, is benefiting from strong customer growth. This metric was 2.9% for the 12-month period that ended on September 30th. The utility is also seeing the addition of large customers in its service area. A cobalt mine is expected to begin operations in mid-2022, Shell is adding a renewable natural gas facility, and a data center that is expected to use more than 20 megawatts is on the drawing board. In addition, management is controlling operating and maintenance expenses effectively. O&amp;M costs in 2021 probably approximated the 2020 level, even in the face of inflationary pressures. All told, we think the bottom line will advance another 4%, to \$5.10 a share, in 2022. IDACORP will likely provide earnings guidance for this year when the company reports its financial results in mid-February.</p>																			
Annual Load Factor (%)				<p><b>The utility's integrated resource plan (IRP) is indicative of its accelerating growth in demand.</b> Filed in late 2021, the IRP projects 2.6% annual growth in retail kilowatt-hour sales over the next five years. The previous IRP, filed two years earlier, projected 1.3% yearly growth. Idaho Power has put out a request for proposals seeking 80 mw of dispatchable capacity by mid-2023 in order to meet its expected peak demand. If the company winds up building this capacity, the utility might have to file a rate case. This has not occurred since 2011 because Idaho Power has been earning its allowed return on equity.</p>																			
% Change Customers (yr-end)				<p><b>This high-quality but untimely stock has a lofty valuation for a utility.</b> This reflects the market's view of IDACORP's consistency, financial health (Financial Strength rating: A+), and solid dividend growth prospects. The dividend yield is nearly a percentage point below the utility average. The equity does not stand out for the next 18 months. The recent quotation is well within our 3- to 5-year Target Price Range, so total return potential is low.</p>																			

ANNUAL RATES		Past 10 Yrs	Past 5 Yrs	Est'd '18-'20 to '24-'26
Revenues	2.5%	1.5%	3.5%	
"Cash Flow"	5.0%	4.5%	3.5%	
Earnings	6.0%	4.0%	4.0%	
Dividends	8.0%	8.0%	6.5%	
Book Value	5.0%	4.5%	4.0%	

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	310.1	340.0	408.8	311.9	1370.8
2019	350.3	316.9	386.3	292.9	1346.4
2020	291.0	318.8	425.3	315.6	1350.7
2021	316.1	360.1	446.9	336.9	1460
2022	330	355	465	350	1500

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	.72	1.23	2.02	.52	4.49
2019	.84	1.05	1.78	.93	4.61
2020	.74	1.19	2.02	.74	4.69
2021	.89	1.38	1.93	.70	4.90
2022	.95	1.25	2.10	.80	5.10

Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year
2018	.59	.59	.59	.63	2.40
2019	.63	.63	.63	.67	2.56
2020	.67	.67	.67	.71	2.72
2021	.71	.71	.71	.75	2.88
2022					

(A) Diluted EPS. Excl. nonrecurring gain (loss): '05, (24c); '06, 17c. '19 earnings don't sum due to rounding. Next earnings report due mid-February. (B) Dividends historically paid in late Feb., May, Aug., and Nov. (C) Dividend reinvestment plan available. (D) Shareholder investment plan available. (E) Rate base: Net original cost. Rate allowed on common equity in '12: 10% (imputed); earned on avg. com. eq., '20: 9.5%. Regulatory Climate: Above Average.

Company's Financial Strength	A+
Stock's Price Stability	100
Price Growth Persistence	70
Earnings Predictability	100

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NORTHWESTERN NDQ-NWE				RECENT PRICE	P/E RATIO	TRAILING (15.4)	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE										
				57.09	17.1	(Trailing: 15.4)	0.90	4.4%											
<b>TIMELINESS</b> 5 Lowered 12/24/21	High: 30.6	36.6	38.0	47.2	58.7	59.7	63.8	64.5	65.7	76.7	80.5	70.8	Target Price Range						
<b>SAFETY</b> 2 Raised 7/27/18	Low: 23.8	27.4	33.0	35.1	42.6	48.4	52.2	55.7	50.0	57.3	45.1	53.2	2024	2025	2026				
<b>TECHNICAL</b> 4 Raised 1/14/22	LEGENDS																		
<b>BETA</b> .95 (1.00 = Market)	0.61 x Dividends p sh divided by Interest Rate																		
<b>18-Month Target Price Range</b>																			
Low-High Midpoint (% to Mid)																			
\$48-\$79 \$64 (10%)																			
<b>2024-26 PROJECTIONS</b>																			
High	Price	Gain	Ann'l Total																
Low	75	(+30%)	Return																
	55	(-5%)	4%																
<b>Institutional Decisions</b>																			
to Buy	102021	202021	302021																
to Sell	114	118	121																
Hid's(000)	47776	47852	49375																
				Percent															
				shares															
				traded															
				30															
				20															
				10															
				% TOT. RETURN 12/21															
				THIS STOCK															
				VL ARITH. INDEX															
				1 yr. 2.1 25.4															
				3 yr. 8.0 84.2															
				5 yr. 21.4 88.5															
				© VALUE LINE PUB. LLC 24-26															
2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Revenues per sh	24.25
32.57	31.49	30.79	35.09	31.72	30.66	30.80	28.76	29.80	25.68	25.21	26.01	26.45	23.81	24.93	23.70	24.75	22.50	"Cash Flow" per sh	7.50
4.00	3.62	3.70	4.40	4.62	4.76	5.42	5.18	5.45	5.39	5.92	6.74	6.76	6.96	7.07	6.72	7.05	6.55	Earnings per sh A	3.75
1.71	1.31	1.44	1.77	2.02	2.14	2.53	2.26	2.46	2.99	2.90	3.39	3.34	3.40	3.53	3.06	3.65	3.35	Div'd Decl'd per sh B = †	2.65
1.00	1.24	1.28	1.32	1.34	1.36	1.44	1.48	1.52	1.60	1.92	2.00	2.10	2.20	2.30	2.40	2.48	2.52	Cap'l Spending per sh	6.75
2.26	2.81	3.00	3.47	5.26	6.30	5.20	5.89	5.95	5.76	5.89	5.96	5.60	5.64	6.26	8.02	8.70	9.70	Book Value per sh C	48.00
20.60	20.65	21.12	21.25	21.86	22.64	23.68	25.09	26.60	31.50	33.22	34.68	36.44	38.60	40.42	41.10	42.95	44.80	Common Shs Outst'g D	62.00
35.79	35.97	38.97	35.93	36.00	36.23	36.28	37.22	38.75	46.91	48.17	48.33	49.37	50.32	50.45	50.59	54.50	60.00	Avg Ann'l P/E Ratio	17.5
17.1	26.0	21.7	13.9	11.5	12.9	12.6	15.7	16.9	16.2	18.4	17.2	17.8	16.8	19.9	19.5	16.7	19.0	Relative P/E Ratio	.95
.91	1.40	1.15	.84	.77	.82	.79	1.00	.95	.85	.93	.90	.90	.91	1.06	1.00	.90	.90	Avg Ann'l Div'd Yield	4.0%
3.4%	3.6%	4.1%	5.4%	5.7%	4.9%	4.5%	4.2%	3.7%	3.3%	3.6%	3.4%	3.5%	3.9%	3.3%	4.0%	4.1%	4.1%		
<b>CAPITAL STRUCTURE as of 9/30/21</b>																			
Total Debt \$2519.5 mill. Due in 5 Yrs \$782.2 mill.																			
LT Debt \$2516.7 mill. LT Interest \$87.8 mill.																			
Incl. \$13.4 mill. finance leases.																			
(LT interest earned: 3.0x)																			
<b>Pension Assets-12/20</b> \$688.5 mill.																			
Oblig \$821.0 mill.																			
<b>Pfd Stock</b> None																			
<b>Common Stock</b> 52,653,671 shs. as of 10/22/21																			
<b>MARKET CAP: \$3.0 billion (Mid Cap)</b>																			
<b>ELECTRIC OPERATING STATISTICS</b>																			
				2018	2019	2020													
% Change Retail Sales (KWH)				+2.9	+4.6	-4.4													
Avg. Indust. Use (MWH)				34573	37808	33526													
Avg. Indust. Revs. per KWH (c)				NA	NA	NA													
Capacity at Peak (Mw)				NA	NA	NA													
Peak Load, Winter (Mw)				2173	2237	NA													
Annual Load Factor (%)				NA	NA	NA													
% Change Customers (yr-end)				+1.2	+1.2	+1.2													
Fixed Charge Cov. (%)				275	284	237													
<b>ANNUAL RATES</b>																			
of change (per sh)				10 Yrs.	5 Yrs.	to '24-'26													
Revenues				-3.0%	-2.0%	Nil													
"Cash Flow"				4.0%	4.5%	1.5%													
Earnings				5.5%	3.5%	2.0%													
Dividends				5.5%	6.5%	2.5%													
Book Value				6.0%	5.5%	3.0%													
<b>QUARTERLY REVENUES (\$ mill.)</b>																			
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year														
2018	341.5	261.8	279.9	314.9	1198.1														
2019	384.2	270.7	274.8	328.2	1257.9														
2020	335.3	269.4	280.6	313.4	1198.7														
2021	400.8	298.2	326.0	325	1350														
2022	390	300	325	335	1350														
<b>EARNINGS PER SHARE A</b>																			
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year														
2018	1.18	.61	.56	1.06	3.40														
2019	1.44	.49	.42	1.18	3.53														
2020	1.00	.43	.58	1.06	3.06														
2021	1.24	.72	.68	1.01	3.65														
2022	1.15	.50	.60	1.10	3.35														
<b>QUARTERLY DIVIDENDS PAID B = †</b>																			
Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year														
2018	.55	.55	.55	.55	2.20														
2019	.575	.575	.575	.575	2.30														
2020	.60	.60	.60	.60	2.40														
2021	.62	.62	.62	.62	2.48														
2022																			
<b>BUSINESS:</b> NorthWestern Corporation (doing business as NorthWestern Energy) supplies electricity & gas in the Upper Midwest and Northwest, serving 449,000 electric customers in Montana and South Dakota and 294,000 gas customers in Montana (85% of gross margin), South Dakota (14%), and Nebraska (1%). Electric revenue breakdown: residential, 39%; commercial, 47%; industrial, 4%; other, 10%. Generating sources: hydro, 33%; coal, 22%; wind, 7%; other, 3%; purchased, 35%. Fuel costs: 25% of revenues. 20 reported deprec. rate: 2.8%. Has 1,500 employees. Chairman: Dana J. Dykhouse. CEO: Robert C. Rowe. President & COO: Brian B. Bird. Inc.: DE. Address: 3010 West 69th Street, Sioux Falls, SD 57108. Tel.: 605-978-2900. Internet: www.northwesternenergy.com.																			
<b>NorthWestern's share earnings will probably decline in 2022.</b> The main reason is the equity issuances the company made in 2021 and expects to make in 2022. NorthWestern issued \$200 million last year, and has effected a forward sale for an additional \$300 million that management expects to settle this year. This is being done to finance the company's capital budget and strengthen its balance sheet. The dilutive effect of the additional shares is expected to reduce share net by about \$0.25 in 2022. In our October report, we had not anticipated an equity issuance in 2022. Thus, we have reduced our share-net estimate from \$3.75 to \$3.35. Our revised estimate is within NorthWestern's preliminary guidance of \$3.20-\$3.40. <b>The reduced earnings expectation will affect dividend growth in 2022.</b> NorthWestern's target for the payout ratio is 60%-70%. However, the payout ratio will be above this range this year, based on the company's guidance. Management suggested that the disbursement will be raised to \$2.50-\$2.54 a share annually. We estimate an increase to \$2.52 a share (1.6%). NorthWestern's long-term goal is				for annual dividend growth in line with annual profit growth of 3%-6%. <b>NorthWestern is planning to file an electric rate case in Montana.</b> The utility is underearning its allowed return on equity. Any rate relief won't come in time to help boost the company's earning power until 2023, however. <b>The company is adding generating capacity.</b> A 60 megawatt gas-fired facility in South Dakota is expected to begin commercial operation soon at a cost of \$80 million. NorthWestern also plans to add 175 mw of gas-fired generation in Montana by late 2023 at a cost of \$275 million. Note that the utility has not obtained a certificate of need from the state commission because this would have delayed the start of construction and raised the cost of the project. <b>The price of this timely stock fell slightly in 2021.</b> We think this is due to the probable earnings decline in 2022 and the deceleration of earnings growth. The dividend yield is about one percentage point above the utility average. Total return potential to 2024-2026 is respectable. <i>Paul E. Debbas, CFA January 21, 2022</i>															
<b>(A)</b> Diluted EPS. Excl. gain (loss) on disc. ops. '05, '06; '16; nonrec. gains: '12, '39c net; '15, '27c; '18, '52c; '19, '45c; '18, '20 EPS don't sum due to rounding. Next earnings report due early Feb. <b>(B)</b> Div'ds historically paid in late Mar., June, Sept. & Dec. '14 Div'd reinvest. plan avail. <b>(C)</b> Incl. def'd charges. In '20: \$20.93/sh. <b>(D)</b> In mill. <b>(E)</b> Rate base: Net orig. cost. Rate allowed on com. eq. in MT in '19 (elec.): 9.65%; in '17 (gas): 9.55%; in SD in '15: none spec.; in NE in '07: 10.4%; earned on avg. com. eq., '20: 7.5%. Reg. Climate: Below Avg.				<b>Company's Financial Strength</b> B++ <b>Stock's Price Stability</b> 90 <b>Price Growth Persistence</b> 45 <b>Earnings Predictability</b> 90															
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OGE ENERGY CORP. NYSE-OGE				RECENT PRICE	37.55	P/E RATIO	15.2 (Trailing: 16.0; Median: 17.0)	RELATIVE P/E RATIO	0.85	DIV'D YLD	4.4%	VALUE LINE																																																																																																																																																																																																																												
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<b>TECHNICAL</b> 2 Lowered 3/11/22	<b>LEGENDS</b> 0.56 x Dividends p sh divided by Interest Rate . . . . Relative Price Strength 2-for-1 split 7/13 Options: Yes Shaded area indicates recession																																																																																																																																																																																																																																							
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<b>CAPITAL STRUCTURE as of 12/31/21</b> Total Debt \$4983.3 mill. Due in 5 Yrs \$1486.9 mill. LT Debt \$4496.4 mill. LT Interest \$158.7 mill. (LT interest earned: 4.4x)													3671.2	2867.7	2453.1	2196.9	2259.2	2261.1	2270.3	2231.6	2122.3	3653.7	2800	3000	Revenues (\$mill)	3650																																																																																																																																																																																																														
<b>Leases, Uncapitalized Annual rentals \$5.7 mill.</b>													355.0	387.6	395.8	337.6	338.2	384.3	425.5	449.6	415.9	472.5	500	530	Net Profit (\$mill)	660																																																																																																																																																																																																														
<b>Pension Assets-12/21 \$486.0 mill. Oblig \$502.9 mill.</b>													26.0%	24.9%	30.4%	29.2%	30.5%	32.5%	14.5%	7.4%	13.2%	11.5%	12.0%	12.0%	Income Tax Rate	12.0%																																																																																																																																																																																																														
<b>Pfd Stock None</b>													2.7%	2.6%	1.7%	3.7%	6.4%	15.0%	8.3%	1.6%	1.6%	2.2%	2.0%	2.0%	AFUDC % to Net Profit	2.0%																																																																																																																																																																																																														
<b>Common Stock 200,201,818 shs. as of 1/31/22</b>													50.7%	43.1%	45.9%	44.3%	41.1%	41.7%	42.0%	43.6%	49.0%	52.6%	47.5%	53.0%	Long-Term Debt Ratio	50.5%																																																																																																																																																																																																														
<b>MARKET CAP: \$7.5 billion (Large Cap)</b>													49.3%	56.9%	54.1%	55.7%	58.9%	58.3%	58.0%	56.4%	51.0%	47.4%	52.5%	47.0%	Common Equity Ratio	49.5%																																																																																																																																																																																																														
<b>ELECTRIC OPERATING STATISTICS</b>													5615.8	5337.2	5999.7	5971.6	5849.6	6600.7	6902.0	7334.7	7126.2	8552.7	8020	9360	Total Capital (\$mill)	10375																																																																																																																																																																																																														
% Change Retail Sales (KWH) +1.1 2020 -4.9 2021 +2.6 Avg. Indust. Use (MWH) NA NA NA Avg. Indust. Revs. per KWH (c) 4.69 4.40 7.68 Capacity at Peak (Mw) NA NA NA Peak Load, Summer (Mw) 6817 6437 NA Annual Load Factor (%) NA NA NA % Change Customers (yr-end) +1.0 +1.1 +1.4													8344.8	6672.8	6979.9	7322.4	7696.2	8339.9	8643.8	9044.6	9374.6	9832.9	10345	10830	Net Plant (\$mill)	12075																																																																																																																																																																																																														
<b>BUSINESS:</b> OGE Energy Corp. is a holding company for Oklahoma Gas and Electric Company (OG&E), which supplies electricity to 879,000 customers in Oklahoma (84% of electric revenues) and western Arkansas (8%); wholesale is (8%). Owns 3% of Energy Transfer's limited partnership units. Electric revenue breakdown: residential, 44%; commercial, 25%; industrial, 11%; oilfield, 10%; other, 10%. Generating sources: gas, 25%; coal, 21%; wind, 6%; purchased, 48%. Fuel costs: 58% of revenues. '21 reported depreciation rate (utility): 2.6%. Has 2,200 employees. Chairman, President and Chief Executive Officer: Sean Trauschke. Incorporated: Oklahoma. Address: 321 North Harvey, P.O. Box 321, Oklahoma City, OK 73101-0321. Tel.: 405-553-3000. Internet: www.oge.com.													7.7%	8.6%	7.8%	6.9%	7.0%	7.0%	7.3%	7.1%	6.9%	6.4%	7.5%	6.5%	Return on Total Cap'l	7.5%																																																																																																																																																																																																														
<b>OG&amp;E's utility subsidiary filed a general rate case in Oklahoma.</b> Oklahoma Gas and Electric requested a hike of \$163.5 million, based on a 10.2% return on equity and a 53.4% common-equity ratio. The utility is seeking to place capital spending from the past three years into the rate base and asking the commission for a performance-based ratemaking plan, similar to what gas utilities have in the state. An order is expected in time for new tariffs to take effect in mid-2022.													12.8%	12.8%	12.2%	10.2%	9.8%	10.0%	10.6%	10.9%	11.5%	11.6%	12.0%	12.0%	Return on Shr. Equity	13.0%																																																																																																																																																																																																														
<b>A rate matter is pending in Arkansas.</b> OG&E reached a settlement calling for a \$4.2 million increase on April 1st under the state's formula rate plan. The utility also requested a five-year extension to this plan, and expects a decision in April.													12.8%	12.8%	12.2%	10.2%	9.8%	10.0%	10.6%	10.9%	11.5%	11.6%	12.0%	12.0%	Return on Com Equity <sup>E</sup>	13.0%																																																																																																																																																																																																														
<b>The company wants to sell its stake in Energy Transfer.</b> OGE Energy owns 95 million units (valued at \$931 million) of the master limited partnership, which completed the acquisition of Enable Midstream Partners in December. OGE Energy booked an aftertax gain of \$264.8 million (\$1.32 a share) on the transaction, which we excluded from our earnings presentation as a nonrecurring item. The com-													7.2%	7.3%	6.5%	4.0%	3.3%	3.5%	3.8%	3.6%	2.8%	3.6%	4.0%	4.5%	Retained to Com Eq	5.5%																																																																																																																																																																																																														
<b>pany plans to use the proceeds from the unit sales to reinvest in OG&amp;E.</b> The sale process will be gradual and might not be completed until 2023.													44%	43%	47%	61%	67%	64%	64%	67%	76%	69%	66%	64%	All Div'ds to Net Prof	56%																																																																																																																																																																																																														
<b>Our earnings estimates require an explanation.</b> We are including equity income from OGE Energy's stake in Energy Transfer until the units are sold. Management is giving earnings guidance only for its OG&E subsidiary. The utility earned \$1.80 a share last year, and the company's guidance for 2022 is \$1.87-\$1.97. The service area's economy is healthy, and customer growth is accelerating. OG&E's long-term earnings growth rate target is 5%-7% annually. Dividend hikes will lag profit growth for a while because the payout ratio is higher than OGE Energy wants. Note that the steep revenue decline likely this year is not a concern because a surge in gas and power prices, passed through to customers, caused a big jump in the top line in the first quarter of 2021.													<b>This stock is untimely, but has an attractive dividend yield.</b> Total return prospects are below the median for the 18-month span and the 3- to 5-year period.										Paul E. Debbas, CFA March 11, 2022																																																																																																																																																																																																																	
<b>ANNUAL RATES</b>													<table border="1"> <thead> <tr> <th>Cal-endar</th> <th>Mar.31</th> <th>Jun.30</th> <th>Sep.30</th> <th>Dec.31</th> <th>Full Year</th> </tr> </thead> <tbody> <tr> <td>2019</td> <td>490.0</td> <td>513.7</td> <td>755.4</td> <td>472.5</td> <td>2231.6</td> </tr> <tr> <td>2020</td> <td>431.3</td> <td>503.5</td> <td>702.1</td> <td>485.4</td> <td>2122.3</td> </tr> <tr> <td>2021</td> <td>1630.6</td> <td>577.4</td> <td>864.4</td> <td>581.3</td> <td>3653.7</td> </tr> <tr> <td>2022</td> <td>600</td> <td>650</td> <td>900</td> <td>650</td> <td>2800</td> </tr> <tr> <td>2023</td> <td>650</td> <td>700</td> <td>950</td> <td>700</td> <td>3000</td> </tr> </tbody> </table>										Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year	2019	490.0	513.7	755.4	472.5	2231.6	2020	431.3	503.5	702.1	485.4	2122.3	2021	1630.6	577.4	864.4	581.3	3653.7	2022	600	650	900	650	2800	2023	650	700	950	700	3000																																																																																																																																																																														
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<b>QUARTERLY DIVIDENDS PAID <sup>B</sup></b>													<table border="1"> <thead> <tr> <th>Cal-endar</th> <th>Mar.31</th> <th>Jun.30</th> <th>Sep.30</th> <th>Dec.31</th> <th>Full Year</th> </tr> </thead> <tbody> <tr> <td>2018</td> <td>.3325</td> <td>.3325</td> <td>.3325</td> <td>.365</td> <td>1.36</td> </tr> <tr> <td>2019</td> <td>.365</td> <td>.365</td> <td>.365</td> <td>.388</td> <td>1.48</td> </tr> <tr> <td>2020</td> <td>.3875</td> <td>.3875</td> <td>.3875</td> <td>.4025</td> <td>1.57</td> </tr> <tr> <td>2021</td> <td>.4025</td> <td>.4025</td> <td>.4025</td> <td>.41</td> <td>1.62</td> </tr> <tr> <td>2022</td> <td>.41</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										Cal-endar	Mar.31	Jun.30	Sep.30	Dec.31	Full Year	2018	.3325	.3325	.3325	.365	1.36	2019	.365	.365	.365	.388	1.48	2020	.3875	.3875	.3875	.4025	1.57	2021	.4025	.4025	.4025	.41	1.62	2022	.41																																																																																																																																																																																		
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(A) Diluted EPS. Excl. nonrecurring gains (losses): '15, (33c); '17, \$1.18; '19, (8c); '20, (\$2.95); '21, \$1.32; gain on discount. ops.: '06, 20c. '19 & '21 EPS don't sum due to rounding. (B) Div'd historically paid in late Jan., Apr., July, & Oct. '19; Div'd reinvestment plan avail. (C) Incl. deferred charges. In '21: \$6.15/sh. (D) In mill., adj. for split. (E) Rate base: Net original cost. Rate allowed on com. eq. in OK in '19: 9.5%; in AR in '18: 9.5%; earned on avg. com. eq., '21: 12.7%. Regulatory Climate: Average.

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**Company's Financial Strength** A  
**Stock's Price Stability** 85  
**Price Growth Persistence** 25  
**Earnings Predictability** 90

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PORTLAND GENERAL NYSE-POR				RECENT PRICE	53.17	P/E RATIO	18.9 (Trailing: 20.8 Median: 18.0)	RELATIVE P/E RATIO	0.99	DIV'D YLD	3.4%	VALUE LINE							
<b>TIMELINESS</b> 3 Raised 9/10/21	High: 22.7	26.0	28.1	33.3	40.3	41.0	45.2	50.1	50.4	58.4	63.1	53.1	Target Price Range 2024 2025 2026						
<b>SAFETY</b> 2 Raised 10/22/21	Low: 17.5	21.3	24.3	27.4	29.0	33.0	35.3	42.4	39.0	44.0	32.0	40.8		128					
<b>TECHNICAL</b> 3 Raised 1/7/22	<b>LEGENDS</b> 0.63 x Dividends p sh divided by Interest Rate . . . . Relative Price Strength Options: Yes Shaded area indicates recession												96						
<b>BETA</b> .90 (1.00 = Market)	<b>18-Month Target Price Range</b> Low-High Midpoint (% to Mid) \$33-\$60 \$47 (-15%)												80						
<b>2024-26 PROJECTIONS</b> High Price 65 Gain (+20%) Ann'l Total Return 9% Low Price 50 Gain (-5%) Return 2%													64						
<b>Institutional Decisions</b> 10/2021 20/2021 30/2021 to Buy 165 157 142 to Sell 149 142 145 Hid's(000) 82978 81434 82480													48						
<b>2005F 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022</b>													32						
<b>© VALUE LINE PUB. LLC 24-26</b>													24						
23.14	24.32	27.87	27.89	23.99	23.67	24.06	23.89	23.18	24.29	21.38	21.62	22.54	22.30	23.75	23.96	26.75	27.30	Revenues per sh	29.75
4.75	4.64	5.21	4.71	4.07	4.82	4.96	5.15	4.93	6.08	5.37	5.78	6.16	6.65	6.97	6.80	7.50	7.85	"Cash Flow" per sh	9.00
1.02	1.14	2.33	1.39	1.31	1.66	1.95	1.87	1.77	2.18	2.04	2.16	2.29	2.37	2.39	1.72	2.75	2.90	Earnings per sh <sup>A</sup>	3.25
--	.68	.93	.97	1.01	1.04	1.06	1.08	1.10	1.12	1.18	1.26	1.34	1.43	1.52	1.59	1.70	1.80	Div'd Decl'd per sh <sup>B</sup> + †	2.10
4.08	5.94	7.28	6.12	9.25	5.97	3.98	4.01	8.40	12.87	6.73	6.57	5.77	6.67	6.78	8.76	8.05	7.45	Cap'l Spending per sh	6.25
19.15	19.58	21.05	21.64	20.50	21.14	22.07	22.87	23.30	24.43	25.43	26.35	27.11	28.07	28.99	29.18	30.20	31.25	Book Value per sh <sup>C</sup>	34.75
62.50	62.50	62.53	62.58	75.21	75.32	75.36	75.56	78.09	78.23	88.79	88.95	89.11	89.27	89.39	89.54	89.65	89.80	Common Shs Outst'g <sup>D</sup>	90.00
--	23.4	11.9	16.3	14.4	12.0	12.4	14.0	16.9	15.3	17.7	19.1	20.0	18.4	22.3	26.6	17.5	--	Avg Ann'l P/E Ratio	17.5
--	1.26	.63	.98	.96	.76	.78	.89	.95	.81	.89	1.00	1.01	.99	1.19	1.36	.95	--	Relative P/E Ratio	.95
--	2.5%	3.3%	4.3%	5.4%	5.2%	4.4%	4.1%	3.7%	3.3%	3.3%	3.1%	2.9%	3.3%	2.8%	3.5%	3.5%	--	Avg Ann'l Div'd Yield	3.7%
<b>CAPITAL STRUCTURE as of 9/30/21</b>				1813.0	1805.0	1810.0	1900.0	1898.0	1923.0	2009.0	1991.0	2123.0	2145.0	2400	2450	Revenues (\$mill)	2675		
Total Debt \$3301 mill. Due in 5 Yrs \$153 mill.				147.0	141.0	137.0	175.0	172.0	193.0	204.0	212.0	214.0	155.0	245	260	Net Profit (\$mill)	295		
LT Debt \$3285 mill. LT Interest \$128 mill.				28.3%	31.4%	23.2%	26.0%	20.7%	20.6%	25.3%	7.4%	11.2%	--	11.0%	11.0%	Income Tax Rate	11.0%		
Incl. \$128 mill. finance leases. (LT interest earned: 2.4x)				5.4%	7.1%	14.6%	33.7%	19.8%	16.6%	8.8%	8.0%	7.0%	15.5%	8.0%	7.0%	AFUDC % to Net Profit	5.0%		
Leases, Uncapitalized Annual rentals \$8 mill.				49.6%	47.1%	51.3%	52.7%	47.8%	48.4%	50.1%	46.5%	51.3%	53.6%	56.0%	55.5%	Long-Term Debt Ratio	54.5%		
Pension Assets-12/20 \$753 mill.				50.4%	52.9%	48.7%	47.3%	52.2%	51.6%	49.9%	53.5%	48.7%	46.4%	44.0%	44.5%	Common Equity Ratio	45.5%		
Oblig \$1010 mill.				3298.0	3264.0	3735.0	4037.0	4329.0	4544.0	4842.0	4684.0	5323.0	5628.0	6125	6320	Total Capital (\$mill)	6850		
Pfd Stock None				4285.0	4392.0	4880.0	5679.0	6012.0	6434.0	6741.0	6887.0	7161.0	7539.0	7835	8060	Net Plant (\$mill)	8300		
Common Stock 89,409,613 shs. as of 10/25/21				6.2%	5.9%	5.1%	5.8%	5.4%	5.6%	5.5%	5.8%	5.1%	4.0%	5.0%	5.0%	Return on Total Cap'l	5.5%		
MARKET CAP: \$4.8 billion (Mid Cap)				8.8%	8.2%	7.5%	9.2%	7.6%	8.2%	8.4%	8.5%	8.3%	5.9%	9.0%	9.5%	Return on Shr. Equity	9.5%		
ELECTRIC OPERATING STATISTICS				8.8%	8.2%	7.5%	9.2%	7.6%	8.2%	8.4%	8.5%	8.3%	5.9%	9.0%	9.5%	Return on Com Equity <sup>E</sup>	9.5%		
2018 2019 2020				4.1%	3.5%	2.9%	4.6%	3.3%	3.5%	3.6%	3.5%	3.1%	6%	3.5%	3.5%	Retained to Com Eq	3.5%		
% Change Retail Sales (KWH)				54%	57%	61%	50%	56%	57%	58%	59%	63%	90%	62%	62%	All Div'ds to Net Prof	64%		
Avg. Indust. Use (MWH)				<b>BUSINESS:</b> Portland General Electric Company (PGE) provides electricity to 914,000 customers in 51 cities in a 4,000-square-mile area of Oregon, including Portland and Salem. The company is in the process of decommissioning the Trojan nuclear plant, which it closed in 1993. Electric revenue breakdown: residential, 49%; commercial, 29%; industrial, 10%; other, 12%. Generating sources: gas, 33%; coal, 13%; wind, 9%; hydro, 5%; purchased, 40%. Fuel costs: 33% of revenues. '20 reported depreciation rate: 3.5%. Has 2,900 full-time employees. Chairman: Jack E. Davis. President and Chief Executive Officer: Maria M. Pope. Incorporated: Oregon. Address: 121 S.W. Salmon Street, Portland, Oregon 97204. Telephone: 503-464-8000. Internet: www.portlandgeneral.com.															
Avg. Indust. Revs. per KWH (c)				<b>Portland General Electric is awaiting a rate order.</b> The utility is seeking a tariff increase of \$89 million (3.9%). PGE, the Oregon commission's staff, and intervenors have reached a settlement for a 9.5% return on equity and a 50% common-equity ratio, the same as the company had requested. The utility wants to place an integrated operations center in the rate base and recover rising costs for vegetation management, wildfire mitigation, and other items. (The integrated operations center was completed in late 2021 at a cost slightly under the budget of \$200 million.) A ruling is expected in time for new rates to take effect on May 1st.															
Capacity at Peak (Mw)				<b>After an earnings recovery in 2021, profits will likely take another step forward in 2022.</b> The comparison was easy last year, as a trading loss hurt the bottom line by \$1.09 a share in the third quarter of 2020. In 2022, PGE should benefit from a partial year of rate relief. Load growth is another positive factor for the utility. Our estimate of \$2.90 a share might even be conservative, given that this is just slightly above the upper end of the company's guidance for 2021 of \$2.70-															
Peak Load, Summer (Mw)				<b>\$2.85 a share.</b> Management will likely put forth guidance when it issues fourth-quarter results in mid-February.															
Annual Load Factor (%)				<b>The utility filed an integrated resource plan.</b> This is for up to 1,000 megawatts of capacity, primarily renewable and hydro. Depending upon how much capacity PGE builds, the company might have to issue equity. Otherwise, no equity issuances are expected through mid-decade.															
% Change Customers (yr-end)				<b>PGE has deferred some expenses for future recovery.</b> As of September 30th, the utility had deferred \$148 million for future recovery, mainly for bad-debt expense, system restoration after wildfires, major storms in February of 2021, and excess power costs. How and when these will be recovered are to be determined.															
Fixed Charge Cov. (%)				<b>The stock price soared 24% in 2021.</b> Wall Street is comfortable that the trading problem was a one-time event, and the company's improved prospects (such as accelerating load growth) are appealing to investors. The dividend yield is average for a utility. However, total return potential is negative for the next 18 months and sub-par for the 3- to 5-year period.															
ANNUAL RATES				<b>Paul E. Debbas, CFA</b> January 21, 2022															
18-'20 of change (per sh)				<b>2021 2022</b>															
Revenues				<b>2018 2019 2020</b>															
"Cash Flow"				<b>2018 2019 2020 2021 2022</b>															
Earnings				<b>2018 2019 2020 2021 2022</b>															
Dividends				<b>2018 2019 2020 2021 2022</b>															
Book Value				<b>2018 2019 2020 2021 2022</b>															
QUARTERLY REVENUES (\$ mill.)				<b>2018 2019 2020 2021 2022</b>															
EARNINGS PER SHARE <sup>A</sup>				<b>2018 2019 2020 2021 2022</b>															
QUARTERLY DIVIDENDS PAID <sup>B</sup> + †				<b>2018 2019 2020 2021 2022</b>															
Cal-endar				<b>2018 2019 2020 2021 2022</b>															
Mar.31 Jun.30 Sep.30 Dec.31				<b>2018 2019 2020 2021 2022</b>															
Full Year				<b>2018 2019 2020 2021 2022</b>															

(A) Diluted EPS. Excl. nonrecurring losses: '13, 42c; '17, 19c. Next earnings report due mid-Feb. (B) Div's paid mid-Jan., Apr., July, and Oct. (C) Div'd reinvestment plan avail. † Share-

holder investment plan avail. (D) In mill. (E) Rate base: Net orig. cost. Rate allowed on com. eq. in '19: 9.5%; earned on avg. com. eq.,

'20: 6.0%. Regulatory Climate: Average. (F) '05 per-share data are pro forma, based on shs. outstanding when stock began trading in '06.

Company's Financial Strength	B++
Stock's Price Stability	90
Price Growth Persistence	50
Earnings Predictability	85

SOUTHERN COMPANY NYSE-SO				RECENT PRICE	69.49	P/E RATIO	19.2 (Trailing: 19.6; Median: 16.0)	RELATIVE P/E RATIO	1.08	DIV'D YLD	3.9%	VALUE LINE							
<b>TIMELINESS</b> 4 Lowered 8/13/21	High: 46.7	48.6	48.7	51.3	53.2	54.6	53.5	49.4	64.3	71.1	68.9	69.8	Target Price Range 2025 2026 2027						
<b>SAFETY</b> 2 Lowered 2/21/14	Low: 35.7	41.8	40.0	40.3	41.4	46.0	46.7	42.4	43.3	42.0	56.7	65.4							
<b>TECHNICAL</b> 3 Raised 1/28/22	<b>LEGENDS</b> 0.62 x Dividends p sh divided by Interest Rate . . . . Relative Price Strength Options: Yes Shaded area indicates recession																		
<b>BETA</b> .95 (1.00 = Market)	<b>18-Month Target Price Range</b> Low-High Midpoint (% to Mid) \$56-\$78 \$67 (-5%)																		
<b>2025-27 PROJECTIONS</b> High Price 75 Gain (+10%) Ann'l Total Return 6% Low Price 55 Gain (-20%) Ann'l Total Return -1%																			
<b>Institutional Decisions</b> 10Q2021 2Q2021 3Q2021 to Buy 676 743 676 to Sell 649 580 598 Hld's(000) 627954 629680 633336 Percent shares traded 18 12 6																			
<b>2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023</b> © VALUE LINE PUB. LLC 25-27																			
19.24	20.12	22.04	19.21	20.70	20.41	19.06	19.26	20.34	19.18	20.09	22.86	22.73	20.34	19.29	21.50	22.55	23.70	Revenues per sh	27.50
4.01	4.22	4.43	4.43	4.51	4.91	5.18	5.27	5.28	5.47	5.69	6.64	6.41	6.33	6.98	7.20	7.40	7.75	"Cash Flow" per sh	9.00
2.10	2.28	2.25	2.32	2.36	2.55	2.67	2.70	2.77	2.84	2.83	3.21	3.00	3.17	3.25	3.50	3.60	3.80	Earnings per sh <sup>A</sup>	4.50
1.54	1.60	1.66	1.73	1.80	1.87	1.94	2.01	2.08	2.15	2.22	2.30	2.38	2.46	2.54	2.62	2.70	2.78	Div'd Decl'd per sh <sup>B</sup>	3.02
4.01	4.65	5.10	5.70	4.85	5.23	5.54	6.16	6.58	6.22	7.38	7.37	7.74	7.17	7.04	7.65	6.55	6.55	Cap'l Spending per sh	6.25
15.24	16.23	17.08	18.15	19.21	20.32	21.09	21.43	21.98	22.59	25.00	23.98	23.92	26.11	26.48	26.75	27.65	28.70	Book Value per sh <sup>C</sup>	32.75
746.27	763.10	777.19	819.65	843.34	865.13	867.77	887.09	907.78	911.72	990.39	1007.6	1033.8	1053.3	1056.5	1070.0	1070.0	1070.0	Common Shs Outst'g <sup>D</sup>	1070.0
16.2	16.0	16.1	13.5	14.9	15.8	17.0	16.2	16.0	15.8	17.8	15.5	15.1	17.6	17.9	18.0	18.0	18.0	Avg Ann'l P/E Ratio	15.0
.87	.85	.97	.90	.95	.99	1.08	.91	.84	.80	.93	.78	.82	.94	.92	.95	.95	.95	Relative P/E Ratio	.85
4.5%	4.4%	4.6%	5.5%	5.1%	4.6%	4.3%	4.6%	4.7%	4.8%	4.4%	4.6%	5.3%	4.4%	4.4%	4.2%	4.2%	4.2%	Avg Ann'l Div'd Yield	4.5%
<b>CAPITAL STRUCTURE as of 9/30/21</b> Total Debt \$52836 mill. Due in 5 Yrs \$13952 mill. LT Debt \$48843 mill. LT Interest \$1682 mill. (LT interest earned: 3.4x) Leases, Uncapitalized Annual rentals \$300 mill. Pension Assets-12/20 \$15367 mill. Pfd Stock \$291 mill. Pfd Div'd \$15 mill. Incl. 10 mill. shs. 5.83% cum. pfd. (\$25 stated value); 475,115 shs. 4.2%-5.44% cum. pfd. (\$100 par). Common Stock 1,059,803,931 shs.																			
16537	17087	18467	17489	19896	23031	23495	21419	20375	23000	24150	25350	29350	29350	29350	29350	29350	29350	Revenues (\$mill)	29350
2415.0	2439.0	2567.0	2647.0	2757.0	3269.0	3096.0	3354.0	3481.0	3750	3840	4085	4870	4870	4870	4870	4870	4870	Net Profit (\$mill)	4870
35.6%	34.8%	33.8%	33.4%	28.5%	25.2%	21.3%	15.9%	14.3%	13.5%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	Income Tax Rate	14.0%
9.4%	11.6%	13.9%	13.2%	11.9%	7.6%	6.8%	6.0%	6.6%	7.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	AFUDC % to Net Profit	4.0%
49.9%	51.5%	49.5%	52.8%	61.5%	64.5%	62.0%	60.1%	61.5%	63.5%	63.5%	63.5%	63.0%	63.0%	63.5%	63.5%	63.5%	63.5%	Long-Term Debt Ratio	63.0%
47.3%	45.8%	47.3%	44.0%	35.7%	35.0%	37.6%	39.5%	38.1%	36.0%	36.5%	36.0%	37.0%	37.0%	36.0%	36.5%	36.0%	36.0%	Common Equity Ratio	37.0%
38653	41483	42142	46788	69359	68953	65750	69594	73336	79250	81475	84925	95300	95300	95300	95300	95300	95300	Total Capital (\$mill)	95300
48390	51208	54868	61114	78446	79872	80797	83080	87634	91875	94825	97625	104100	104100	104100	104100	104100	104100	Net Plant (\$mill)	104100
7.3%	6.8%	7.1%	6.6%	4.9%	5.9%	5.9%	6.0%	5.9%	6.0%	6.0%	6.0%	6.5%	6.5%	6.0%	6.0%	6.0%	6.0%	Return on Total Cap'l	6.5%
12.5%	12.1%	12.1%	12.0%	10.3%	13.3%	12.4%	12.1%	12.3%	13.0%	13.0%	13.5%	14.0%	14.0%	13.0%	13.0%	13.5%	13.5%	Return on Shr. Equity	14.0%
12.8%	12.5%	12.5%	12.6%	11.0%	13.4%	12.5%	12.1%	12.4%	13.0%	13.0%	13.5%	14.0%	14.0%	13.0%	13.0%	13.5%	13.5%	Return on Com Equity <sup>E</sup>	14.0%
3.6%	3.2%	3.2%	3.1%	2.5%	3.9%	2.8%	2.8%	2.8%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	3.5%	Retained to Com Eq	4.5%
73%	75%	75%	76%	78%	72%	79%	77%	77%	75%	76%	73%	67%	67%	73%	73%	73%	73%	All Div's to Net Prof	67%
<b>ELECTRIC OPERATING STATISTICS</b> 2018 2019 2020 % Change Retail Sales (KWH) +3.6 -8.5 -5.3 Avg. Indust. Use (MWH) 3048 2947 NA Avg. Indust. Revs. per KWH (c) 6.04 6.03 NA Capacity at Yearend (Mw) <sup>F</sup> 45824 41940 NA Peak Load, Summer (Mw) <sup>F</sup> 36429 34209 NA Annual Load Factor (%) 61.2 60.3 NA % Change Customers (yr-end) +1.0 -8.9 +1.3																			
<b>BUSINESS:</b> The Southern Company, through its subs., supplies electricity to 4.3 mill. customers in GA, AL, and MS. Also has a competitive generation business. Acq'd AGL Resources (renamed Southern Company Gas, 4.3 mill. customers in GA, NJ, IL, VA, & TN) 7/16. Sold Gulf Power 1/19. Electric rev. breakdown: residential, 37%; commercial, 30%; industrial, 19%; other, 14%. Retail																			
<b>Southern Company's Georgia Power subsidiary expects to complete Units 3 and 4 of the Vogtle nuclear station in the third quarter of 2022 and the second quarter of 2023, respectively.</b> The project has had significant delays and cost overruns. In the first nine months of 2021, the company took aftertax charges totaling \$0.54 a share for the estimated loss on construction, which is not recoverable in rates. We excluded these charges from our earnings presentation as nonrecurring. The latest capital cost estimate is \$9.5 billion for Georgia Power's 45.7% share of the project. As of September 30th, \$1.3 billion remained to be spent. There might well be additional delays and cost overruns, but Wall Street has taken these in stride. In 2021, Southern Company stock posted a total return of 16.3%, not far below the median for this industry.																			
<b>Southern Company has issued equity and sold assets to finance the rising capital costs of its nuclear project.</b> Most notably, it sold its Gulf Power electric utility in Florida a few years ago, and has also sold some gas companies. Most recently, Southern Company sold some leveraged leases. (This will result in a \$100 million aftertax gain in the fourth quarter of 2021.) Other asset sales are under consideration. For now, we do not anticipate any equity additions in the next few years, and are not assuming any asset sales.																			
<b>Earnings should advance this year and next.</b> The company's utilities are benefiting from rate relief and growth in their service areas. Nicor Gas in Illinois will record a full year's effect of a \$240 million rate hike, based on a 9.75% return on equity and a 54.5% common-equity ratio, that went into place on December 1st. Atlanta Gas Light received \$49 million at the start of 2022. Note that Georgia Power expects to file a rate case on July 1st.																			
<b>We expect a dividend increase in the second quarter.</b> We think the board will raise the quarterly payout \$0.02 a share (3.0%), the same as in recent years.																			
<b>The dividend yield is somewhat above average for a utility.</b> Dividend growth prospects are subpar, and investors must be able to accept the uncertainties arising from the nuclear construction project. The stock is untimely.																			
Paul E. Debbas, CFA February 11, 2022																			
<b>ANNUAL RATES</b> Past 10 Yrs. Past 5 Yrs. to '25-'27 of change (per sh) 1.0% 4.0% Revenues 4.0% 4.5% 4.5% "Cash Flow" 3.0% 2.5% 5.5% Earnings 3.5% 3.5% 3.0% Dividends 3.5% 3.0% 3.0% Book Value 3.5% 3.0% 3.5%																			
<b>QUARTERLY REVENUES (mill.)</b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2019 5412 5098 5995 4914 21419 2020 5018 4620 5620 5117 20375 2021 5910 5198 6238 5654 23000 2022 6200 5600 6600 5750 24150 2023 6500 5900 6900 6050 25350																			
<b>EARNINGS PER SHARE <sup>A</sup></b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2019 .75 .85 1.25 .32 3.17 2020 .81 .75 1.18 .51 3.25 2021 1.09 .73 1.22 .46 3.50 2022 1.05 .80 1.30 .45 3.60 2023 1.10 .85 1.40 .45 3.80																			
<b>QUARTERLY DIVIDENDS PAID <sup>B</sup></b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2018 .58 .60 .60 .60 2.38 2019 .60 .62 .62 .62 2.46 2020 .62 .64 .64 .64 2.54 2021 .64 .66 .66 .66 2.62																			
<b>Company's Financial Strength</b> A <b>Stock's Price Stability</b> 90 <b>Price Growth Persistence</b> 35 <b>Earnings Predictability</b> 95																			

(A) Diluted EPS. Excl. nonrec. gain (losses): '09, (25c); '13, (83c); '14, (59c); '15, (25c); '16, (28c); '17, (\$2.37); '18, (78c); '19, \$1.30; '20, (17c); '21, (54c). Next earnings report due mid-Feb. (B) Div'ds paid in early Mar., June, Sept. and Dec. (C) Div'd reinvest. plan avail. (D) In mill. (E) cost. Allowed return on common eq. (blended): 12.5%; earned on avg. com. eq. '20: 12.5%. Regulatory Climate: GA, AL Above Average; MS, FL Average. (F) Winter peak in '18.

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XCEL ENERGY NDQ-XEL				RECENT PRICE	P/E RATIO	RELATIVE P/E RATIO	DIV'D YLD	VALUE LINE	
<b>TIMELINESS</b> 3 Raised 12/31/21 <b>SAFETY</b> 1 Raised 5/1/15 <b>TECHNICAL</b> 4 Raised 1/14/22 <b>BETA</b> .80 (1.00 = Market)				69.86	23.3 (Trailing: 23.9; Median: 17.0)	1.22	2.8%		
<b>18-Month Target Price Range</b> Low-High Midpoint (% to Mid) \$57-\$94 \$76 (10%)				<b>LEGENDS</b> 0.68 x Dividends p sh divided by Interest Rate . . . . Relative Price Strength Options: Yes Shaded area indicates recession				<b>Target Price Range</b> 2024 2025 2026	
<b>2024-26 PROJECTIONS</b> High Price Gain Ann'l Total Low 75 60 (+5%) 5% Nil								<b>% TOT. RETURN 12/21</b> THIS STOCK INDEX VL ARITH. 1 yr. 4.4 25.4 3 yr. 49.0 84.2 5 yr. 92.2 88.5	
<b>Institutional Decisions</b> 10/2021 20/2021 30/2021 to Buy 348 381 355 to Sell 396 344 343 Hld's(000) 405318 412491 411220				Percent shares traded 30 20 10					
				<b>2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022</b>				© VALUE LINE PUB. LLC 24-26	
<b>Revenues per sh</b> 28.00 <b>"Cash Flow" per sh</b> 9.00 <b>Earnings per sh A</b> 3.75 <b>Div'd Decl'd per sh B</b> 2.30 <b>Cap'l Spending per sh</b> 10.00 <b>Book Value per sh C</b> 34.50 <b>Common Shs Outst'g D</b> 553.00									
<b>Avg Ann'l P/E Ratio</b> 18.0 <b>Relative P/E Ratio</b> 1.00 <b>Avg Ann'l Div'd Yield</b> 3.4%									
<b>CAPITAL STRUCTURE as of 9/30/21</b> Total Debt \$23347 mill. Due in 5 Yrs \$5174 mill. LT Debt \$20979 mill. LT Interest \$780 mill. Incl. \$73 mill. finance leases. (LT interest earned: 2.9x)									
<b>Leases, Uncapitalized Annual rentals</b> \$273 mill. <b>Pension Assets-12/20</b> \$3599 mill. <b>Oblig</b> \$3964 mill.									
<b>Pfd Stock</b> None <b>Common Stock</b> 538,675,570 shs. <b>as of 10/26/21</b> <b>MARKET CAP:</b> \$38 billion (Large Cap)									
<b>ELECTRIC OPERATING STATISTICS</b> 2018 2019 2020 % Change Retail Sales (KWH) +3.2 -1.2 -2.3 Large C & I Use (MWH) 23004 NA NA Large C & I Revs. per KWH (¢) 5.91 5.96 5.78 Capacity at Peak (Mw) NA NA NA Peak Load, Summer (Mw) 20293 20146 19665 Annual Load Factor (%) NA NA NA % Change Customers (yr-end) +1.1 +1.0 NA									
<b>Fixed Charge Cov. (%)</b> 281 272 252									
<b>ANNUAL RATES</b> Past Past Est'd '18-'20 of change (per sh) 10 Yrs. 5 Yrs. to '24-'26 <b>Revenues</b> - - -5.4 4.0% <b>"Cash Flow"</b> 6.0% 7.5% 6.0% <b>Earnings</b> 6.0% 5.5% 6.0% <b>Dividends</b> 5.5% 6.0% 6.0% <b>Book Value</b> 4.5% 5.0% 5.0%									
<b>QUARTERLY REVENUES (\$ mill.)</b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2018 2951 2658 3048 2880 11537 2019 3141 2577 3013 2798 11529 2020 2811 2586 3182 2947 11526 2021 3541 3068 3467 3224 13300 2022 3650 3150 3700 3500 14000									
<b>EARNINGS PER SHARE A</b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2018 .57 .52 .96 .42 2.47 2019 .61 .46 1.01 .56 2.64 2020 .56 .54 1.14 .54 2.79 2021 .67 .58 1.13 .57 2.95 2022 .70 .60 1.20 .60 3.10									
<b>QUARTERLY DIVIDENDS PAID B</b> Cal-endar Mar.31 Jun.30 Sep.30 Dec.31 Full Year 2018 .36 .38 .38 .38 1.50 2019 .38 .405 .405 .405 1.60 2020 .405 .43 .43 .43 1.70 2021 .43 .4575 .4575 .4575 1.80 2022 .4575									
<b>BUSINESS:</b> Xcel Energy Inc. is the parent of Northern States Power, which supplies electricity to Minnesota, Wisconsin, North Dakota, South Dakota & Michigan & gas to Minnesota, Wisconsin, North Dakota & Michigan; P.S. of Colorado, which supplies electricity & gas to Colorado; & Southwestern Public Service, which supplies electricity to Texas & New Mexico. Customers: 3.7 mill. elec., 2.1 mill. gas. Elec. rev. breakdown: res'l, 31%; sm. comm'l & ind'l, 36%; lg. comm'l & ind'l, 18%; other, 15%. Generating sources not avail. Fuel costs: 36% of revs. '20 reported decr. rate: 3.4%. Has 11,400 employees. Chairman: Ben Fowke. President & CEO: Bob Frenzel. Inc.: MN. Address: 414 Nicollet Mall, Minneapolis, MN 55401. Tel.: 612-330-5500. Internet: www.xcelenergy.com.				<b>Xcel Energy's utility in Minnesota filed a general rate case.</b> Northern States Power is seeking electric rate increases of \$396 million in 2022, \$150 million in 2023, and \$131 million in 2024, based on a 10.2% return on equity and a 52.5% common-equity ratio. Interim relief of \$247 million took effect at the start of 2022. NSP filed for a \$36 million gas hike, based on a 10.5% ROE and a 52.5% common-equity ratio. A \$25 million interim increase took effect at the start of 2022. <b>Some intervenors in Minnesota are proposing that some gas costs should be disallowed.</b> In February of 2021, some of the company's utilities experienced a spike in gas costs stemming from a cold spell in the Gulf Coast region. This even affected NSP in Minnesota. Utilities have been allowed to recover these expenses in other states, but intervenor groups in Minnesota contend that some of these be disallowed as imprudent. The largest proposed disallowance is \$179 million pretax. Our 2022 earnings estimate of \$3.10 a share is at the low end of Xcel's targeted range of \$3.10-\$3.20, and assumes no disallowance. However, if one occurs, we will include				this in our earnings presentation. A decision from the Minnesota commission is expected this summer. Note that in Wisconsin, the regulators approved electric and gas hikes totaling \$45 million in 2022 and \$21 million in 2023. <b>Other rate cases are pending.</b> Public Service of Colorado reached a settlement calling for an electric increase of \$299 million (including \$122 million already being recovered through rate riders), based on a 9.3% ROE and a 55.7% common-equity ratio. In Texas, Southwestern Public Service is seeking a hike of \$143 million, based on a 10.35% ROE and a 54.6% common-equity ratio. The utility reached a settlement for a \$62 million increase in New Mexico, based on a 9.35% ROE and a 54.7% common-equity ratio. Orders are expected this quarter. <b>Although the price of this top-quality stock rose just slightly in 2021, the valuation is still high.</b> The dividend yield is below average, as is total return potential to 2024-2026. It appears as if the risk of a disallowance of gas costs isn't weighing much on the quotation. <i>Paul E. Debbas, CFA January 21, 2022</i>	
<b>(A)</b> Diluted EPS. Excl. nonrecurring gain (losses): '10, 5¢; '15, (16¢); '17, (5¢); gains (loss) on discontinued ops.: '05, 3¢; '06, 1¢; '09, (1¢); '10, 1¢. '20 EPS don't sum due to rounding. Next earnings report due late Jan.				<b>(B)</b> Div'ds historically paid mid-Jan., Apr., July, and Oct. ■ Div'd reinvestment plan available.				<b>(C)</b> Incl. intangibles. In '20: \$2373 mill., \$4.42/sh. <b>(D)</b> In mill. <b>(E)</b> Rate base: Varies. Rate allowed on com. eq. (blended): 9.6%; earned on avg. com. eq., '20: 10.6%. Regulatory Climate: Average.	
<b>Company's Financial Strength</b> A+ <b>Stock's Price Stability</b> 95 <b>Price Growth Persistence</b> 65 <b>Earnings Predictability</b> 100									



Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Summary of Risk Premium Models for the  
Proxy Group of Six Natural Gas Distribution Companies  
and Proxy Group of Fourteen Electric Companies

	Proxy Group of Six Natural Gas Distribution Companies	Proxy Group of Fourteen Electric Companies
Predictive Risk Premium Model (PRPM) (1)	10.52 %	10.77 %
Risk Premium Using an Adjusted Total Market Approach (2)	10.67 %	10.90 %
Average	10.60 %	10.84 %

Notes:

- (1) From page 2 of this Schedule.
- (2) From page 3 of this Schedule.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Indicated ROE  
Derived by the Predictive Risk Premium Model (1)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
<u>Proxy Group of Six Natural Gas Distribution Companies</u>	<u>LT Average Predicted Variance</u>	<u>Spot Predicted Variance</u>	<u>Recommended Variance (2)</u>	<u>GARCH Coefficient</u>	<u>Predicted Risk Premium (3)</u>	<u>Risk-Free Rate (4)</u>	<u>Indicated ROE (5)</u>
Atmos Energy Corporation	0.34%	0.48%	0.41%	2.3073	11.95%	2.89%	14.84%
New Jersey Resources Corporation	0.38%	0.41%	0.40%	2.0666	10.29%	2.89%	13.18%
NiSource Inc.	0.48%	0.54%	0.51%	0.8281	5.23%	2.89%	8.12%
Northwest Natural Holding Company	0.33%	0.41%	0.37%	1.5433	7.04%	2.89%	9.93%
ONE Gas, Inc.	0.34%	0.58%	0.46%	4.0503	24.76%	2.89%	NMF
Spire Inc.	0.71%	0.41%	0.56%	0.9436	6.52%	2.89%	9.41%
						Average	<u>11.10%</u>
						Median	<u>9.93%</u>
					Average of Mean and Median		<u>10.52%</u>
	[1]	[2]	[3]	[4]	[5]	[6]	[7]
<u>Proxy Group of Fourteen Electric Companies</u>	<u>LT Average Predicted Variance</u>	<u>Spot Predicted Variance</u>	<u>Recommended Variance (2)</u>	<u>GARCH Coefficient</u>	<u>Predicted Risk Premium (3)</u>	<u>Risk-Free Rate (4)</u>	<u>Indicated ROE (5)</u>
Alliant Energy Corporation	0.27%	0.36%	0.32%	2.6805	10.70%	2.89%	13.59%
Ameren Corporation	0.23%	0.29%	0.26%	2.0193	6.52%	2.89%	9.41%
American Electric Power Company, Inc.	0.29%	0.31%	0.30%	2.3648	8.73%	2.89%	11.62%
Duke Energy Corporation	0.31%	0.28%	0.29%	1.8470	6.74%	2.89%	9.63%
Edison International	0.43%	0.50%	0.47%	1.4907	8.70%	2.89%	11.59%
Entergy Corporation	0.40%	0.49%	0.45%	2.2094	12.56%	2.89%	NMF
Eversource Energy	0.41%	0.57%	0.49%	0.8169	4.90%	2.89%	7.79%
Evergy, Inc.	0.31%	0.37%	0.34%	1.6205	6.75%	2.89%	9.64%
IDACORP, Inc.	0.29%	0.28%	0.28%	2.2082	7.80%	2.89%	10.69%
NorthWestern Corporation	0.33%	0.20%	0.27%	2.2559	7.51%	2.89%	10.40%
OGE Energy Corporation	0.31%	0.32%	0.31%	2.2029	8.65%	2.89%	11.54%
Portland General Electric Company	0.28%	0.29%	0.29%	2.0976	7.43%	2.89%	10.32%
The Southern Company	1.27%	0.35%	0.81%	0.9774	9.97%	2.89%	12.86%
Xcel Energy Inc.	0.28%	0.24%	0.26%	2.8075	9.03%	2.89%	11.92%
						Average	<u>10.85%</u>
						Median	<u>10.69%</u>
					Average of Mean and Median		<u>10.77%</u>

Notes:

- (1) The Predictive Risk Premium Model uses historical data to generate a predicted variance and a GARCH coefficient. The historical data used are the equity risk premiums for the first available trading month as reported by Bloomberg Professional Services.
- (2) Average of the long-term average and spot predicted variance.
- (3)  $(1 + (\text{Column [3]} * \text{Column [4]})^{12}) - 1$ .
- (4) From note 2 on page 2 of Schedule DWD-5.
- (5) Column [5] + Column [6].

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Indicated Common Equity Cost Rate  
Through Use of a Risk Premium Model  
Using an Adjusted Total Market Approach

<u>Line No.</u>		<u>Proxy Group of Six Natural Gas Distribution Companies</u>	<u>Proxy Group of Fourteen Electric Companies</u>
1.	Prospective Yield on Aaa Rated Corporate Bonds (1)	3.95 %	3.95 %
2.	Adjustment to Reflect Yield Spread Between Aaa Rated Corporate Bonds and A2 Rated Public Utility Bonds (2)	<u>0.41</u>	<u>0.41</u>
3.	Adjusted Prospective Yield on A2 Rated Public Utility Bonds	4.36 %	4.36 %
4.	Adjustment to Reflect Bond Rating Difference of Proxy Group (3)	<u>0.08</u>	<u>0.17</u>
5.	Adjusted Bond Yield	4.44 %	4.53 %
6.	Equity Risk Premium (4)	<u>6.23</u>	<u>6.37</u>
7.	Risk Premium Derived Common Equity Cost Rate	<u><u>10.67 %</u></u>	<u><u>10.90 %</u></u>

- Notes:
- (1) Consensus forecast of Moody's Aaa Rated Corporate bonds from Blue Chip Financial Forecasts (see pages 10 and 11 of this Schedule).
  - (2) The average yield spread of A2 rated public utility bonds over Aaa rated corporate bonds of 0.41% from page 4 of this Schedule.
  - (3) Adjustment to reflect the A3 Moody's LT issuer rating of the Gas Utility Proxy Group and the Baa1 LT issuer rating of the Electric Utility Proxy Group, both shown on page 5 of this Schedule. For the Gas Group, the 0.08% upward adjustment is derived by taking 1/3 of the spread between A2 and Baa2 Public Utility Bonds ( $1/3 * 0.25\% = 0.08\%$ ) as derived from page 4 of this Schedule. For the Electric Group, the 0.17% upward adjustment is derived by taking 2/3 of the spread between A2 and Baa2 Public Utility Bonds ( $2/3 * 0.25\% = 0.17\%$ ) as derived from page 4 of this Schedule.
  - (4) From page 7 of this Schedule.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Interest Rates and Bond Spreads for  
Moody's Corporate and Public Utility Bonds

Selected Bond Yields

	[1]	[2]	[3]
	<u>Aaa Rated Corporate Bond</u>	<u>A2 Rated Public Utility Bond</u>	<u>Baa2 Rated Public Utility Bond</u>
Feb-2022	3.25 %	3.68 %	3.95 %
Jan-2022	2.93	3.33	3.57
Dec-2021	<u>2.65</u>	<u>3.04</u>	<u>3.28</u>
Average	<u>2.94 %</u>	<u>3.35 %</u>	<u>3.60 %</u>

Selected Bond Spreads

A2 Rated Public Utility Bonds Over Aaa Rated Corporate Bonds:

0.41 % (1)

Baa2 Rated Public Utility Bonds Over A2 Rated Public Utility Bonds:

0.25 % (2)

Notes:

(1) Column [2] - Column [1].

(2) Column [3] - Column [2].

Source of Information:

Bloomberg Professional Services.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Comparison of Long-Term Issuer Ratings for the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

	Moody's		Standard & Poor's	
	Long-Term Issuer Rating		Long-Term Issuer Rating	
	March 2022		March 2022	
<u>Proxy Group of Six Natural Gas Distribution Companies</u>	Long-Term Issuer Rating (1)	Numerical Weighting (2)	Long-Term Issuer Rating (1)	Numerical Weighting (2)
Atmos Energy Corporation	A1	5.0	A-	7.0
New Jersey Resources Corporation	NA	-	NR	-
NiSource Inc.	Baa1	8.0	BBB+	8.0
Northwest Natural Holding Company	Baa1	8.0	A+	5.0
ONE Gas, Inc.	A3	7.0	BBB+	8.0
Spire Inc.	A1	5.0	A-	7.0
Average	A3	6.6	A-	7.0
<u>Proxy Group of Fourteen Electric Companies</u>	Long-Term Issuer Rating (1)	Numerical Weighting (2)	Long-Term Issuer Rating (1)	Numerical Weighting (2)
Alliant Energy Corporation	A3/Baa1	7.5	A/A-	6.5
Ameren Corporation	A3/Baa1	7.5	BBB+	8.0
American Electric Power Company, Inc.	Baa1	8.0	A-	7.0
Duke Energy Corporation	A3	7.0	BBB+	8.0
Edison International	Baa2	9.0	BBB	9.0
Entergy Corporation	Baa2	9.0	BBB+	8.0
Eversource Energy	A3	7.0	A-	7.0
IDACORP, Inc.	A3	7.0	BBB	9.0
NorthWestern Corporation	Baa2	9.0	BBB	9.0
OGE Energy Corporation	A3	7.0	A-	7.0
Portland General Electric Company	A3	7.0	BBB+	8.0
The Southern Company	A3	7.0	BBB+	8.0
Xcel Energy Inc.	A3	7.0	A-	7.0
Average	Baa1	7.6	BBB+	7.8

Notes:

- (1) Ratings are that of the average of each company's utility operating subsidiaries.  
(2) From page 6 of this Schedule.

Source Information: Moody's Investors Services.  
Standard & Poor's Global Utilities Rating Services.



Numerical Assignment for  
Moody's and Standard & Poor's Bond Ratings

<u>Moody's Bond Rating</u>	<u>Numerical Bond Weighting</u>	<u>Standard &amp; Poor's Bond Rating</u>
Aaa	1	AAA
Aa1	2	AA+
Aa2	3	AA
Aa3	4	AA-
A1	5	A+
A2	6	A
A3	7	A-
Baa1	8	BBB+
Baa2	9	BBB
Baa3	10	BBB-
Ba1	11	BB+
Ba2	12	BB
Ba3	13	BB-
B1	14	B+
B2	15	B
B3	16	B-

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Judgment of Equity Risk Premium for the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

<u>Line No.</u>		<u>Proxy Group of Six Natural Gas Distribution Companies</u>	<u>Proxy Group of Fourteen Electric Companies</u>
1.	Calculated equity risk premium based on the total market using the beta approach (1)	7.79 %	8.14 %
2.	Mean equity risk premium based on a study using the holding period returns of public utilities with A rated bonds (2)	5.44	5.44
3.	Predicted Equity Risk Premium Based on Regression Analysis of 809 Fully-Litigated Natural Gas Utility Rate Cases (3)	5.46	NA
4.	Predicted Equity Risk Premium Based on Regression Analysis of 1,192 Fully-Litigated Electric Utility Rate Cases (4)	<u>NA</u>	<u>5.52</u>
5.	Average equity risk premium	<u><u>6.23 %</u></u>	<u><u>6.37 %</u></u>

Notes: (1) From page 8 of this Schedule.  
(2) From page 12 of this Schedule.  
(3) From pages 13 of this Schedule.  
(4) From pages 14 of this Schedule.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Derivation of Equity Risk Premium Based on the Total Market Approach  
Using the Beta for the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

<u>Line No.</u>	<u>Equity Risk Premium Measure</u>	<u>Proxy Group of Six Natural Gas Distribution Companies</u>	<u>Proxy Group of Fourteen Electric Companies</u>
<u>Ibbotson-Based Equity Risk Premiums:</u>			
1.	Ibbotson Equity Risk Premium (1)	5.92 %	5.92 %
2.	Regression on Ibbotson Risk Premium Data (2)	8.23	8.23
3.	Ibbotson Equity Risk Premium based on PRPM (3)	8.07	8.07
4.	Equity Risk Premium Based on Value Line Summary and Index (4)	7.44	7.44
5.	Equity Risk Premium Based on Value Line S&P 500 Companies (5)	12.19	12.19
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	<u>10.65</u>	<u>10.65</u>
7.	Conclusion of Equity Risk Premium	8.75 %	8.75 %
8.	Adjusted Beta (7)	<u>0.89</u>	<u>0.93</u>
9.	Forecasted Equity Risk Premium	<u><u>7.79 %</u></u>	<u><u>8.14 %</u></u>

Notes provided on page 9 of this Schedule.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Derivation of Equity Risk Premium Based on the Total Market Approach  
Using the Beta for the

Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

Notes:

- (1) Based on the arithmetic mean historical monthly returns on large company common stocks from Ibbotson® SBBI® 2021 Market Report minus the arithmetic mean monthly yield of Moody's average Aaa and Aa corporate bonds from 1928-2020.
- (2) This equity risk premium is based on a regression of the monthly equity risk premiums of large company common stocks relative to Moody's average Aaa and Aa rated corporate bond yields from 1928-2020 referenced in Note 1 above.
- (3) The Predictive Risk Premium Model (PRPM) is discussed in the accompanying direct testimony. The Ibbotson equity risk premium based on the PRPM is derived by applying the PRPM to the monthly risk premiums between Ibbotson large company common stock monthly returns and average Aaa and Aa corporate monthly bond yields, from January 1928 through February 2022.
- (4) The equity risk premium based on the Value Line Summary and Index is derived by subtracting the average consensus forecast of Aaa corporate bonds of 3.95% (from page 3 of this Schedule) from the projected 3-5 year total annual market return of 11.39% (described fully in note 1 on page 2 of Schedule DWD-5).
- (5) Using data from Value Line for the S&P 500, an expected total return of 16.14% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 3.95% results in an expected equity risk premium of 12.19%.
- (6) Using data from the Bloomberg Professional Service for the S&P 500, an expected total return of 14.60% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the average consensus forecast of Aaa corporate bonds of 3.53% results in an expected equity risk premium of 10.65%.
- (7) Average of mean and median beta for each proxy group from page 1 of Schedule DWD-5.

Sources of Information:

Stocks, Bonds, Bills, and Inflation - 2021 SBBI Yearbook, John Wiley & Sons, Inc.  
Value Line Summary and Index.  
Blue Chip Financial Forecasts, March 1, 2022 and December 1, 2021  
Bloomberg Professional Services.  
Industrial Manual and Mergent Bond Record Monthly Update.

### Consensus Forecasts of U.S. Interest Rates and Key Assumptions

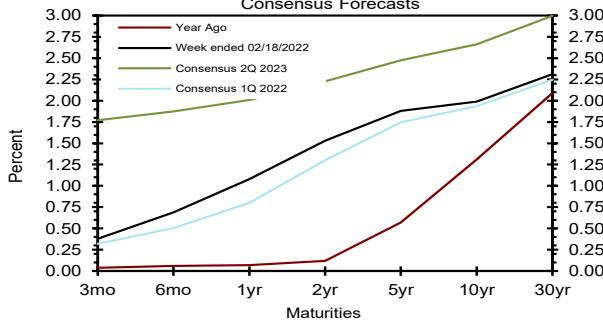
Interest Rates	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month				Latest Qtr	1Q 2022	2Q 2022	3Q 2022	4Q 2022	1Q 2023
	Feb 18	Feb 11	Feb 4	Jan 28	Jan	Dec	Nov	4Q 2021	2022	2022	2022	2022	2023	2023
Federal Funds Rate	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.2	0.6	1.0	1.3	1.6	1.8
Prime Rate	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.4	3.7	4.1	4.3	4.6	4.8
SOFR	0.05	0.05	0.05	0.04	0.05	0.05	0.05	0.05	0.2	0.5	0.9	1.2	1.4	1.7
Commercial Paper, 1-mo.	0.08	0.08	0.08	0.07	0.07	0.06	0.05	0.06	0.2	0.6	0.9	1.2	1.5	1.7
Treasury bill, 3-mo.	0.38	0.31	0.21	0.19	0.06	0.05	0.05	0.05	0.3	0.7	1.0	1.3	1.5	1.8
Treasury bill, 6-mo.	0.69	0.64	0.49	0.41	0.15	0.07	0.06	0.09	0.5	0.8	1.1	1.4	1.7	1.9
Treasury bill, 1 yr.	1.08	0.98	0.80	0.69	0.30	0.18	0.11	0.20	0.8	1.1	1.4	1.6	1.8	2.0
Treasury note, 2 yr.	1.53	1.42	1.20	1.09	0.68	0.51	0.39	0.53	1.3	1.6	1.8	2.0	2.1	2.2
Treasury note, 5 yr.	1.88	1.84	1.66	1.60	1.23	1.20	1.11	1.18	1.7	2.0	2.1	2.3	2.4	2.5
Treasury note, 10 yr.	1.99	1.95	1.83	1.79	1.47	1.56	1.58	1.54	1.9	2.1	2.3	2.4	2.6	2.7
Treasury note, 30 yr.	2.31	2.25	2.14	2.11	1.85	1.94	2.06	1.95	2.2	2.5	2.6	2.7	2.9	3.0
Corporate Aaa bond	3.43	3.31	3.19	3.14	2.79	2.79	2.85	2.81	3.2	3.4	3.7	3.9	4.0	4.1
Corporate Baa bond	4.00	3.85	3.70	3.64	3.26	3.25	3.31	3.27	3.9	4.2	4.4	4.6	4.8	4.9
State & Local bonds	3.08	2.97	2.92	2.85	2.57	2.57	2.59	2.58	2.6	2.9	3.0	3.2	3.3	3.4
Home mortgage rate	3.92	3.69	3.55	3.55	3.10	3.07	3.07	3.08	3.7	3.9	4.1	4.2	4.4	4.5

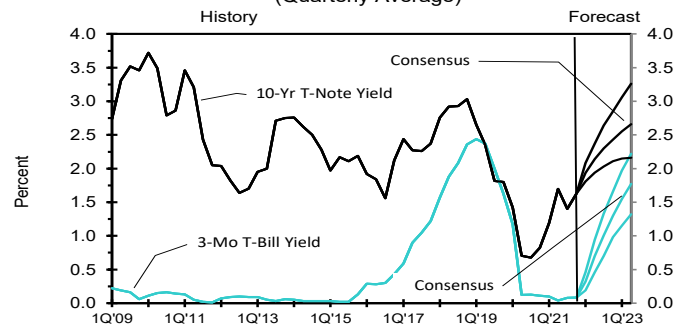
Key Assumptions	History								Consensus Forecasts-Quarterly					
	1Q 2020	2Q 2020	3Q 2020	4Q 2020	1Q 2021	2Q 2021	3Q 2021	4Q 2021	1Q 2022	2Q 2022	3Q 2022	4Q 2022	1Q 2023	2Q 2023
Fed's AFE \$ Index	111.3	112.4	107.2	105.1	103.4	102.9	105.0	107.0	107.8	108.0	108.1	107.8	107.5	107.2
Real GDP	-5.1	-31.2	33.8	4.5	6.3	6.7	2.3	7.0	1.9	3.9	3.1	2.6	2.4	2.3
GDP Price Index	1.6	-1.5	3.6	2.2	4.3	6.1	6.0	7.1	4.8	3.8	3.1	2.8	2.6	2.5
Consumer Price Index	1.3	-3.4	4.8	2.2	4.1	8.2	6.7	7.9	5.8	3.9	3.1	2.7	2.5	2.4
PCE Price Index	1.3	-1.6	3.7	1.5	3.8	6.5	5.3	6.3	5.1	3.5	2.8	2.4	2.3	2.3

Forecasts for interest rates and the Federal Reserve's Advanced Foreign Economies Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index, CPI and PCE Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; SOFR from the New York Fed. All interest rate data are sourced from Haver Analytics. Historical data for Fed's Advanced Foreign Economies Index are from FRSR H.10. Historical data for Real GDP, GDP Price Index and PCE Price Index are from the Bureau of Economic Analysis (BEA). Consumer Price Index history is from the Department of Labor's Bureau of Labor Statistics (BLS).

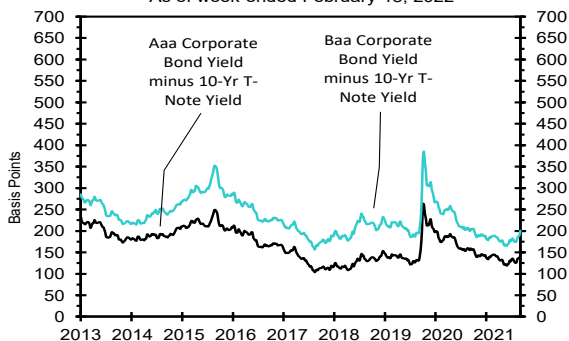
**U.S. Treasury Yield Curve**  
 Week ended February 18, 2022 & Year Ago vs.  
 1Q 2022 & 2Q 2023  
 Consensus Forecasts



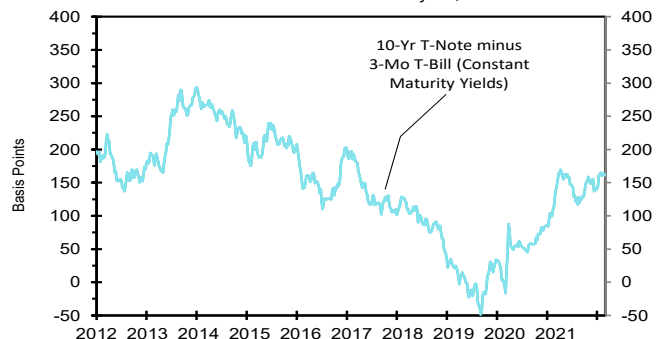
**US 3-Mo T-Bills & 10-Yr T-Note Yield**  
 (Quarterly Average)



**Corporate Bond Spreads**  
 As of week ended February 18, 2022



**U.S. Treasury Yield Curve**  
 As of week ended February 18, 2022



## Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2023 through 2027 and averages for the five-year periods 2023-2027 and 2028-2032. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

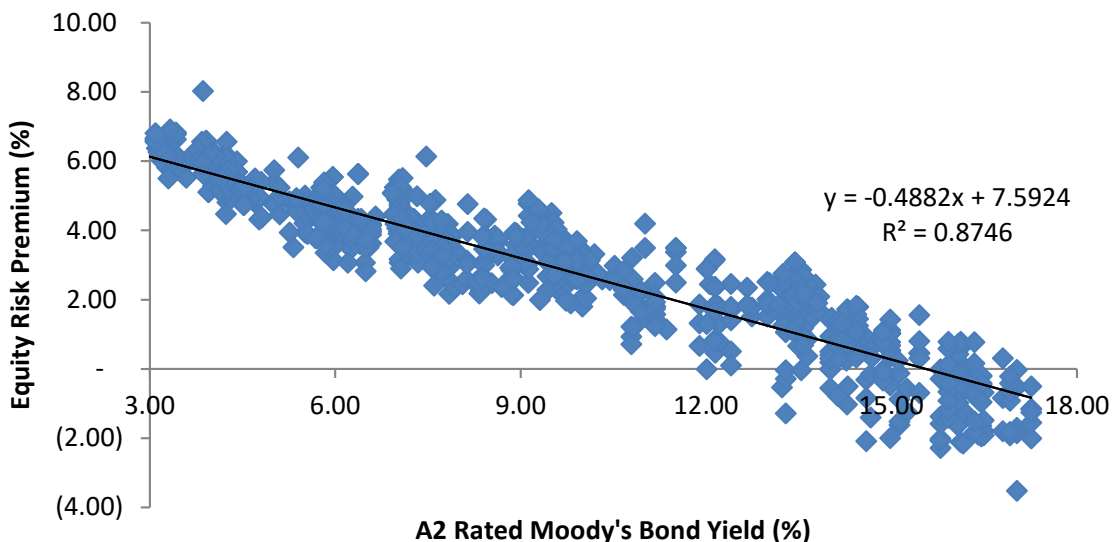
		Average For The Year					Five-Year Averages	
		2023	2024	2025	2026	2027	2023-2027	2028-2032
1. Federal Funds Rate	<b>CONSENSUS</b>	<b>0.8</b>	<b>1.6</b>	<b>2.0</b>	<b>2.2</b>	<b>2.3</b>	<b>1.8</b>	<b>2.2</b>
	Top 10 Average	1.2	2.2	2.7	2.7	2.8	2.3	2.9
	Bottom 10 Average	0.4	1.0	1.4	1.7	1.8	1.2	1.5
2. Prime Rate	<b>CONSENSUS</b>	<b>4.0</b>	<b>4.7</b>	<b>5.1</b>	<b>5.3</b>	<b>5.4</b>	<b>4.9</b>	<b>5.3</b>
	Top 10 Average	4.3	5.3	5.8	5.8	5.9	5.4	6.0
	Bottom 10 Average	3.6	4.1	4.5	4.9	5.0	4.4	4.6
3. LIBOR, 3-Mo.	<b>CONSENSUS</b>	<b>1.0</b>	<b>1.7</b>	<b>2.2</b>	<b>2.4</b>	<b>2.5</b>	<b>1.9</b>	<b>2.4</b>
	Top 10 Average	1.3	2.1	2.7	2.9	3.0	2.4	3.1
	Bottom 10 Average	0.7	1.2	1.6	1.9	2.0	1.5	1.8
4. Commercial Paper, 1-Mo	<b>CONSENSUS</b>	<b>0.9</b>	<b>1.6</b>	<b>2.1</b>	<b>2.3</b>	<b>2.4</b>	<b>1.9</b>	<b>2.4</b>
	Top 10 Average	1.2	2.0	2.6	2.8	2.9	2.3	2.9
	Bottom 10 Average	0.6	1.2	1.6	1.9	2.0	1.5	1.8
5. Treasury Bill Yield, 3-Mo	<b>CONSENSUS</b>	<b>0.8</b>	<b>1.4</b>	<b>1.8</b>	<b>2.0</b>	<b>2.3</b>	<b>1.7</b>	<b>2.2</b>
	Top 10 Average	1.2	1.9	2.5	2.6	2.8	2.2	2.9
	Bottom 10 Average	0.4	0.8	1.2	1.5	1.8	1.1	1.6
6. Treasury Bill Yield, 6-Mo	<b>CONSENSUS</b>	<b>0.8</b>	<b>1.4</b>	<b>1.9</b>	<b>2.1</b>	<b>2.4</b>	<b>1.7</b>	<b>2.3</b>
	Top 10 Average	1.2	2.0	2.6	2.7	2.9	2.3	3.0
	Bottom 10 Average	0.4	0.9	1.2	1.6	1.9	1.2	1.7
7. Treasury Bill Yield, 1-Yr	<b>CONSENSUS</b>	<b>1.0</b>	<b>1.6</b>	<b>2.1</b>	<b>2.4</b>	<b>2.5</b>	<b>1.9</b>	<b>2.4</b>
	Top 10 Average	1.4	2.1	2.7	2.8	3.0	2.4	3.1
	Bottom 10 Average	0.6	1.2	1.5	1.9	2.0	1.4	1.8
8. Treasury Note Yield, 2-Yr	<b>CONSENSUS</b>	<b>1.3</b>	<b>1.9</b>	<b>2.4</b>	<b>2.6</b>	<b>2.6</b>	<b>2.2</b>	<b>2.6</b>
	Top 10 Average	1.7	2.5	3.0	3.1	3.2	2.7	3.4
	Bottom 10 Average	0.8	1.4	1.8	2.0	2.1	1.6	1.9
9. Treasury Note Yield, 5-Yr	<b>CONSENSUS</b>	<b>1.9</b>	<b>2.4</b>	<b>2.8</b>	<b>2.9</b>	<b>2.9</b>	<b>2.6</b>	<b>3.0</b>
	Top 10 Average	2.3	3.0	3.4	3.5	3.6	3.1	3.8
	Bottom 10 Average	1.5	1.9	2.1	2.3	2.3	2.0	2.2
10. Treasury Note Yield, 10-Yr	<b>CONSENSUS</b>	<b>2.4</b>	<b>2.8</b>	<b>3.1</b>	<b>3.2</b>	<b>3.2</b>	<b>2.9</b>	<b>3.3</b>
	Top 10 Average	2.8	3.3	3.7	3.8	3.9	3.5	4.2
	Bottom 10 Average	2.0	2.3	2.4	2.5	2.5	2.3	2.4
11. Treasury Bond Yield, 30-Yr	<b>CONSENSUS</b>	<b>2.9</b>	<b>3.3</b>	<b>3.6</b>	<b>3.7</b>	<b>3.7</b>	<b>3.4</b>	<b>3.8</b>
	Top 10 Average	3.4	3.9	4.3	4.4	4.4	4.1	4.6
	Bottom 10 Average	2.4	2.8	2.9	3.0	3.0	2.8	3.0
12. Corporate Aaa Bond Yield	<b>CONSENSUS</b>	<b>3.7</b>	<b>4.2</b>	<b>4.5</b>	<b>4.6</b>	<b>4.8</b>	<b>4.4</b>	<b>4.9</b>
	Top 10 Average	4.3	4.7	5.1	5.2	5.4	4.9	5.6
	Bottom 10 Average	3.2	3.7	3.9	4.1	4.2	3.8	4.2
13. Corporate Baa Bond Yield	<b>CONSENSUS</b>	<b>4.6</b>	<b>5.0</b>	<b>5.3</b>	<b>5.5</b>	<b>5.6</b>	<b>5.2</b>	<b>5.7</b>
	Top 10 Average	5.1	5.5	5.9	6.1	6.2	5.7	6.5
	Bottom 10 Average	4.0	4.5	4.8	4.9	5.0	4.7	5.0
14. State & Local Bonds Yield	<b>CONSENSUS</b>	<b>3.2</b>	<b>3.7</b>	<b>3.9</b>	<b>4.1</b>	<b>4.2</b>	<b>3.8</b>	<b>4.3</b>
	Top 10 Average	3.8	4.3	4.5	4.7	4.8	4.4	5.0
	Bottom 10 Average	2.7	3.2	3.4	3.5	3.6	3.3	3.6
15. Home Mortgage Rate	<b>CONSENSUS</b>	<b>4.0</b>	<b>4.4</b>	<b>4.7</b>	<b>4.8</b>	<b>4.8</b>	<b>4.5</b>	<b>4.9</b>
	Top 10 Average	4.5	5.0	5.3	5.4	5.4	5.1	5.7
	Bottom 10 Average	3.6	3.9	4.1	4.1	4.2	4.0	4.1
A. Fed's AFE Nominal \$ Index	<b>CONSENSUS</b>	<b>106.2</b>	<b>106.0</b>	<b>106.1</b>	<b>106.2</b>	<b>106.4</b>	<b>106.2</b>	<b>106.5</b>
	Top 10 Average	108.1	108.4	108.9	109.0	109.2	108.7	110.1
	Bottom 10 Average	104.4	104.0	103.7	103.7	103.9	103.9	103.1
		----- Year-Over-Year, % Change -----					Five-Year Averages	
		<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2023-2027</b>	<b>2028-2032</b>
B. Real GDP	<b>CONSENSUS</b>	<b>2.6</b>	<b>2.2</b>	<b>2.1</b>	<b>2.0</b>	<b>2.0</b>	<b>2.2</b>	<b>2.0</b>
	Top 10 Average	3.1	2.6	2.5	2.4	2.3	2.6	2.4
	Bottom 10 Average	2.2	1.7	1.7	1.7	1.7	1.8	1.7
C. GDP Chained Price Index	<b>CONSENSUS</b>	<b>2.5</b>	<b>2.2</b>	<b>2.2</b>	<b>2.1</b>	<b>2.1</b>	<b>2.2</b>	<b>2.1</b>
	Top 10 Average	3.0	2.7	2.5	2.4	2.4	2.6	2.4
	Bottom 10 Average	2.0	1.9	1.9	1.9	1.9	1.9	1.8
D. Consumer Price Index	<b>CONSENSUS</b>	<b>2.6</b>	<b>2.3</b>	<b>2.3</b>	<b>2.2</b>	<b>2.2</b>	<b>2.3</b>	<b>2.2</b>
	Top 10 Average	3.2	2.8	2.6	2.5	2.5	2.7	2.5
	Bottom 10 Average	2.1	2.0	2.0	2.0	2.0	2.0	1.9
E. PCE Price Index	<b>CONSENSUS</b>	<b>2.5</b>	<b>2.2</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>2.2</b>	<b>2.1</b>
	Top 10 Average	3.0	2.6	2.4	2.4	2.3	2.6	2.4
	Bottom 10 Average	2.0	1.9	1.9	1.9	1.9	1.9	1.9

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Derivation of Mean Equity Risk Premium Based Studies  
Using Holding Period Returns and  
Projected Market Appreciation of the S&P Utility Index

<u>Line No.</u>		<u>Implied Equity Risk Premium</u>
	<u>Equity Risk Premium based on S&amp;P Utility Index Holding Period Returns (1):</u>	
1.	Historical Equity Risk Premium	4.16 %
2.	Regression of Historical Equity Risk Premium (2)	6.04
3.	Forecasted Equity Risk Premium Based on PRPM (3)	5.27
4.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Value Line Data) (4)	6.33
5.	Forecasted Equity Risk Premium based on Projected Total Return on the S&P Utilities Index (Bloomberg Data) (5)	<u>5.42</u>
6.	Average Equity Risk Premium (6)	<u><u>5.44 %</u></u>

- Notes: (1) Based on S&P Public Utility Index monthly total returns and Moody's Public Utility Bond average monthly yields from 1928-2020. Holding period returns are calculated based upon income received (dividends and interest) plus the relative change in the market value of a security over a one-year holding period.
- (2) This equity risk premium is based on a regression of the monthly equity risk premiums of the S&P Utility Index relative to Moody's A2 rated public utility bond yields from 1928 - 2020 referenced in note 1 above.
- (3) The Predictive Risk Premium Model (PRPM) is applied to the risk premium of the monthly total returns of the S&P Utility Index and the monthly yields on Moody's A2 rated public utility bonds from January 1928 - February 2022.
- (4) Using data from Value Line for the S&P Utilities Index, an expected total return of 10.69% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the expected A2 rated public utility bond yield of 4.36% results in an expected equity risk premium of 6.33%. (10.69% - 4.36 = 6.33%)
- (5) Using data from the Bloomberg Professional Service for the S&P Utilities Index, an expected total return of 9.78% was derived based upon expected dividend yields and long-term earnings growth estimates as a proxy for capital appreciation. Subtracting the expected A2 rated public utility bond yield of 4.36% results in an expected equity risk premium of 5.42%. (9.78% - 4.36 = 5.42%)
- (6) Average of lines 1 through 5.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Prediction of Equity Risk Premiums Relative to  
Moody's A2 Rated Utility Bond Yields - Gas Utilities



		Prospective A2 Rated Utility Bond (1)	Prospective Equity Risk Premium
<u>Constant</u>	<u>Slope</u>		
7.5924 %	-0.4882	4.36 %	5.46 %

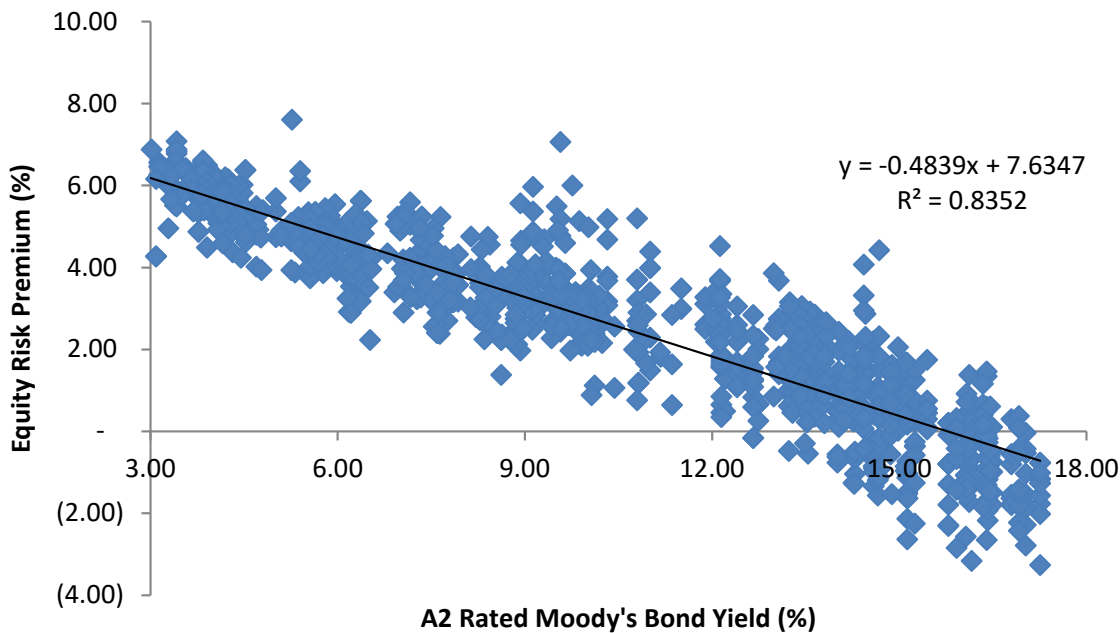
Notes:

(1) From line 3 of page 3 of this Schedule.

Source of Information: Regulatory Research Associates.



Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Prediction of Equity Risk Premiums Relative to  
Moody's A2 Rated Utility Bond Yields - Electric Utilities



		Prospective A2 Rated Utility Bond (1)	Prospective Equity Risk Premium
<u>Constant</u>	<u>Slope</u>		
7.6347 %	-0.4839	4.36 %	5.52 %

Notes:

(1) From line 3 of page 3 of this Schedule.

Source of Information: Regulatory Research Associates.

Valley Energy, Inc./ Citizens' Electric Company of Lewisburg, PA  
Indicated Common Equity Cost Rate Through Use  
of the Traditional Capital Asset Pricing Model (CAPM) and Empirical Capital Asset Pricing Model (ECAPM)

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Six Natural Gas Distribution Companies	Value Line Adjusted Beta	Bloomberg Adjusted Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Atmos Energy Corporation	0.80	0.83	0.81	9.84 %	2.89 %	10.86 %	11.33 %	11.09 %
New Jersey Resources Corporation	1.00	0.93	0.96	9.84	2.89	12.33	12.43	12.38
NiSource Inc.	0.85	0.92	0.89	9.84	2.89	11.64	11.92	11.78
Northwest Natural Holding Company	0.80	0.85	0.83	9.84	2.89	11.05	11.47	11.26
ONE Gas, Inc.	0.80	0.97	0.89	9.84	2.89	11.64	11.92	11.78
Spire Inc.	0.85	0.96	0.91	9.84	2.89	11.84	12.06	11.95
Mean			<u>0.88</u>			<u>11.56 %</u>	<u>11.85 %</u>	<u>11.71 %</u>
Median			<u>0.89</u>			<u>11.64 %</u>	<u>11.92 %</u>	<u>11.78 %</u>
Average of Mean and Median			<u>0.89</u>			<u>11.60 %</u>	<u>11.89 %</u>	<u>11.75 %</u>

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Fourteen Electric Companies	Value Line Adjusted Beta	Bloomberg Adjusted Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Alliant Energy Corporation	0.85	0.91	0.88	9.84 %	2.89 %	11.55 %	11.84 %	11.69 %
Ameren Corporation	0.80	0.88	0.84	9.84	2.89	11.15	11.55	11.35
American Electric Power Company, Inc.	0.75	0.90	0.82	9.84	2.89	10.96	11.40	11.18
Duke Energy Corporation	0.85	0.82	0.83	9.84	2.89	11.05	11.47	11.26
Edison International	0.95	1.05	1.00	9.84	2.89	12.73	12.73	12.73
Energy Corporation	0.95	1.10	1.03	9.84	2.89	13.02	12.95	12.99
Eversource Energy	0.95	0.99	0.97	9.84	2.89	12.43	12.51	12.47
EverSource Energy	0.90	0.98	0.94	9.84	2.89	12.14	12.28	12.21
IDACORP, Inc.	0.80	0.92	0.86	9.84	2.89	11.35	11.69	11.52
NorthWestern Corporation	0.95	1.16	1.05	9.84	2.89	13.22	13.10	13.16
OGE Energy Corporation	1.05	1.20	1.12	9.84	2.89	13.91	13.61	13.76
Portland General Electric Company	0.90	0.93	0.92	9.84	2.89	11.94	12.14	12.04
The Southern Company	0.95	1.04	0.99	9.84	2.89	12.63	12.65	12.64
Xcel Energy Inc.	0.80	0.84	0.82	9.84	2.89	10.96	11.40	11.18
Mean			<u>0.93</u>			<u>12.07 %</u>	<u>12.24 %</u>	<u>12.16 %</u>
Median			<u>0.93</u>			<u>12.04 %</u>	<u>12.21 %</u>	<u>12.13 %</u>
Average of Mean and Median			<u>0.93</u>			<u>12.06 %</u>	<u>12.23 %</u>	<u>12.15 %</u>

Notes on page 2 of this Schedule.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Notes to Accompany the Application of the CAPM and ECAPM

Notes:

- (1) The market risk premium (MRP) is derived by using six different measures from three sources: Ibbotson, Value Line, and Bloomberg as illustrated below:

Historical Data MRP Estimates:

Measure 1: Ibbotson Arithmetic Mean MRP (1926-2020)

Arithmetic Mean Monthly Returns for Large Stocks 1926-2020:	12.20 %
Arithmetic Mean Income Returns on Long-Term Government Bonds:	5.05
MRP based on Ibbotson Historical Data:	<u>7.15 %</u>

Measure 2: Application of a Regression Analysis to Ibbotson Historical Data (1926-2020)

9.38 %

Measure 3: Application of the PRPM to Ibbotson Historical Data: (January 1926 - February 2022)

9.03 %

Value Line MRP Estimates:

Measure 4: Value Line Projected MRP (Thirteen weeks ending March 18, 2022)

Total projected return on the market 3-5 years hence*:	11.39 %
Projected Risk-Free Rate (see note 2):	2.89
MRP based on Value Line Summary & Index:	<u>8.50 %</u>

\*Forecasted 3-5 year capital appreciation plus expected dividend yield

Measure 5: Value Line Projected Return on the Market based on the S&P 500

Total return on the Market based on the S&P 500:	16.14 %
Projected Risk-Free Rate (see note 2):	2.89
MRP based on Value Line data	<u>13.25 %</u>

Measure 6: Bloomberg Projected MRP

Total return on the Market based on the S&P 500:	14.60 %
Projected Risk-Free Rate (see note 2):	2.89
MRP based on Bloomberg data	<u>11.71 %</u>

Average of Value Line, Ibbotson, and Bloomberg MRP: 9.84 %

- (2) For reasons explained in the direct testimony, the appropriate risk-free rate for cost of capital purposes is the average forecast of 30 year Treasury Bonds per the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts. (See pages 10 and 11 of Schedule DWD-4) The projection of the risk-free rate is illustrated below:

First Quarter 2022	2.20 %
Second Quarter 2022	2.50
Third Quarter 2022	2.60
Fourth Quarter 2022	2.70
First Quarter 2023	2.90
Second Quarter 2023	3.00
2023-2027	3.40
2028-2032	3.80
	<u>2.89 %</u>

- (3) Average of Column 6 and Column 7.

Sources of Information:

Value Line Summary and Index.  
Blue Chip Financial Forecasts, March 1, 2022 and December 1, 2021  
Stocks, Bonds, Bills, and Inflation - 2021 SBBi Yearbook, John Wiley & Sons, Inc.  
Bloomberg Professional Services.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Basis of Selection of the Groups of Non-Price Regulated Companies  
Comparable in Total Risk to the Gas and Electric Utility Proxy Groups

The criteria for selection of the proxy groups of non-price regulated companies comparable in total risk to the Gas and Electric Utility Proxy Groups were that the non-price regulated companies be domestic and reported in Value Line Investment Survey (Standard Edition).

One proxy group of non-price regulated companies was selected based on the unadjusted beta range of 0.59 – 0.87 and residual standard error of the regression range of 2.5562 – 3.0486 of the Gas Utility Proxy Group and another proxy group of non-price regulated companies was selected based on the unadjusted beta range of 0.65 – 0.93 and residual standard error of the regression range of 2.5237 – 3.0101 of the Electric Utility Proxy Group.

These ranges are based upon plus or minus two standard deviations of the unadjusted beta and standard error of the regression. Plus or minus two standard deviations captures 95.50% of the distribution of unadjusted betas and residual standard errors of the regression.

The standard deviation of the Electric and Gas Utility Proxy Groups' residual standard errors of the regression are 0.1231 and 0.1216, respectively. The standard deviation of the standard error of the regression is calculated as follows:

$$\text{Standard Deviation of the Std. Err. of the Regr.} = \frac{\text{Standard Error of the Regression}}{\sqrt{2N}}$$

where: N = number of observations. Since Value Line betas are derived from weekly price change observations over a period of five years, N = 259

$$\text{Thus, } 0.1231 = \frac{2.8024}{\sqrt{518}} = \frac{2.8024}{22.7596}$$

$$\text{and, } 0.1216 = \frac{2.7669}{\sqrt{518}} = \frac{2.7669}{22.7596}$$

Source of Information: Value Line, Inc., March 2022  
Value Line Investment Survey (Standard Edition)

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Basis of Selection of Comparable Risk  
Domestic Non-Price Regulated Companies

	[1]	[2]	[3]	[4]
<u>Proxy Group of Six Natural Gas Distribution Companies</u>	<u>Value Line Adjusted Beta</u>	<u>Unadjusted Beta</u>	<u>Residual Standard Error of the Regression</u>	<u>Standard Deviation of Beta</u>
Atmos Energy Corporation	0.80	0.68	2.7298	0.0675
New Jersey Resources Corporation	1.00	0.92	2.9340	0.0726
NiSource Inc.	0.85	0.71	2.4700	0.0611
Northwest Natural Holding Company	0.80	0.69	3.1119	0.0770
ONE Gas, Inc.	0.80	0.66	2.7138	0.0671
Spire Inc.	0.85	0.71	2.8551	0.0706
Average	<u>0.85</u>	<u>0.73</u>	<u>2.8024</u>	<u>0.0693</u>
Beta Range (+/- 2 std. Devs. of Beta)	0.59	0.87		
2 std. Devs. of Beta	0.14			
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.5562	3.0486		
Std. dev. of the Res. Std. Err.	0.1231			
2 std. devs. of the Res. Std. Err.	0.2462			
	[1]	[2]	[3]	[4]
<u>Proxy Group of Fourteen Electric Companies</u>	<u>Value Line Adjusted Beta</u>	<u>Unadjusted Beta</u>	<u>Residual Standard Error of the Regression</u>	<u>Standard Deviation of Beta</u>
Alliant Energy Corporation	0.85	0.71	2.6953	0.0667
Ameren Corporation	0.80	0.69	2.5235	0.0624
American Electric Power Company, Inc.	0.75	0.58	2.6108	0.0646
Duke Energy Corporation	0.85	0.75	2.6859	0.0664
Edison International	0.95	0.91	3.2986	0.0816
Entergy Corporation	0.95	0.86	2.7525	0.0681
Evergy, Inc.	0.95	0.85	3.0574	0.0778
Eversource Energy	0.90	0.82	3.0252	0.0748
IDACORP, Inc.	0.80	0.67	2.5897	0.0641
NorthWestern Corporation	0.95	0.89	2.7299	0.0675
OGE Energy Corporation	1.05	1.03	2.6847	0.0664
Portland General Electric Company	0.85	0.77	2.7744	0.0686
The Southern Company	0.95	0.87	2.6353	0.0652
Xcel Energy Inc.	0.80	0.65	2.6727	0.0661
Average	<u>0.89</u>	<u>0.79</u>	<u>2.7669</u>	<u>0.0686</u>
Beta Range (+/- 2 std. Devs. of Beta)	0.65	0.93		
2 std. Devs. of Beta	0.14			
Residual Std. Err. Range (+/- 2 std. Devs. of the Residual Std. Err.)	2.5237	3.0101		
Std. dev. of the Res. Std. Err.	0.1216			
2 std. devs. of the Res. Std. Err.	0.2432			

Source of Information: Valueline Proprietary Database, March 2022.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Proxy Group of Non-Price Regulated Companies  
Comparable in Total Risk to the

Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

	[1]	[2]	[3]	[4]
<u>Proxy Group of Thirty-Eight Non-Price Regulated Companies</u>	<u>VL Adjusted Beta</u>	<u>Unadjusted Beta</u>	<u>Residual Standard Error of the Regression</u>	<u>Standard Deviation of Beta</u>
Agilent Technologies	0.90	0.78	2.7005	0.0668
Abbott Labs.	0.90	0.82	2.8039	0.0694
Assurant Inc.	0.90	0.84	2.7387	0.0677
Smith (A.O.)	0.85	0.77	2.8592	0.0707
Air Products & Chem.	0.90	0.79	2.6168	0.0647
Becton, Dickinson	0.75	0.60	2.8626	0.0708
Brown-Forman 'B'	0.90	0.80	2.7317	0.0676
Black Knight, Inc.	0.75	0.60	2.6932	0.0666
Bristol-Myers Squibb	0.85	0.75	2.9154	0.0721
Broadridge Fin'l	0.85	0.73	2.7513	0.0681
CACI Int'l	0.90	0.84	2.8642	0.0709
Cerner Corp.	0.90	0.80	2.6984	0.0667
Chemed Corp.	0.85	0.70	2.8432	0.0703
CSW Industrials	0.90	0.80	2.8686	0.0710
Exponent, Inc.	0.90	0.79	3.0005	0.0742
Ingredion Inc.	0.95	0.85	2.7688	0.0685
J&J Snack Foods	0.95	0.86	3.0009	0.0742
Henry (Jack) & Assoc	0.85	0.70	2.9159	0.0721
McCormick & Co.	0.80	0.65	2.8247	0.0699
Monster Beverage	0.85	0.75	2.9659	0.0734
Altria Group	0.95	0.86	3.0325	0.0750
Merck & Co.	0.80	0.63	2.8110	0.0695
Motorola Solutions	0.90	0.79	2.6488	0.0655
NewMarket Corp.	0.75	0.60	2.7398	0.0678
Northrop Grumman	0.85	0.75	2.9830	0.0738
Old Dominion Freight	0.95	0.86	2.9874	0.0739
Oracle Corp.	0.75	0.61	2.8406	0.0703
Pfizer, Inc.	0.80	0.65	2.6589	0.0658
Progressive Corp.	0.75	0.59	2.9344	0.0726
RLI Corp.	0.80	0.65	2.8568	0.0707
Selective Ins. Group	0.90	0.81	2.9172	0.0722
Sirius XM Holdings	0.95	0.85	2.9761	0.0736
Sensient Techn.	0.90	0.82	2.6687	0.0660
Thermo Fisher Sci.	0.85	0.70	2.6150	0.0647
Texas Instruments	0.85	0.76	2.6869	0.0665
VeriSign Inc.	0.90	0.79	2.6081	0.0645
Watsco, Inc.	0.85	0.74	2.6836	0.0664
Western Union	0.80	0.64	2.8493	0.0705
Average	<u>0.86</u>	<u>0.75</u>	<u>2.8138</u>	<u>0.0696</u>
Proxy Group of Six Natural Gas Distribution Companies	<u>0.85</u>	<u>0.73</u>	<u>2.8024</u>	<u>0.0693</u>

Source of Information:

Valueline Proprietary Database, March 2022.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Proxy Group of Non-Price Regulated Companies  
Comparable in Total Risk to the

Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

	[1]	[2]	[3]	[4]
<u>Proxy Group of Fourty Eight Non-Price Regulated Companies</u>	<u>VL Adjusted Beta</u>	<u>Unadjusted Beta</u>	<u>Residual Standard Error of the Regression</u>	<u>Standard Deviation of Beta</u>
Agilent Technologies	0.90	0.78	2.7005	0.0668
Abbott Labs.	0.90	0.82	2.8039	0.0694
Analog Devices	0.95	0.88	2.8212	0.0698
Assurant Inc.	0.90	0.84	2.7387	0.0677
Smith (A.O.)	0.85	0.77	2.8592	0.0707
Air Products & Chem.	0.90	0.79	2.6168	0.0647
Brown-Forman 'B'	0.90	0.80	2.7317	0.0676
Ball Corp.	0.95	0.91	2.8617	0.0708
Bristol-Myers Squibb	0.85	0.75	2.9154	0.0721
Broadridge Fin'l	0.85	0.73	2.7513	0.0681
Brady Corp.	1.00	0.92	2.7776	0.0687
CACI Int'l	0.90	0.84	2.8642	0.0709
Cerner Corp.	0.90	0.80	2.6984	0.0667
Chemed Corp.	0.85	0.70	2.8432	0.0703
CSW Industrials	0.90	0.80	2.8686	0.0710
Danaher Corp.	0.80	0.68	2.5298	0.0626
Dolby Labs.	0.95	0.88	2.6074	0.0645
Exponent, Inc.	0.90	0.79	3.0005	0.0742
FactSet Research	0.95	0.92	2.7561	0.0682
GATX Corp.	0.95	0.88	2.9561	0.0731
Gentex Corp.	0.95	0.89	2.7619	0.0683
Alphabet Inc.	0.90	0.79	2.5405	0.0628
Ingredion Inc.	0.95	0.85	2.7688	0.0685
Hunt (J.B.)	0.95	0.91	2.8935	0.0716
J&J Snack Foods	0.95	0.86	3.0009	0.0742
Henry (Jack) & Assoc	0.85	0.70	2.9159	0.0721
McCormick & Co.	0.80	0.65	2.8247	0.0699
Monster Beverage	0.85	0.75	2.9659	0.0734
Motorola Solutions	0.90	0.79	2.6488	0.0655
Mettler-Toledo Int'l	0.95	0.91	2.8032	0.0693
Northrop Grumman	0.85	0.75	2.9830	0.0738
Old Dominion Freight	0.95	0.86	2.9874	0.0739
Pfizer, Inc.	0.80	0.65	2.6589	0.0658
Packaging Corp.	0.95	0.89	2.8411	0.0703
Post Holdings	0.95	0.87	2.8860	0.0714
RLI Corp.	0.80	0.65	2.8568	0.0707
Service Corp. Int'l	0.95	0.88	2.7221	0.0673
Sherwin-Williams	0.90	0.84	2.5345	0.0627
Selective Ins. Group	0.90	0.81	2.9172	0.0722
Sirius XM Holdings	0.95	0.85	2.9761	0.0736
Sensient Techn.	0.90	0.82	2.6687	0.0660
Thermo Fisher Sci.	0.85	0.70	2.6150	0.0647
Texas Instruments	0.85	0.76	2.6869	0.0665
AMERCO	0.95	0.90	2.7432	0.0679
UniFirst Corp.	0.95	0.90	2.7175	0.0672
VeriSign Inc.	0.90	0.79	2.6081	0.0645
Waters Corp.	0.95	0.88	2.8517	0.0705
Watsco, Inc.	0.85	0.74	2.6836	0.0664
Average	<u>0.90</u>	<u>0.81</u>	<u>2.7868</u>	<u>0.0689</u>
Proxy Group of Fourteen Electric Companies	<u>0.89</u>	<u>0.79</u>	<u>2.7669</u>	<u>0.0686</u>

Source of Information:

Valueline Proprietary Database, March 2022.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Summary of Cost of Equity Models Applied to  
Proxy Group of Non-Price Regulated Companies  
Comparable in Total Risk to the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

<u>Principal Methods</u>	<u>Proxy Group of Thirty- Eight Non-Price Regulated Companies</u>	<u>Proxy Group of Fourty Eight Non-Price Regulated Companies</u>
Discounted Cash Flow Model (DCF) (1)	12.22 %	12.70 %
Risk Premium Model (RPM) (2)	12.12	12.73
Capital Asset Pricing Model (CAPM) (3)	<u>11.54</u>	<u>12.07</u>
	Mean <u>11.96 %</u>	<u>12.50 %</u>
	Median <u>12.12 %</u>	<u>12.70 %</u>
	Average of Mean and Median <u>12.04 %</u>	<u>12.60 %</u>

Notes:

- (1) From pages 2 and 3 of this Schedule.
- (2) From page 4 of this Schedule.
- (3) From pages 7 and 8 of this Schedule.



Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Proxy Group of Thirty-Eight Non-Price Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS	Adjusted Dividend Yield	Indicated Common Equity Cost Rate (1)
Agilent Technologies	0.60 %	11.50 %	9.00 %	13.61 %	11.37 %	0.63 %	12.00 %
Abbott Labs.	1.49	10.00	7.80	12.12	9.97	1.56	11.53
Assurant Inc.	1.70	15.50	17.70	17.70	16.97	1.84	18.81
Smith (A.O.)	1.49	11.00	9.00	8.00	9.33	1.56	10.89
Air Products & Chem.	2.45	12.00	12.20	11.20	11.80	2.59	14.39
Becton, Dickinson	1.33	6.00	6.30	6.00	6.10	1.37	7.47
Brown-Forman 'B'	1.12	13.00	NA	7.01	10.01	1.18	11.19
Black Knight, Inc.	-	10.00	11.90	12.80	11.57	-	NA
Bristol-Myers Squibb	3.28	12.50	6.80	5.00	8.10	3.41	11.51
Broadridge Fin'l	1.63	9.00	NA	11.80	10.40	1.71	12.11
CACI Int'l	-	10.50	3.80	2.40	5.57	-	NA
Cerner Corp.	1.17	9.50	12.80	13.52	11.94	1.24	13.18
Chemed Corp.	0.30	9.50	8.30	6.60	8.13	0.31	8.44
CSW Industrials	0.51	14.00	NA	12.00	13.00	0.54	13.54
Exponent, Inc.	0.98	12.00	NA	15.00	13.50	1.05	14.55
Ingredion Inc.	2.83	7.50	NA	10.50	9.00	2.96	11.96
J&J Snack Foods	1.63	8.50	NA	6.00	7.25	1.69	8.94
Henry (Jack) & Assoc	1.14	10.50	17.00	14.00	13.83	1.22	15.05
McCormick & Co.	1.52	6.00	6.10	7.20	6.43	1.57	8.00
Monster Beverage	-	13.00	15.90	14.01	14.30	-	NA
Altria Group	7.16	5.50	4.00	5.36	4.95	7.34	12.29
Merck & Co.	3.53	7.50	8.60	9.42	8.51	3.68	12.19
Motorola Solutions	1.34	8.00	9.00	14.27	10.42	1.41	11.83
NewMarket Corp.	2.55	(1.00)	NA	7.70	7.70	2.65	10.35
Northrop Grumman	1.55	7.50	6.20	4.80	6.17	1.60	7.77
Old Dominion Freight	0.38	12.00	15.80	24.81	17.54	0.41	17.95
Oracle Corp.	1.57	10.00	8.00	10.24	9.41	1.64	11.05
Pfizer, Inc.	3.05	11.50	12.50	NMF	12.00	3.23	15.23
Progressive Corp.	0.38	4.50	19.70	(10.10)	12.10	0.40	12.50
RLI Corp.	0.95	12.00	NA	9.80	10.90	1.00	11.90
Selective Ins. Group	1.40	11.00	NA	13.40	12.20	1.49	13.69
Sirius XM Holdings	1.40	30.50	9.70	9.75	16.65	1.52	18.17
Sensient Techn.	1.90	2.50	NA	3.80	3.15	1.93	5.08
Thermo Fisher Sci.	0.21	15.50	14.00	10.87	13.46	0.22	13.68
Texas Instruments	2.60	9.00	9.30	10.00	9.43	2.72	12.15
VeriSign Inc.	-	8.50	NA	8.00	8.25	-	NA
Watsco, Inc.	2.73	11.00	NA	15.00	13.00	2.91	15.91
Western Union	5.11	8.00	NA	8.11	8.06	5.32	13.38
						Mean	12.31 %
						Median	12.13 %
						Average of Mean and Median	12.22 %

NA= Not Available  
NMF= Not Meaningful Figure

Notes:

(1) The application of the DCF model to the domestic, non-price regulated comparable risk companies is identical to the application of the DCF to the Utility Proxy Groups. The dividend yield is derived by using the 60 day average price and the spot indicated dividend as of March 18, 2022. The dividend yield is then adjusted by 1/2 the average projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.zacks.com, and www.yahoo.com (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.

Source of Information: Value Line Investment Survey.  
www.zacks.com Downloaded on 03/18/2022.  
www.yahoo.com Downloaded on 03/18/2022.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
DCF Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Proxy Group of Fourty Eight Non-Price Regulated Companies	Average Dividend Yield	Value Line Projected Five Year Growth in EPS	Zack's Five Year Projected Growth Rate in EPS	Yahoo! Finance Projected Five Year Growth in EPS	Average Projected Five Year Growth Rate in EPS	Adjusted Dividend Yield	Indicated Common Equity Cost Rate (1)
Agilent Technologies	0.60 %	11.50 %	9.00 %	13.61 %	11.37 %	0.63 %	12.00 %
Abbott Labs.	1.49	10.00	7.80	12.12	9.97	1.56	11.53
Analog Devices	1.87	11.00	12.30	14.71	12.67	1.99	14.66
Assurant Inc.	1.70	15.50	17.70	17.70	16.97	1.84	18.81
Smith (A.O.)	1.49	11.00	9.00	8.00	9.33	1.56	10.89
Air Products & Chem.	2.45	12.00	12.20	11.20	11.80	2.59	14.39
Brown-Forman 'B'	1.12	13.00	NA	7.01	10.01	1.18	11.19
Ball Corp.	0.88	21.00	5.00	14.78	13.59	0.94	14.53
Bristol-Myers Squibb	3.28	12.50	6.80	5.00	8.10	3.41	11.51
Broadridge Fin'l	1.63	9.00	NA	11.80	10.40	1.71	12.11
Brady Corp.	1.81	9.50	7.00	7.00	7.83	1.88	9.71
CACI Int'l	-	10.50	3.80	2.40	5.57	-	NA
Cerner Corp.	1.17	9.50	12.80	13.52	11.94	1.24	13.18
Chemed Corp.	0.30	9.50	8.30	6.60	8.13	0.31	8.44
CSW Industrials	0.51	14.00	NA	12.00	13.00	0.54	13.54
Danaher Corp.	0.35	22.00	20.50	16.87	19.79	0.38	20.17
Dolby Labs.	1.21	10.50	13.00	16.00	13.17	1.29	14.46
Exponent, Inc.	0.98	12.00	NA	15.00	13.50	1.05	14.55
FactSet Research	0.77	9.50	8.40	9.75	9.22	0.81	10.03
GATX Corp.	1.95	5.50	NA	12.00	8.75	2.04	10.79
Gentex Corp.	1.51	10.00	12.80	15.80	12.87	1.61	14.48
Alphabet Inc.	-	23.50	19.80	14.10	19.13	-	NA
Ingredion Inc.	2.83	7.50	NA	10.50	9.00	2.96	11.96
Hunt (J.B.)	0.81	11.00	15.00	28.04	18.01	0.88	18.89
J&J Snack Foods	1.63	8.50	NA	6.00	7.25	1.69	8.94
Henry (Jack) & Assoc	1.14	10.50	17.00	14.00	13.83	1.22	15.05
McCormick & Co.	1.52	6.00	6.10	7.20	6.43	1.57	8.00
Monster Beverage	-	13.00	15.90	14.01	14.30	-	NA
Motorola Solutions	1.34	8.00	9.00	14.27	10.42	1.41	11.83
Mettler-Toledo Int'l	-	13.50	19.10	17.80	16.80	-	NA
Northrop Grumman	1.55	7.50	6.20	4.80	6.17	1.60	7.77
Old Dominion Freight	0.38	12.00	15.80	24.81	17.54	0.41	17.95
Pfizer, Inc.	3.05	11.50	12.50	NMF	12.00	3.23	15.23
Packaging Corp.	2.79	9.00	5.00	16.40	10.13	2.93	13.06
Post Holdings	-	16.50	NA	26.40	21.45	-	NA
RLI Corp.	0.95	12.00	NA	9.80	10.90	1.00	11.90
Service Corp. Int'l	1.57	6.50	8.70	7.06	7.42	1.63	9.05
Sherwin-Williams	0.83	11.50	12.40	14.00	12.63	0.88	13.51
Selective Ins. Group	1.40	11.00	NA	13.40	12.20	1.49	13.69
Sirius XM Holdings	1.40	30.50	9.70	9.75	16.65	1.52	18.17
Sensient Techn.	1.90	2.50	NA	3.80	3.15	1.93	5.08
Thermo Fisher Sci.	0.21	15.50	14.00	10.87	13.46	0.22	13.68
Texas Instruments	2.60	9.00	9.30	10.00	9.43	2.72	12.15
AMERCO	-	11.50	NA	15.00	13.25	-	NA
UniFirst Corp.	0.64	5.50	NA	10.00	7.75	0.66	8.41
VeriSign Inc.	-	8.50	NA	8.00	8.25	-	NA
Waters Corp.	-	6.00	8.50	10.00	8.17	-	NA
Watsco, Inc.	2.73	11.00	NA	15.00	13.00	2.91	15.91
						Mean	<u>12.78 %</u>
						Median	<u>12.61 %</u>
						Average of Mean and Median	<u>12.70 %</u>

NA= Not Available  
NMF= Not Meaningful Figure

Notes:

- (1) The application of the DCF model to the domestic, non-price regulated comparable risk companies is identical to the application of the DCF to the Utility Proxy Groups. The dividend yield is derived by using the 60 day average price and the spot indicated dividend as of March 18, 2022. The dividend yield is then adjusted by 1/2 the average projected growth rate in EPS, which is calculated by averaging the 5 year projected growth in EPS provided by Value Line, www.zacks.com, and www.yahoo.com (excluding any negative growth rates) and then adding that growth rate to the adjusted dividend yield.

Source of Information: Value Line Investment Survey.  
www.zacks.com Downloaded on 03/18/2022.  
www.yahoo.com Downloaded on 03/18/2022.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Indicated Common Equity Cost Rate  
Through Use of a Risk Premium Model  
Using an Adjusted Total Market Approach

<u>Line No.</u>		<u>Proxy Group of Thirty-Eight Non- Price Regulated Companies</u>	<u>Proxy Group of Fourty Eight Non- Price Regulated Companies</u>
1.	Prospective Yield on Baa2 Rated Corporate Bonds (1)	4.71 %	4.71 %
2.	Adjustment to Reflect Bond rating Difference of Non-Price Regulated Companies (2)	<u>(0.12)</u>	<u>(0.12)</u>
3.	Adjusted Prospective Bond Yield	4.59 %	4.59 %
4.	Equity Risk Premium (3)	<u>7.53</u>	<u>8.14</u>
5.	Risk Premium Derived Common Equity Cost Rate	<u>12.12 %</u>	<u>12.73 %</u>

Notes: (1) Average forecast of Baa corporate bonds based upon the consensus of nearly 50 economists reported in Blue Chip Financial Forecasts dated December 1, 2021 (see pages 10 and 11 of Schedule DWD-4). The estimates are detailed below.

First Quarter 2022	3.90 %
Second Quarter 2022	4.20
Third Quarter 2022	4.40
Fourth Quarter 2022	4.60
First Quarter 2023	4.80
Second Quarter 2023	4.90
2023-2027	5.20
2028-2032	<u>5.70</u>
Average	<u>4.71 %</u>

(2) Both Non-Price Regulated Proxy Groups have an average LT issuer rating of Baa1. To reflect the Baa1 average rating of the Non-Price Regulated Proxy Groups, the prospective yield on Baa corporate bonds must be adjusted by 1/3 of the spread between A and Baa corporate bond yields as shown below:

	<u>A Corp. Bond Yield</u>	<u>Baa Corp. Bond Yield</u>	<u>Spread</u>
Feb-22	3.60 %	3.97 %	0.37 %
Jan-22	3.25	3.59	0.34
Dec-21	2.97	3.30	<u>0.33</u>
	Average yield spread		<u>0.35</u>
	1/3 of spread		<u>0.12</u>

(3) From page 7 of this Schedule.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Comparison of Long-Term Issuer Ratings for the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

Proxy Group of Thirty-Eight Non-Price Regulated Companies	Moody's Long-Term Issuer Rating March 2022		Standard & Poor's Long-Term Issuer Rating March 2022	
	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
Agilent Technologies	Baa2	9.0	BBB+	8.0
Abbott Labs.	A1	5.0	AA-	4.0
Assurant Inc.	Baa3	10.0	BBB	9.0
Smith (A.O.)	NA	--	NA	--
Air Products & Chem.	A2	6.0	A	6.0
Becton, Dickinson	Baa3	10.0	BBB	9.0
Brown-Forman 'B'	A1	5.0	A-	7.0
Black Knight, Inc.	Ba3	13.0	BB	12.0
Bristol-Myers Squibb	A2	6.0	A+	5.0
Broadridge Fin'l	Baa1	8.0	BBB+	8.0
CACI Int'l	NA	--	BB+	11.0
Cerner Corp.	NA	--	NA	--
Chemed Corp.	WR	--	NR	--
CSW Industrials	NA	--	NA	--
Exponent, Inc.	NA	--	NA	--
Ingredion Inc.	Baa1	8.0	BBB	9.0
J&J Snack Foods	NA	--	NA	--
Henry (Jack) & Assoc	NA	--	NA	--
McCormick & Co.	Baa2	9.0	BBB	9.0
Monster Beverage	NA	--	NA	--
Altria Group	A3	7.0	BBB	9.0
Merck & Co.	A1	5.0	A+	5.0
Motorola Solutions	Baa3	10.0	BBB-	10.0
NewMarket Corp.	Baa2	9.0	BBB+	8.0
Northrop Grumman	Baa1	8.0	BBB+	8.0
Old Dominion Freight	NA	--	NA	--
Oracle Corp.	Baa2	9.0	BBB+	8.0
Pfizer, Inc.	A2	6.0	A+	5.0
Progressive Corp.	A2	6.0	A	6.0
RLI Corp.	Baa2	9.0	BBB	9.0
Selective Ins. Group	Baa2	9.0	BBB	9.0
Sirius XM Holdings	NA	--	BB	12.0
Sensient Techn.	WR	--	NR	--
Thermo Fisher Sci.	A3	7.0	BBB+	8.0
Texas Instruments	Aa3	4.0	A+	5.0
VeriSign Inc.	Baa3	10.0	BBB	9.0
Watsco, Inc.	NA	--	NA	--
Western Union	Baa2	9.0	BBB	9.0
Average	Baa1	7.9	BBB+	8.0

Notes:

(1) From page 6 of Schedule DWD-4.

Source of Information:

Bloomberg Professional Services.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Comparison of Long-Term Issuer Ratings for the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

Proxy Group of Fourty Eight Non-Price Regulated Companies	Moody's Long-Term Issuer Rating March 2022		Standard & Poor's Long-Term Issuer Rating March 2022	
	Long-Term Issuer Rating	Numerical Weighting (1)	Long-Term Issuer Rating	Numerical Weighting (1)
Agilent Technologies	Baa2	9.0	BBB+	8.0
Abbott Labs.	A1	5.0	AA-	4.0
Analog Devices	A3	7.0	A-	7.0
Assurant Inc.	Baa3	10.0	BBB	9.0
Smith (A.O.)	NA	--	NA	--
Air Products & Chem.	A2	6.0	A	6.0
Brown-Forman 'B'	A1	5.0	A-	7.0
Ball Corp.	Ba1	11.0	BB+	11.0
Bristol-Myers Squibb	A2	6.0	A+	5.0
Broadridge Fin'l	Baa1	8.0	BBB+	8.0
Brady Corp.	NA	--	NA	--
CACI Int'l	NA	--	BB+	11.0
Cerner Corp.	NA	--	NA	--
Chemed Corp.	WR	--	NR	--
CSW Industrials	NA	--	NA	--
Danaher Corp.	Baa1	8.0	BBB+	8.0
Dolby Labs.	NA	--	NA	--
Exponent, Inc.	NA	--	NA	--
FactSet Research	Baa3	10.0	NA	--
GATX Corp.	Baa2	9.0	BBB	9.0
Gentex Corp.	NA	--	NA	--
Alphabet Inc.	Aa2	3.0	AA+	2.0
Ingredion Inc.	Baa1	8.0	BBB	9.0
Hunt (J.B.)	Baa1	8.0	BBB+	8.0
J&J Snack Foods	NA	--	NA	--
Henry (Jack) & Assoc	NA	--	NA	--
McCormick & Co.	Baa2	9.0	BBB	9.0
Monster Beverage	NA	--	NA	--
Motorola Solutions	Baa3	10.0	BBB-	10.0
Mettler-Toledo Int'l	WR	--	NR	--
Northrop Grumman	Baa1	8.0	BBB+	8.0
Old Dominion Freight	NA	--	NA	--
Pfizer, Inc.	A2	6.0	A+	5.0
Packaging Corp.	Baa2	9.0	BBB	9.0
Post Holdings	B2	15.0	B+	14.0
RLI Corp.	Baa2	9.0	BBB	9.0
Service Corp. Int'l	Ba3	13.0	BB+	11.0
Sherwin-Williams	Baa2	9.0	BBB	9.0
Selective Ins. Group	Baa2	9.0	BBB	9.0
Sirius XM Holdings	NA	--	BB	12.0
Sensient Techn.	WR	--	NR	--
Thermo Fisher Sci.	A3	7.0	BBB+	8.0
Texas Instruments	Aa3	4.0	A+	5.0
AMERCO	WR	--	NR	--
UniFirst Corp.	NA	--	NA	--
VeriSign Inc.	Baa3	10.0	BBB	9.0
Waters Corp.	NA	--	NA	--
Watsco, Inc.	NA	--	NA	--
Average	Baa1	8.3	BBB+	8.2

Notes:  
(1) From page 6 of Schedule DWD-4.

Source of Information:  
Bloomberg Professional Services.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Derivation of Equity Risk Premium Based on the Total Market Approach  
Using the Beta for  
Non-Price Regulated Companies of Comparable risk to the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

<u>Line No.</u>	<u>Equity Risk Premium Measure</u>	<u>Proxy Group of Thirty- Eight Non-Price Regulated Companies</u>	<u>Proxy Group of Fourty Eight Non-Price Regulated Companies</u>
1.	Ibbotson Equity Risk Premium (1)	5.92 %	5.92 %
2.	Regression on Ibbotson Risk Premium Data (2)	8.23	8.23
3.	Ibbotson Equity Risk Premium based on PRPM (3)	8.07	8.07
4.	Equity Risk Premium Based on <u>Value Line</u> Summary and Index (4)	7.44	7.44
5	Equity Risk Premium Based on <u>Value Line</u> S&P 500 Companies (5)	12.19	12.19
6.	Equity Risk Premium Based on Bloomberg S&P 500 Companies (6)	10.65	10.65
7.	Conclusion of Equity Risk Premium	8.75 %	8.75 %
8.	Adjusted Beta (7)	0.86	0.93
9.	Forecasted Equity Risk Premium	7.53 %	8.14 %

Notes:

- (1) From note 1 of page 9 of Schedule DWD-4.
- (2) From note 2 of page 9 of Schedule DWD-4.
- (3) From note 3 of page 9 of Schedule DWD-4.
- (4) From note 4 of page 9 of Schedule DWD-4.
- (5) From note 5 of page 9 of Schedule DWD-4.
- (6) From note 6 of page 9 of Schedule DWD-4.
- (7) Average of mean and median beta from pages 8 and 9 of this Schedule.

Sources of Information:

Stocks, Bonds, Bills, and Inflation - 2021 SBBI Yearbook, John Wiley & Sons, Inc.  
Value Line Summary and Index.  
Blue Chip Financial Forecasts, March 1, 2022 and December 1, 2021  
Bloomberg Professional Services.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Traditional CAPM and ECAPM Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Thirty-Eight Non-Price Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Agilent Technologies	0.90	0.98	0.94	9.84 %	2.89 %	12.14 %	12.28 %	12.21 %
Abbott Labs.	0.90	0.79	0.84	9.84	2.89	11.15	11.55	11.35
Assurant Inc.	0.95	0.93	0.94	9.84	2.89	12.14	12.28	12.21
Smith (A.O.)	0.85	1.06	0.95	9.84	2.89	12.24	12.36	12.30
Air Products & Chem.	0.90	0.90	0.90	9.84	2.89	11.74	11.99	11.87
Becton, Dickinson	0.75	0.52	0.64	9.84	2.89	9.19	10.07	9.63
Brown-Forman 'B'	0.90	0.96	0.93	9.84	2.89	12.04	12.21	12.12
Black Knight, Inc.	0.75	0.80	0.77	9.84	2.89	10.46	11.03	10.75
Bristol-Myers Squibb	0.85	0.64	0.74	9.84	2.89	10.17	10.81	10.49
Broadridge Fin'l	0.85	0.85	0.85	9.84	2.89	11.25	11.62	11.44
CACI Int'l	0.90	0.92	0.91	9.84	2.89	11.84	12.06	11.95
Cerner Corp.	0.90	0.75	0.82	9.84	2.89	10.96	11.40	11.18
Chemed Corp.	0.85	0.90	0.88	9.84	2.89	11.55	11.84	11.69
CSW Industrials	0.90	1.07	0.99	9.84	2.89	12.63	12.65	12.64
Exponent, Inc.	0.90	1.01	0.95	9.84	2.89	12.24	12.36	12.30
Ingredion Inc.	0.90	0.83	0.86	9.84	2.89	11.35	11.69	11.52
J&J Snack Foods	0.95	0.72	0.83	9.84	2.89	11.05	11.47	11.26
Henry (Jack) & Assoc	0.85	0.78	0.82	9.84	2.89	10.96	11.40	11.18
McCormick & Co.	0.80	0.59	0.70	9.84	2.89	9.78	10.51	10.14
Monster Beverage	0.85	1.00	0.92	9.84	2.89	11.94	12.14	12.04
Altria Group	0.95	0.81	0.88	9.84	2.89	11.55	11.84	11.69
Merck & Co.	0.80	0.57	0.68	9.84	2.89	9.58	10.37	9.97
Motorola Solutions	0.90	1.01	0.95	9.84	2.89	12.24	12.36	12.30
NewMarket Corp.	0.75	0.54	0.64	9.84	2.89	9.19	10.07	9.63
Northrop Grumman	0.85	0.73	0.79	9.84	2.89	10.66	11.18	10.92
Old Dominion Freight	0.95	1.07	1.01	9.84	2.89	12.83	12.80	12.81
Oracle Corp.	0.75	0.84	0.80	9.84	2.89	10.76	11.25	11.01
Pfizer, Inc.	0.80	0.59	0.69	9.84	2.89	9.68	10.44	10.06
Progressive Corp.	0.75	0.67	0.71	9.84	2.89	9.87	10.59	10.23
RLI Corp.	0.80	1.02	0.91	9.84	2.89	11.84	12.06	11.95
Selective Ins. Group	0.90	1.00	0.95	9.84	2.89	12.24	12.36	12.30
Sirius XM Holdings	0.95	1.01	0.98	9.84	2.89	12.53	12.58	12.55
Sensient Techn.	0.90	0.99	0.95	9.84	2.89	12.24	12.36	12.30
Thermo Fisher Sci.	0.85	0.76	0.80	9.84	2.89	10.76	11.25	11.01
Texas Instruments	0.85	0.92	0.89	9.84	2.89	11.64	11.92	11.78
VeriSign Inc.	0.90	0.78	0.84	9.84	2.89	11.15	11.55	11.35
Watsco, Inc.	0.85	0.78	0.82	9.84	2.89	10.96	11.40	11.18
Western Union	0.80	1.04	0.92	9.84	2.89	11.94	12.14	12.04
		Mean	<u>0.85</u>			<u>11.27 %</u>	<u>11.64 %</u>	<u>11.46 %</u>
		Median	<u>0.87</u>			<u>11.45 %</u>	<u>11.77 %</u>	<u>11.61 %</u>
		Average of Mean and Median	<u>0.86</u>			<u>11.36 %</u>	<u>11.71 %</u>	<u>11.54 %</u>

Notes:

- (1) From note 1 of page 2 of Schedule DWD-5.
- (2) From note 2 of page 2 of Schedule DWD-5.
- (3) Average of CAPM and ECAPM cost rates.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Traditional CAPM and ECAPM Results for the Proxy Group of Non-Price-Regulated Companies Comparable in Total Risk to the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
Proxy Group of Fourty Eight Non-Price Regulated Companies	Value Line Adjusted Beta	Bloomberg Beta	Average Beta	Market Risk Premium (1)	Risk-Free Rate (2)	Traditional CAPM Cost Rate	ECAPM Cost Rate	Indicated Common Equity Cost Rate (3)
Agilent Technologies	0.90	0.98	0.94	9.84 %	2.89 %	12.14 %	12.28 %	12.21 %
Abbott Labs.	0.90	0.79	0.84	9.84	2.89	11.15	11.55	11.35
Analog Devices	0.95	1.08	1.01	9.84	2.89	12.83	12.80	12.81
Assurant Inc.	0.95	0.93	0.94	9.84	2.89	12.14	12.28	12.21
Smith (A.O.)	0.85	1.06	0.95	9.84	2.89	12.24	12.36	12.30
Air Products & Chem.	0.90	0.90	0.90	9.84	2.89	11.74	11.99	11.87
Brown-Forman 'B'	0.90	0.96	0.93	9.84	2.89	12.04	12.21	12.12
Ball Corp.	0.95	1.02	0.98	9.84	2.89	12.53	12.58	12.55
Bristol-Myers Squibb	0.85	0.64	0.74	9.84	2.89	10.17	10.81	10.49
Broadridge Fin'l	0.85	0.85	0.85	9.84	2.89	11.25	11.62	11.44
Brady Corp.	1.00	1.17	1.08	9.84	2.89	13.51	13.32	13.42
CACI Int'l	0.90	0.92	0.91	9.84	2.89	11.84	12.06	11.95
Cerner Corp.	0.90	0.75	0.82	9.84	2.89	10.96	11.40	11.18
Chemed Corp.	0.85	0.90	0.88	9.84	2.89	11.55	11.84	11.69
CSW Industrials	0.90	1.07	0.99	9.84	2.89	12.63	12.65	12.64
Danaher Corp.	0.80	0.82	0.81	9.84	2.89	10.86	11.33	11.09
Dolby Labs.	0.95	0.88	0.91	9.84	2.89	11.84	12.06	11.95
Exponent, Inc.	0.90	1.01	0.95	9.84	2.89	12.24	12.36	12.30
FactSet Research	0.95	0.94	0.94	9.84	2.89	12.14	12.28	12.21
GATX Corp.	0.95	0.97	0.96	9.84	2.89	12.33	12.43	12.38
Gentex Corp.	0.95	1.09	1.02	9.84	2.89	12.92	12.87	12.90
Alphabet Inc.	0.90	0.98	0.94	9.84	2.89	12.14	12.28	12.21
Ingredion Inc.	0.90	0.83	0.86	9.84	2.89	11.35	11.69	11.52
Hunt (J.B.)	0.95	0.99	0.97	9.84	2.89	12.43	12.51	12.47
J&J Snack Foods	0.95	0.72	0.83	9.84	2.89	11.05	11.47	11.26
Henry (Jack) & Assoc	0.85	0.78	0.82	9.84	2.89	10.96	11.40	11.18
McCormick & Co.	0.80	0.59	0.70	9.84	2.89	9.78	10.51	10.14
Monster Beverage	0.85	1.00	0.92	9.84	2.89	11.94	12.14	12.04
Motorola Solutions	0.90	1.01	0.95	9.84	2.89	12.24	12.36	12.30
Mettler-Toledo Int'l	0.95	1.10	1.03	9.84	2.89	13.02	12.95	12.99
Northrop Grumman	0.85	0.73	0.79	9.84	2.89	10.66	11.18	10.92
Old Dominion Freight	0.95	1.07	1.01	9.84	2.89	12.83	12.80	12.81
Pfizer, Inc.	0.80	0.59	0.69	9.84	2.89	9.68	10.44	10.06
Packaging Corp.	0.95	0.82	0.89	9.84	2.89	11.64	11.92	11.78
Post Holdings	0.95	0.81	0.88	9.84	2.89	11.55	11.84	11.69
RLI Corp.	0.80	1.02	0.91	9.84	2.89	11.84	12.06	11.95
Service Corp. Int'l	0.95	1.03	0.99	9.84	2.89	12.63	12.65	12.64
Sherwin-Williams	0.90	0.98	0.94	9.84	2.89	12.14	12.28	12.21
Selective Ins. Group	0.90	1.00	0.95	9.84	2.89	12.24	12.36	12.30
Sirius XM Holdings	0.95	1.01	0.98	9.84	2.89	12.53	12.58	12.55
Sensient Techn.	0.90	0.99	0.95	9.84	2.89	12.24	12.36	12.30
Thermo Fisher Sci.	0.85	0.76	0.80	9.84	2.89	10.76	11.25	11.01
Texas Instruments	0.85	0.92	0.89	9.84	2.89	11.64	11.92	11.78
AMERCO	0.95	1.13	1.04	9.84	2.89	13.12	13.02	13.07
UniFirst Corp.	0.95	1.10	1.02	9.84	2.89	12.92	12.87	12.90
VeriSign Inc.	0.90	0.78	0.84	9.84	2.89	11.15	11.55	11.35
Waters Corp.	0.95	0.94	0.94	9.84	2.89	12.14	12.28	12.21
Watsco, Inc.	0.85	0.78	0.82	9.84	2.89	10.96	11.40	11.18
		Mean	0.91			11.85 %	12.07 %	11.96 %
		Median	0.94			12.09 %	12.25 %	12.17 %
		Average of Mean and Median	0.93			11.97 %	12.16 %	12.07 %

Notes:

- (1) From note 1 of page 2 of Schedule DWD-5.
- (2) From note 2 of page 2 of Schedule DWD-5.
- (3) Average of CAPM and ECAPM cost rates.



Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Derivation of Investment Risk Adjustment Based upon  
Ibbotson Associates' Size Premia for the Decile Portfolios of the NYSE/AMEX/NASDAQ

Line No.	[1] Market Capitalization on March 18, 2022 (1) (millions)	[2] Applicable Decile of the NYSE/AMEX/NASDAQ (2)	[3] Applicable Size Premium (3)	[4] Spread from Applicable Size Premium (4)
1.	a. Valley Energy, Inc.	10	5.01%	
	b. Citizens' Electric Company of Lewisburg, PA	10	5.01%	
2.	a. Proxy Group of Six Natural Gas Distribution Companies	332.7 x	0.75%	4.26%
	b. Proxy Group of Fourteen Electric Companies	1,744.1 x	0.49%	4.52%

Notes:

- (1) From page 2 of this Schedule.
- (2) Gleaned from Columns [B] and [C] on the bottom of this page. The appropriate decile (Column [A]) corresponds to the market capitalization of the proxy group, which is found in Column [1].
- (3) Corresponding risk premium to the decile is provided in Column [D] on the bottom of this page.
- (4) Line No. 1 Column [3] - Line No. 2 Column [3]. For example, the 4.26% in Column [4], Line No. 2 is derived as follows 4.26% = 5.01% - 0.75%.

\*From 2021 Duff & Phelps Cost of Capital Navigator

Valley Energy, Inc./Citizens' Electric Company of Lewisburg, PA  
Market Capitalization of Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA and the  
Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies

Company	[1] Exchange	[2] Common Stock Shares Outstanding at Fiscal Year End 2021 (millions)	[3] Book Value per Share at Fiscal Year End 2021 (1)	[4] Total Common Equity at Fiscal Year End 2021 (millions)	[5] Closing Stock Market Price on March 18, 2022	[6] Market-to-Book Ratio on March 18, 2022 (2)	[6] Market Capitalization on March 18, 2022 (millions)
Valley Energy, Inc.		NA	NA	10,426 (4)	NA		
Citizens' Electric Company of Lewisburg, PA		NA	NA	7,934 (4)	NA		
Based upon Proxy Group of Six Natural Gas Distribution Companies						195.9 (5)	\$ 20,425 (6)
Based upon Proxy Group of Fourteen Electric Companies						201.3 (5)	\$ 15,971 (6)
Proxy Group of Six Natural Gas Distribution Companies							
Atmos Energy Corporation	NYSE	132,420	\$ 59.711	\$ 7,906,889	\$ 112.730	188.8 %	\$ 14,927,679
New Jersey Resources Corporation	NYSE	95,710	17.040	1,630,862	43,460	255.0	4,159,542
NSource Inc.	NYSE	405,303	13.325	5,400,800	30,090	225.8	12,195,568
Northwest Natural Holding Company	NYSE	31,129	30.041	935,146	52,660	175.4	1,639,876
ONE Gas, Inc.	NYSE	53,633	43.807	2,349,532	82,500	188.3	4,424,740
Spire Inc.	NYSE	51,685	46.749	2,416,200	66,350	141.9	3,429,292
Average		128,313	\$ 35.112	\$ 3,439,905	\$ 64,635	195.9 %	\$ 6,796,116
Proxy Group of Fourteen Electric Companies							
Alliant Energy Corporation	NASDAQ	250,475	\$ 23.915	\$ 5,990,000	\$ 60.310	252.2 %	\$ 15,106,119
Ameren Corporation	NYSE	257,700	37.641	9,700,000	87,850	233.4	22,638,945
American Electric Power Company, Inc.	NASDAQ	504,212	44.492	22,433,200	94,070	211.4	47,431,224
Duke Energy Corporation	NYSE	769,000	61.553	47,334,000	105,050	170.7	80,783,450
Edison International	NYSE	380,378	36.572	13,911,000	64,650	176.8	24,591,447
Energy Corporation	NYSE	202,653	57.425	11,637,284	109,450	190.6	22,180,391
Energy, Inc.	NYSE	229,300	40.316	9,244,400	64,770	160.7	14,851,755
Eversource Energy	NYSE	344,403	42.982	14,599,844	83,430	196.8	28,733,559
IDACORP, Inc.	NYSE	50,516	52.823	2,668,436	110,250	208.7	5,569,442
NorthWestern Corporation	NASDAQ	57,606	40.616	2,339,713	57,340	141.2	3,303,142
OGE Energy Corporation	NYSE	200,500	20.231	4,056,300	38,410	189.9	7,701,205
Portland General Electric Company	NYSE	89,411	30.276	2,707,000	53,790	177.7	4,809,397
The Southern Company	NYSE	1,100,000	25.340	27,874,000	68,030	268.5	74,833,000
Xcel Energy, Inc.	NASDAQ	544,025	28.697	15,612,000	68,790	239.7	37,423,498
Average		355,727	\$ 38.735	\$ 13,579,084	\$ 76,156	201.3 %	\$ 27,854,041

NA= Not Available

- Notes: (1) Column 3 / Column 1.  
(2) Column 4 / Column 2.  
(3) Column 1 \* Column 4.  
(4) Requested rate base multiplied by the requested common equity ratio.  
(5) The market-to-book ratio of Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA on March 18, 2022 is assumed to be equal to the market-to-book ratio of Proxy Group of Six Natural Gas Distribution Companies and Proxy Group of Fourteen Electric Companies on March 18, 2022 as appropriate.

(6) Column [3] multiplied by Column [5].

Source of Information: 2021 Annual Forms 10K  
yahoo.finance.com.  
Bloomberg Professional Services

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket Nos. R-2022-_____</b>
	:	<b>R-2022-_____</b>
<b>Citizens' Electric Company of Lewisburg, PA and Valley Energy Company</b>	:	

**DIRECT TESTIMONY  
AND EXHIBIT  
OF  
MELISSA SULLIVAN**

**ON BEHALF OF  
CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA  
AND  
VALLEY ENERGY COMPANY**

**APRIL 29, 2022**

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Pennsylvania Public Utility Commission :  
:   
v. : Docket Nos. R-2022-\_\_\_\_\_  
: R-2022-\_\_\_\_\_  
Citizens' Electric Company of Lewisburg, PA :  
and Valley Energy Company :

**DIRECT TESTIMONY OF MELISSA SULLIVAN  
ON BEHALF OF CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA, AND  
VALLEY ENERGY COMPANY**

1 **Q. Please state your name and business address.**

2 A. My name is Melissa Sullivan and my business address is 33 Austin Street, 3<sup>rd</sup> Floor,  
3 Wellsboro, Pennsylvania.

4 **Q. By whom are you employed?**

5 A. I am employed by C&T Enterprises, Inc. ("C&T"), as the Chief Financial Officer ("CFO").

6 **Q. What are your duties in that capacity?**

7 A. As CFO, I have a number of duties, including: administering C&T's financial activities;  
8 reporting to C&T's Chief Executive Officers and Board of Directors regarding C&T's  
9 financial condition and making recommendations when required; providing accounting  
10 support to the affiliated companies; arranging long-term and short-term financing for  
11 C&T's affiliates; reviewing the operating companies' monthly financial statements and  
12 consolidating the financial statements quarterly for C&T's officers, directors and lending  
13 institutions review; assisting each accounting department with preliminary and year-end  
14 audits; reviewing and consolidating annual budgets and supplying the operating companies  
15 with projections for shared services and long-term and short-term debt service projections;

1 and attending at least one Board of Directors meeting annually for each operating company  
2 to review audited financials and provide an update on C&T. In addition, I have  
3 responsibility for the oversight of regulatory activities of C&T's affiliates: Citizens'  
4 Electric Company of Lewisburg, PA ("Citizens"); Wellsboro Electric Company  
5 ("Wellsboro"); and Valley Energy, Inc. ("Valley") (collectively, "Companies").  
6 Regulatory activities include annual Pennsylvania Public Utility Commission ("PUC" or  
7 "Commission") reporting, securities certificate filings, rate filings, Public Utility Realty  
8 Tax Act ("PURTA") filings, State Tax Adjustment Surcharge ("STAS") filings and  
9 Generation Supply Service Rate ("GSSR")/Gas Cost Rate ("GCR") filings and GSSR/GCR  
10 audits.

11 **Q. Please describe your employment and educational background.**

12 A. I have a Bachelor of Science degree in Business Administration and Industrial Relations  
13 (Human Resources) from Clarion University of Pennsylvania as well as a Master of  
14 Science degree in Business Leadership from Wilkes University. I began my career as  
15 Business Manager at Galeton Area School District in 2007 and remained there until 2013.  
16 In 2013, I accepted a position at Mansfield University of Pennsylvania as Human  
17 Resources Manager working directly with the Director of Human Resources and other top  
18 officers. In 2014, due to cutbacks at the University, I began serving as Director of Human  
19 Resources at SMC Powder Metallurgy, where I remained until taking the position as Chief  
20 Financial Officer at C&T Enterprises, Inc. in 2018.

21 **Q. What are your responsibilities with respect to this filing?**

22 A. I am responsible for coordinating the internal and external resources for this case, including  
23 legal, consulting, auditing, and company support.

1 **Q. What is the purpose of your testimony?**

2 A. The purpose of my testimony is to explain C&T's roles and procedures as the management  
3 services company, and to discuss the history and circumstances surrounding C&T's  
4 acquisition of the two operating companies that are seeking rate relief (Citizens' and  
5 Valley).

6 **Q. Did you provide information to other witnesses to prepare their testimony for this**  
7 **proceeding?**

8 A. Yes. Mr. Gorman, Ms. Levering, Ms. Stauder, and Mr. D'Ascendis rely upon certain  
9 information that I provided.

10 **HISTORY OF C&T AND ACQUISITIONS**

11 **Q. Please explain the relationship between C&T and the affiliates.**

12 A. C&T is a for-profit subsidiary of Claverack Rural Electric Cooperative ("Claverack") and  
13 Tri-Country Rural Electric Cooperative ("Tri-County"). C&T was formed in 1998 to  
14 facilitate the purchase of Citizens'. C&T now owns all of the stock of Citizens', Wellsboro  
15 and Valley. Charts showing the current corporate family structures are attached as  
16 Exhibit\_\_(MS-1). Also included in Exhibit\_\_(MS-1) is a description of each entity within  
17 the C&T family.

18 **Q. Could you please provide a brief history of each of the affiliate acquisitions by C&T?**

19 A. As noted above, C&T was originally formed by Tri-County and Claverack in 1998 to  
20 acquire Citizens'. On February 8, 1999, C&T completed a stock purchase acquiring  
21 approximately 99% of Citizens' stock. Subsequently, C&T acquired the remaining shares.  
22 When C&T purchased Citizens', Citizens' had very little debt. Our accountants advised us  
23 that we should place the debt for the purchase on C&T's books. As a result, Citizens' capital

1 structure was 100% equity and zero debt at closing. Citizens' capital structure as of  
2 December 31, 2021, was 16.1% debt and 83.9% equity.

3 On March 10, 1994, Tri-County formed Wilderness Area Utilities, Inc. ("Wilderness"), to  
4 acquire Wellsboro. On January 4, 1995, Wilderness completed a stock purchase acquiring  
5 100% of Wellsboro. On January 1, 2005, Tri-County transferred 100% ownership of its  
6 common stock in Wilderness to C&T. Wilderness then transferred 100% of its stock in  
7 Wellsboro to C&T and Wilderness was subsequently inactivated. When Wilderness  
8 purchased Wellsboro, Wellsboro had approximately \$2.3 million in existing debt and our  
9 accountants advised us not to place any of the acquisition debt on Wellsboro's books. The  
10 resulting capital structure was 65.2% debt and 34.8% equity. Wellsboro's current capital  
11 structure as of December 31, 2021, was 75% debt, 1.0% preferred stock and 24% common  
12 equity.

13 C&T formed Valley on October 17, 2000, to facilitate the purchase of the assets of Valley  
14 Cities Gas and Waverly Gas Service from NUI Corporation. On November 7, 2002, the  
15 transaction was completed and Valley assumed ownership of the assets and began  
16 operation. The assets were purchased for \$15 million. C&T's parent companies made an  
17 equity infusion of \$3 million and C&T assumed a long-term loan for \$12 million. Because  
18 it was an asset deal, C&T could place the entire acquisition debt (including \$899,000 of  
19 acquisition cost) in the amount of \$12.9 million on Valley's books, resulting in an initial  
20 capitalization of 81.1% debt and 18.9% equity. Valley's current capital structure as of  
21 December 31, 2021, was 46.5% debt and 53.5% common equity.

22 **Q. Do you have any comments on the capital structures that exist for each operating**  
23 **company?**

1 A. Yes. As the previous question demonstrates, C&T's three PUC-regulated subsidiaries have  
2 different capital structures. This occurred due to the historic financial practices of each  
3 particular subsidiary prior to C&T's acquisition, the amount of debt that has been incurred  
4 since acquisition to fund system improvements, and/or the deal structure for the  
5 acquisition. On a consolidated basis, C&T's capital structure as of December 31, 2021, is  
6 49.53% equity and 50.47% debt. Mr. D'Ascendis' testimony explains why the consolidated  
7 capital structure is an appropriate hypothetical capital structure to use for Citizens' and  
8 Valley in this case.

9 **C&T SERVICES PROVIDED TO CITIZENS', WELLSBORO, AND VALLEY**

10 **Q. Please describe the services that C&T provides the affiliates.**

11 A. In addition to being the parent holding company, C&T currently provides various  
12 management services to its affiliates. These services include shared services such as  
13 human resources and payroll; call center; information technology; safety oversight; and  
14 legal/regulatory. Finally, C&T functions as the formal employer of the non-union  
15 employees within the entire corporate family so our group can combine resources for  
16 insurance and other benefits.

17 **Q. Are there Affiliated Interest Agreements that address the services provided among**  
18 **the C&T entities?**

19 A. Yes. There is an Affiliated Interest Agreement ("AIA") that was executed by all of the  
20 C&T entities (including the cooperatives) in 2019. C&T has a more detailed Contract for  
21 Services with each subsidiary that implements the AIA, including the assignment of  
22 various employees to the subsidiary. The Contract for Services was approved for Citizens'  
23 at Docket No. G-2008-2020733 and for Valley at Docket No. G-2008-2020732. Citizens',



1 Valley and Wellsboro submitted proposed modifications to the AIA that are pending before  
2 the Commission at the following dockets: G-2022-3031755 (Citizens'), G-2022-3031753  
3 (Valley) and G-2022-3031756 (Wellsboro). I will discuss the Shared Services covered by  
4 the AIA in more detail below.

5  
6 **EMPLOYEE COSTS**

7 **Q. How does C&T determine the wages and benefits that are billed to each of the**  
8 **affiliates for employees that are assigned to each operating company?**

9 A. The operating companies each determine which individuals they want to have on their  
10 staffs; however, the official "employer" for all non-union employees is C&T. C&T handles  
11 the payroll and benefits for all of the non-union employees in the corporate family. The  
12 wages and benefits billed to Citizens', Wellsboro and Valley for the C&T employees are a  
13 direct assignment of the salaries and benefits provided to the particular employees by C&T.  
14 This applies only to non-union positions. Wellsboro's linemen are union employees that  
15 are employed directly by Wellsboro.

16 With the exception of the salaries for the CEOs of Claverack, Tri-County and the three  
17 subsidiaries, which are established by the respective Boards of Directors, C&T applies a  
18 uniform methodology to determine the salaries for each of its employees. This  
19 methodology is based on periodic surveys of the wages and salaries that are common in  
20 the utility industry and in our portions of Pennsylvania. Performance range and grade  
21 levels were established for each position. Grade levels were last updated in November,  
22 2011. Also, each of the operating companies undertakes a performance evaluation process.

1 Each year, a wage and salary survey analysis is conducted to determine the prevailing pay  
2 increases that are being implemented by employers in the labor market area and industry  
3 of the operating company. Along with the labor market analysis, an economic analysis is  
4 completed annually. After consideration of these two factors, C&T's Board of Directors,  
5 upon the recommendation of the co-chairs of the oversight committee, makes a  
6 determination of the base compensation adjustment to be applied to the pay rates of each  
7 employee. Performance ranges for each position are also typically reviewed and adjusted  
8 at this time.

9 Based on performance, an employee may be awarded a merit increase or bonus. The CEO  
10 of the individual operating companies approve merit increases and bonuses when  
11 appropriate for their employees.

12 **Q. Please provide the historic and projected base compensation adjustments for the**  
13 **C&T employees.**

14 A. Historically, the base compensation adjustment was 3.0% to 3.5%, as set by the Board of  
15 Directors each year. In December 2021, the C&T Board of Directors approved a 4.5%  
16 adjustment for 2022. This was consistent with reports of other employer decisions  
17 regarding annual wage increases, which we must consider to remain competitive in  
18 attracting and retaining our employees. For the FPFTY 2023, Citizens' and Valley have  
19 reflected an annual base compensation adjustment of 3.0% consistent with historic levels;  
20 however, the C&T Board of Directors will make the final determination in late 2022. This  
21 is conservative given the current levels of inflation.

22 **Q. How does C&T establish the benefits costs for the assigned employees.**

1 A. All full-time C&T employees are eligible for the benefits provided by C&T regardless of  
2 which operating company they are assigned. C&T negotiates with the providers for bulk  
3 benefit packages and premiums. We review our benefits options on an annual basis to  
4 ensure that we are providing our employees with options that are attractive and consistent  
5 with workforce expectations. We negotiate our health insurance prices each year to  
6 minimize cost increases. We were very pleased to have a 0% increase from 2021 to 2022;  
7 however, based on historic experience and continued inflationary pressures, we believe  
8 that we could see an increase of 10 % for our benefits costs from 2022 to 2023. To be  
9 conservative, both Companies have reflected just a 3% increase in benefit costs for 2023.  
10 We will continue to check with our brokers during the litigation of this case to get  
11 additional information regarding the 2023 increase. Normally, we finalize the contract in  
12 October or November for the following year.

13 **Q. Please explain the billing process that C&T undertakes for the assigned employees.**

14 A. When possible, C&T attempts to directly assign costs to the operating companies. If direct  
15 assignment is not administratively feasible, then we use another reasonable allocation  
16 methodology.

17 Wages are billed monthly based on weekly time sheets submitted by each operating  
18 company. The operating companies are billed for the direct and indirect labor expenses  
19 for their employees. All employee benefits are arranged for and paid by C&T. The  
20 premiums for medical, prescription, vision, dental, life insurance, and contributions to the  
21 pension fund are directly assigned to the companies based on which company the employee  
22 is assigned. All other benefits are allocated monthly based on percentage of payroll.

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**C&T SHARED SERVICES**

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**Q. What are the advantages of providing the C&T affiliates with the shared services?**

A. There are several advantages. First, the shared services are functions that any single entity within the C&T family may not be able to support on a stand-alone basis. For example, Citizens', Wellsboro, and Valley likely would not be able to justify having a person dedicated to human resources when viewed separately; however, when the needs of the entire C&T family are assessed, the six companies clearly can justify a person dedicated to human resources. The people filling our shared services functions have specialized knowledge on highly technical issues due, largely, to their ability to devote their entire attention to the particular topic.

Second, the personnel at C&T who provide this advice have the experience of working with three PUC-regulated entities and two non-PUC-regulated entities with a combined workforce in excess of 200 employees, more than 61,000 combined customers and combined 2021 revenues exceeding \$106.5 million. These shared resources enable C&T and its affiliates to implement more standardized solutions reflecting the "best practices" of all of the affiliated companies.

**Q. How has C&T historically billed the operating companies for the shared services?**

A. Salaries and benefits for shared services (except the Controller Department) are billed monthly based on a pro-rata comparison of the number of active meters and the revenues for each operating company during the previous year, as follows: 60% active meters and 40% revenue. Under the implementation plan approved by the Bureau of Audits in 2007, the expenses for the shared services and other C&T administrative expenses (other than salaries and benefits) are being allocated based on the same formula as above and billed

1 monthly. The Controller's Department is allocated one-third to each regulated operating  
2 company. No allocation is made to Tri-County or Claverack because none of the  
3 controller's activities are performed for them.

4 Call Center charges are billed monthly based on a flat charge plus a nominal amount for  
5 incoming and outgoing calls attributed to the particular operating company.

6 **Q. Please explain the changes to the shared services arrangement in the pending AIA**  
7 **revisions?**

8 A. On April 1, 2022, Citizens', Valley and Wellsboro filed proposed revisions to the AIA that  
9 would make the following changes:

- 10 1. Elimination of the "Key Accounts" function, which is now done by each individual  
11 member organization rather than through a centralized shared employee.
- 12 2. Modifications to the explanation of the "Information Technology" function to reflect  
13 the ongoing enhanced focus by this department on network infrastructure, third-party  
14 technology and cyber security.
- 15 3. Addition of a "Legal/Regulatory" function, which is a new service provided as of  
16 January 1, 2021. The "Legal/Regulatory" function provides advice and assistance on  
17 legal and regulatory issues, including contracts, rates, ratemaking, tariffs, regulatory  
18 proceedings, legislative proposals, regulatory business strategy and similar issues. A  
19 portion the time for this function is devoted to activities necessary to operate the C&T  
20 corporation, including assistance with human resources, board meetings and other  
21 corporate functions. The remaining time is spent on the Legal/Regulatory Shared  
22 Support Services functions as defined previously. This department also is available on  
23 an "as needed" basis for specific projects for Tri-County and Claverack.  
24

25 **Q. How do the companies allocate the costs for the Legal/Regulatory function?**

26 A. The agreement includes a cost allocation for the new Legal/Regulatory function that  
27 appropriately reflects the anticipated activities for this department. Specifically, 10% of  
28 the costs of this function are classified as relating to the operation of the C&T corporation.  
29 That 10% is allocated among the member organizations using the meters/revenue  
30 allocation that is used for the other C&T Shared Support Services (except

1 Treasury/Corporate Finance and Call Center). The remaining 90% of the Legal/Regulatory  
2 department costs are allocated 1/3, 1/3, 1/3 to Citizens', Valley and Wellsboro, like the  
3 allocation of the Treasury/Corporate Finance department costs. To appropriately account  
4 for any projects or activities done for Claverack and Tri-County, the Legal/Regulatory  
5 department tracks the hours on those projects. Claverack and Tri-County compensate C&T  
6 for the tracked Legal/Regulatory hours, and those payments are used to offset the costs  
7 allocated to Citizens', Valley and Wellsboro.

8 **FINANCING AND OTHER BENEFITS OF C&T STRUCTURE**

9 **Q. What are the other benefits of the C&T relationship?**

10 A. C&T's relationship with Tri-County and Claverack provides C&T access to reasonable cost  
11 financing with better terms. C&T offers this financing to the operating companies. Also,  
12 C&T has obtained reasonable premiums for Directors & Officers ("D&O"), liability, and  
13 property insurance for its affiliates through Federated Rural Electric Cooperative Insurance  
14 Company. The parent companies (C&T, Claverack and Tri-County) also provide parental  
15 guarantees when necessary for various contracts such as Citizens' and Wellsboro's  
16 wholesale electricity supply agreements, thus reducing the operating companies' need to  
17 access independent or third-party financing for these arrangements. Citizens', Wellsboro,  
18 and Valley each have access from C&T to a \$14 million short-term line of credit.

19 **Q. Please describe the financing arrangements that C&T has in place for Citizens',**  
20 **Wellsboro, and Valley.**

21 A. Due to its affiliation with Tri-County and Claverack, C&T is able to borrow funds for  
22 Citizens', Wellsboro's and Valley's use from the National Cooperative Services  
23 Corporation ("NCSC"). NCSC is a lending institution formed by the Cooperative Finance

1 Corporation to address the financing needs of for-profit affiliates of rural electric  
2 cooperatives. C&T borrows funds from NCSC on behalf of Citizens', Wellsboro, and  
3 Valley. Currently, C&T has approximately \$30 million in outstanding debt with NCSC on  
4 behalf of its subsidiaries. Citizens', Wellsboro, and Valley guarantee this debt with their  
5 assets and stock.

6 **Q. What requirements or covenants does NCSC place on C&T?**

7 A. In addition to the standard Affirmative and Negative Covenants, NCSC requires C&T to  
8 meet certain financial ratios, such as an annual Debt Service Coverage ("DSC") ratio on a  
9 consolidated basis of not less than 1.15, and an Equity Ratio. NCSC also requires quarterly  
10 financial reporting on a consolidated basis and an audited annual report for each subsidiary.  
11 By January 31 of each calendar year each subsidiary must provide an updated five-year  
12 financial plan.

13 Other covenants include that C&T shall not declare or make any dividend payments  
14 without the written consent of NCSC. Without the prior written consent of NCSC, C&T  
15 shall not cause or permit any subsidiary to: (i) consolidate with, merge, or sell all or  
16 substantially all of its business or assets, to another entity or person, or (ii) acquire the  
17 assets of another business or entity. Finally, C&T must notify NCSC of any changes in its  
18 management agreements with any of its affiliates and shall submit copies of such revised  
19 agreements to NCSC.

20 **Q. Will the requested rate relief be viewed positively by C&T's lender?**

21 A. Yes. As discussed above, NCSC actively monitors the financial condition of C&T and its  
22 subsidiaries. Improving Citizens' and Valley's financial conditions through the requested  
23 rate relief will contribute to C&T's ability to continue meeting its loan covenants and also

1 influence the amount of financing that NCSC may be willing to provide C&T and its  
2 subsidiaries in the future for various purposes. Finally, by ensuring that the Companies'  
3 rates provide the Companies with the opportunity to recover their costs and to earn a fair  
4 return on investments, the Companies may be able to fund some capital improvements  
5 without incurring additional debt, and to obtain a more favorable cost on debt they do incur.

6 **Q. Does this complete your Direct Testimony?**

7 A. Yes.



**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

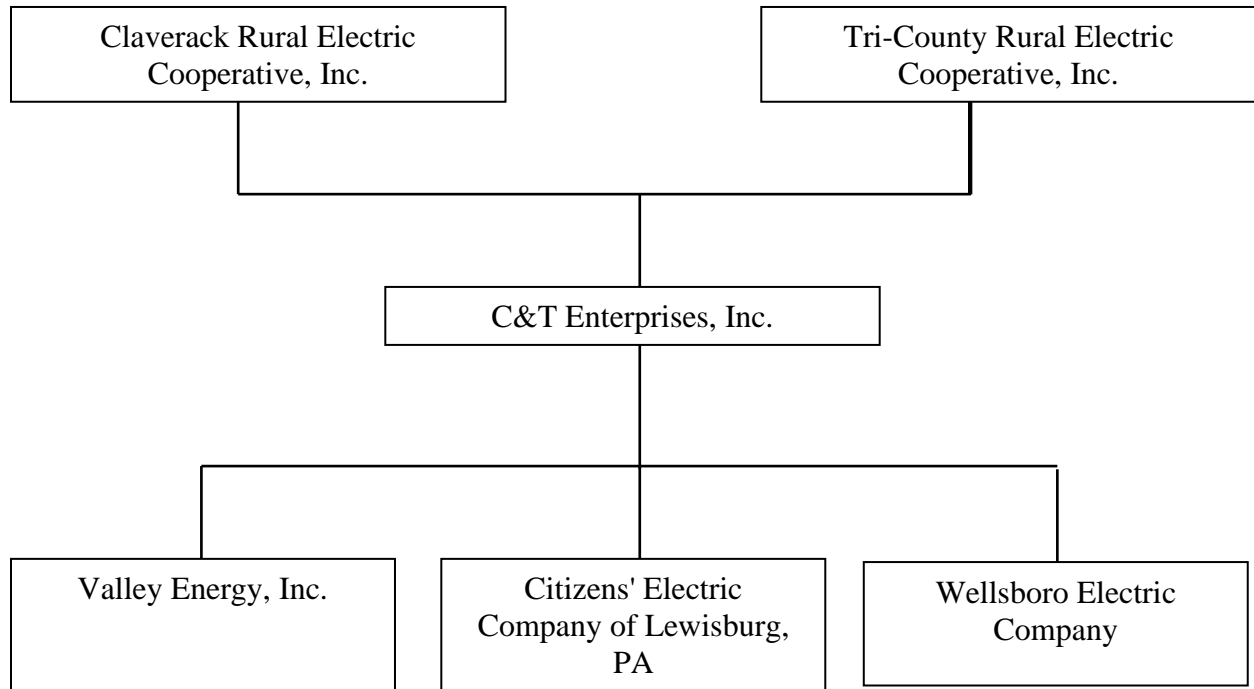
<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket Nos. R-2022-_____</b>
	:	<b>R-2022-_____</b>
<b>Citizens' Electric Company of Lewisburg, PA and Valley Energy Company</b>	:	

**EXHIBIT  
OF  
MELISSA SULLIVAN**

**ON BEHALF OF  
CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA,  
AND  
VALLEY ENERGY COMPANY**

**APRIL 29, 2022**

**C&T ENTERPRISES, INC.  
CORPORATE CHART**



**DESCRIPTION OF  
C&T ENTERPRISES CORPORATE CHART**

**Citizens' Electric Company of Lewisburg, PA**

Citizens' is an investor-owned, for-profit electric utility incorporated under the laws of Pennsylvania. Citizens' serves approximately 7,100 customers in and around Lewisburg, Pennsylvania, in a 55 square mile territory in Union County. Approximately eighty percent (80%) of Citizens' customers are residential, with the remaining twenty percent (20%) of customers being commercial and small industrial users. Citizens' is subject to regulation by the Pennsylvania Public Utility Commission.

**Claverack Rural Electric Cooperative, Inc.**

Claverack is a rural electric cooperative incorporated under the Pennsylvania Electric Cooperative Corporation Act of 1937 providing service to approximately 18,900 members in an eight-county region in Northeastern Pennsylvania. It's service area is approximately 1,820 square miles in area. Claverack's service area includes all or parts of the following counties: Bradford, Lackawanna, Luzerne, Lycoming, Sullivan, Susquehanna, Tioga, and Wyoming. Approximately ninety-four percent (94%) of Claverack's customers are residential or seasonal customers. The remaining six percent (6%) are commercial or small industrial customers. The Rural Utility Service, Office of the United States Department of Agriculture, provides oversight of Claverack's operations.

**C&T Enterprises, Inc.**

C&T is a Pennsylvania business corporation that functions as a public utility holding company, which owns all of the stock of Valley Energy, WECO, and Citizens'. C&T acts as a management services company for the Group Members.

**Tri-County Rural Electric Cooperative, Inc.**

Tri-County is a member-owned rural electric cooperative incorporated under the Pennsylvania Electric Cooperative Corporation Act of 1937. Tri-County provides electric service to approximately 19,500 members in the following counties in Northcentral, Pennsylvania: Bradford, Cameron, Clinton, Lycoming, McKeon, Potter, and Tioga. Tri-County's service territory is approximately 4,484 square miles in area. The Rural Utility Service, Office of the United States Department of Agriculture, provides administrative oversight of Tri-County's operations.

**Valley Energy, Inc. – Pennsylvania Division**

VE-PA is a for-profit, investor-owned public utility incorporated under the laws of Pennsylvania. VE-PA is engaged in the business of supplying and distributing natural gas to approximately 6,400 residential customers and 930 commercial and industrial customers. VE-PA's service territory is in and around Sayre, Pennsylvania, in Northcentral Pennsylvania. VE-PA is subject to regulation by the Pennsylvania Public Utility Commission.

**Valley Energy, Inc. – New York Division**

VE-NY is a for-profit, investor-owned public utility incorporated under the laws of Pennsylvania. VE-NY is engaged in the business of supplying and distributing natural gas to approximately 1,800 residential and 220 commercial and industrial customers. VE-NY's service area is in and around Waverly, New York. VE-NY is subject to regulation by the New York Public Service Commission.

**Wellsboro Electric Company**

WECO is a for-profit, investor-owned utility rendering electric utility service in the Borough of Wellsboro, Pennsylvania and surrounding communities. WECO serves approximately 6,400 customers, over eighty percent (80%) of which are residential and twenty percent (20%) of which are commercial or industrial. WECO is regulated by the Pennsylvania Public Utility Commission.

**BEFORE  
THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission** :  
: **Docket No. R-2022-\_\_\_\_\_**  
**v.** :  
: **Valley Energy, Inc.** :  
:

**DIRECT TESTIMONY**  
  
**OF**  
  
**EDWARD E. ROGERS**

**ON BEHALF OF  
VALLEY ENERGY, INC.**

**APRIL 29, 2022**

**BEFORE  
THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission**       :  
  :  
                                  **v.**                               :  
  :  
**Valley Energy, Inc.**                                   :  
  :

**Docket No. R-2022-\_\_\_\_\_**

**DIRECT TESTIMONY OF EDWARD E. ROGERS  
ON BEHALF OF VALLEY ENERGY, INC.**

1   **Q.    Please state your name and business address.**

2   A.    My name is Edward E. Rogers. My business address is 523 Keystone Avenue,  
3            Sayre, Pennsylvania.

4   **Q.    By whom are you employed and what position do you hold with Valley Energy,  
5            Inc.?**

6   A.    I am employed by C&T Enterprises, Inc., and assigned to Valley Energy, Inc.  
7            ("Valley" or "Company"), as the President and Chief Executive Officer.

8   **Q.    What are your duties in that capacity?**

9   A.    My duties include the management of all administrative, engineering, operations,  
10            safety, compliance, and customer service activities of Valley.

11 **Q.    Please describe your educational and professional background.**

12 A.    I attended Marquette University as a computational mathematics major from 1980  
13            to 1982 and enrolled in Pennsylvania State University's Mechanical Engineering  
14            Technology Program from 1989 to 1991. I worked for various construction firms  
15            prior to joining Valley.

1 **Q. Please describe the purpose of your testimony.**

2 A. My testimony provides a general overview of Valley, its operations, service  
3 territory, and customer base. I will discuss the major factors that necessitate the  
4 rate relief that we are requesting. I also discuss proposed changes to the tariff.

5 **Q. Please provide a brief corporate history of Valley.**

6 A. Valley was formed by C&T Enterprises in 2000 to purchase from NUI Corporation  
7 ("NUI") the assets of Valley Cities Gas Service and Waverly Gas Service.  
8 Ownership and operational control of the assets was transferred to Valley on  
9 November 7, 2002.

10 In 1944, Pennsylvania & Southern Gas Company formed Valley Cities by acquiring  
11 the following companies: The Athens and Sayre Gas Company (originally formed  
12 in 1899); The Athens, Sayre and South Waverly Heat and Power Company  
13 (originally formed in 1899); and The South Waverly Gas Light Company  
14 (originally formed in 1885). Pennsylvania & Southern added the Towanda portion  
15 of the service territory from Towanda Gas and Water Company (originally formed  
16 in 1859) in 1945. Finally, The Waverly Gas Light Company (1883) was acquired  
17 in 1959. Pennsylvania & Southern operated the combined assets (known as Valley  
18 Cities Gas in Pennsylvania and Waverly Gas in New York) through 1994. In 1994,  
19 NUI acquired Pennsylvania & Southern.

20 **Q. Please describe the current service territory for Valley.**

21 A. Valley serves twelve communities in Bradford County, Pennsylvania, and Tioga  
22 and Chemung Counties in New York. Valley supplies natural gas to more than  
23 7,349 residential, commercial and industrial customers in Pennsylvania. Our



1 Pennsylvania natural gas distribution system includes over 170 miles of mains. We  
2 operate the Pennsylvania and New York systems as an integrated system, with all  
3 natural gas injected into the system at points in Pennsylvania.

4 **Q. In what year was the last filing to adjust the base rates for customers on the**  
5 **Valley system?**

6 A. The last base rate proceeding adjusting rates for Valley customers was in 2019, with  
7 new rates taking effect on May 1, 2020. In that case, we were granted an annual  
8 revenue increase of \$469,097, based on a Return on Equity of 9.73%.

9 **Q. Why is Valley requesting to increase its rates?**

10 A. The primary reason that we are submitting this filing is to ensure the continued  
11 financial viability of the company. We must continue to earn an appropriate return  
12 on our rate base investments and cover our expenses. The Order approving our last  
13 rate case assumed that our rate base at the end of that Fully-Projected Future Test  
14 Year ("FPFTY") ending December 31, 2020, would be approximately \$17.159  
15 million. As of December 31, 2021, our actual rate base is \$19.067 million, which  
16 is almost \$2 million higher than assumed in setting the currently-effective rates. By  
17 the end of the FPFTY for this filing, ending December 31, 2023, we project that  
18 our rate base will be \$19.761 million. Mr. Chapman will address the past and future  
19 enhancements to utility plant in more detail.

20 In addition, our costs of operating and maintaining the gas system are increasing.  
21 Our labor expense is increasing in line with the general wage increases that the  
22 country is experiencing as we emerge from the pandemic. We also are experiencing

1 other material and supply increases for everything from office supplies to vehicle  
2 fuels. Ms. Levering will address our current and future expenses in her testimony.  
3 As the analysis conducted by Mr. Gorman indicates, Valley's pro forma return on  
4 rate base for historic year 2021 was 6.73%. *See* Exhibit\_\_(HSG-1), Schedule C1.  
5 However, without a rate increase, the Company projects a return on rate base of  
6 just 3.59% for 2023. *Id.* Using an appropriate market-reflective return on equity  
7 ("ROE") as Mr. D'Ascendis recommends in his testimony would establish rates that  
8 provide Valley with the opportunity to earn a return on rate base of 7.96% and result  
9 in a proposed rate increase of \$1.25 million.

10 **Q. Is Valley seeking the full \$1.25 million rate increase to which it is entitled?**

11 . No. We are limiting the rate increase request to \$1.0 million for several reasons.  
12 First, the Commission applies a much more extensive set of filing requirements for  
13 rate increases that exceed \$1.0 million. Although we believe that our filing contains  
14 the essential information that would be presented if our increase request exceeded  
15 \$1.0 million, it would be costly and burdensome on Valley to prepare, present and  
16 defend all of the additional information that would be required. We believe that all  
17 parties' time and resources are better focused on reviewing our request and  
18 establishing new rates as soon as possible to offset the expense increases that we  
19 are currently facing and expect to face, as we explain in our filing.

20 In addition, Valley recognizes that our customers are facing increases in many of  
21 the products and services that they buy. We are willing to voluntarily limit our rate  
22 increase at this time to mitigate the impact on our customers.

1 **Q. How did the COVID-19 pandemic impact Valley's revenues, expenses and**  
2 **operations?**

3 A. When the COVID-19 pandemic emerged in early 2020, Valley was just concluding  
4 the litigation of its prior rate case and nearing the end of the termination moratorium  
5 for the Winter of 2019-2020. Valley was impacted by the same closure and  
6 pandemic mitigation strategies that many businesses experienced. We closed our  
7 office to the public, established remote payment sites, installed protective  
8 equipment for our employees, increased cleaning and sanitation, purchased IT  
9 equipment, and implemented masking and social distancing requirements. For our  
10 operations, maintenance and customer service employees, we pursued various  
11 strategies to limit the potential spread of the virus. To mitigate potential exposure  
12 incidents, staggered work shifts were established where feasible, some employees  
13 worked remotely, and others were placed on paid standby.

14 **Q. Did Valley adhere to the Commission's extension of the termination**  
15 **moratorium due to COVID-19?**

16 A. Yes. Under normal circumstances, we would start preparing our collection  
17 activities as the winter termination moratorium ends as of April 1<sup>st</sup>. Consistent with  
18 the Commission's extension of the moratorium, we delayed those activities until  
19 November 2020. We were able to get some of our residential customers and most  
20 of our commercial customers onto payment arrangements or otherwise current with  
21 their charges before the Winter 2020-2021 termination moratorium began on  
22 December 1, 2020.

1           When the Winter 2020-2021 termination moratorium ended, Valley worked with  
2           its payment-troubled accounts to establish appropriate payment arrangements. We  
3           were also able to connect our residential consumers with approximately \$255,944  
4           in assistance through Low-Income Home Energy Assistance Program ("LIHEAP"),  
5           the Emergency Rental Assistance Program ("ERAP"), and other local agencies,  
6           such as the Salvation Army and the Bridge. Our customer service representatives  
7           worked extremely hard to get our payment-troubled customers onto arrangements  
8           so they could avoid termination.

9   **Q.    Is Valley seeking recovery for any COVID-19 expenses in this proceeding?**

10  A.    Yes. First, we have identified certain unbudgeted IT and cleaning expense items  
11       that we incurred in 2020 and 2021 that were extraordinary and not included in our  
12       2019 rate case. Second, we experienced extraordinary carrying costs on  
13       uncollectible expenses in 2020 and 2021 when we were not able to initiate  
14       collection activities due to the Commission's extension of the termination  
15       moratorium.

16

17  **Q.    Has Valley been pursuing a systemic improvement of the distribution system**  
18       **over the last ten years?**

19  A.    Yes. Valley has continued to make significant improvements to the distribution  
20       system to enhance service, safety and reliability. For example, Valley has replaced  
21       all bare steel pipe on its system. The Company has also performed upgrades to its  
22       City Gate facility; upgraded transmission mains; added, replaced or upgraded 14  
23       district regulator stations; installed over 24 miles of new or replacement plastic gas

1 mains; installed 2,132 new or replacement services; relocated over 100 meters from  
2 indoors to outdoors; added remote pressure monitoring devices; installed additional  
3 over-pressure protection equipment on low-pressure systems and added or replaced  
4 32 large commercial metering facilities.

5 Valley's prudent management and attention to its distribution system has resulted  
6 in an excellent safety record. We also have one of the lowest lost and unaccounted  
7 for gas percentages in Pennsylvania, which saves our ratepayers money on their  
8 supply service.

9 **Q. Does Valley anticipate any major capital projects to enhance its building and**  
10 **facilities?**

11 A. Yes. Valley has continued to invest in its building and facilities with planned  
12 upgrades to its main office in 2022.

13

14 **SMALL UTILITY ISSUES AND COMPANY PERFORMANCE**

15 **Q. Mr. Rogers, is it accurate to categorize Valley as a small utility?**

16 A. Yes. I already mentioned that Valley serves less than 7,500 customers in  
17 Pennsylvania. Similarly, the market capitalization analysis in the Direct Testimony  
18 of Company witness Dylan D'Ascendis of ScottMadden, Inc., shows Valley to be  
19 a small public utility relative to his comparison group.

20 **Q. As a small privately held utility, does Valley face any unique financial**  
21 **challenges?**

22 A. Yes, it does. As Mr. D'Ascendis explains, small utilities face increased financial  
23 and business risks.

1 **Q. Mr. Rogers, can you provide an example of a risk faced by smaller utilities**  
2 **that larger utilities may not face?**

3 A. Yes. As discussed by Mr. D'Ascendis, smaller utilities are at greater risk to  
4 experience adverse financial impacts from a single customer leaving the system  
5 (either by plant closure or by switching to alternate fuel). Currently, Valley's three  
6 largest customers represent nearly 30% of distribution revenues per year. In  
7 addition, our five largest customers represent approximately 32% of our annual  
8 distribution margins, and three of the five have dual-fuel capabilities.

9 **Q. Is Valley at risk to lose other customers?**

10 A. Yes. In addition to the largest customers, many of our other customers have access  
11 to potential alternatives to natural gas service, including propane, fuel oil, wood  
12 and electric.

13 **Q. How do you think the Commission should address the additional risks faced**  
14 **by small utilities?**

15 A. I believe the Commission should address this risk through an appropriate overall  
16 return on distribution rates, including a size adjustment. Additionally, the  
17 Commission should adopt the recommendations of Mr. D'Ascendis for a market-  
18 reflective return on equity and a management performance adjustment.

19 **Q. What are the bases for the performance adjustments proposed by**  
20 **Mr. D'Ascendis?**

21 A. Mr. D'Ascendis' testimony cites to Section 523 of the Public Utility Code, 52 Pa.  
22 Code § 523, which sets forth the Commission's guidelines for performance  
23 adjustments. I am advised by counsel that the Public Utility Code identifies several

1 criteria to be considered in assessing the performance of a fixed utility for purposes  
2 of a performance factor adjustment, including consideration of any relevant and  
3 material evidence of efficiency, effectiveness, and adequacy of service. The  
4 Commission should consider Valley's operations as supportive of the proposed  
5 performance adjustment, including the following.

- 6 • **Main replacements.** Valley has replaced all cast iron, bare-steel and the  
7 majority of vintage plastic mains without assessing a Distribution System  
8 Improvement Charge on its customers.
- 9 • **Low customer complaints.** Valley has also demonstrated exceptional  
10 customer service, as evidenced by the Company's record of no formal  
11 complaints and just one informal complaint regarding our infrastructure,  
12 which was resolved quickly and to the full satisfaction of the complaining  
13 party, filed with the PUC over the prior 3 years.
- 14 • **Emergency Response.** For the period 2019 – 2021, Valley has responded  
15 to 99.89% of emergency calls in 60 minutes or less.
- 16 • **Favorable customer feedback.** Over the same three-year period from  
17 2019-2021, over 96% of customers surveyed as part of Valley's annual  
18 Customer Contact Survey responded that they are "Very Satisfied" with  
19 Valley's overall quality of service. The "Very Satisfied" election is the  
20 highest ranking on the survey, which is conducted by Valley, consistent  
21 using a form developed by the Commission's Bureau of Consumer Services,  
22 and provided annually to the Commission pursuant to 52 Pa. Code § 62.35.

- 1           • **Technology adoption: Smarthub use.** Valley has adopted Smarthub as an  
2           option for customers to manage bills electronically, analyze consumption,  
3           and conduct other business with the Company using their smartphone or  
4           other device. To date, 2,312 of Valley’s customers use Smarthub and  
5           benefit from the convenience of this resource. This is an increase of almost  
6           600 users since our last rate case in 2019.
- 7           • **PIPE Grant for East Athens Expansion.** To reduce customer costs for a  
8           significant main extension project, the Company applied for grant funding  
9           from the Pennsylvania Department of Community and Economic  
10          Development's ("DCED") Pipeline Investment Program ("PIPE"). DCED  
11          approved the application and awarded an \$850,000 PIPE grant for the  
12          project. The PUC Chairman noted the impact of this grant in a public  
13          statement, commending the Company on its "practical commitment to  
14          extending natural gas service" and specifically stating "I am pleased to see  
15          Valley utilize PIPE grant funds."
- 16          • **Low Lost and Unaccounted For Gas.** Valley's maintenance and  
17          replacement of gas infrastructure initiatives have resulted in an extremely  
18          low lost and unaccounted for percentage of 0.33%. There are two primary  
19          causes of lost gas—(1) leaks on mains and equipment that leak gas into the  
20          atmosphere.; and (2) meter inaccuracies. As explained by Mr. Chapman,  
21          Valley proactively addresses both issues. At a \$4 per Mcf gas cost, each  
22          0.5% improvement in the lost and unaccounted for percentage saves our  
23          supplier of last resort customers \$17,774 per year.



- 1 • **Customer Service Representative Efforts to Assist Payment-Troubled**  
2 **Accounts during COVID-19.** As the Commission is aware, the COVID-  
3 19 pandemic disrupted many customers, adversely impacting some  
4 customers' ability to pay their utility bills. Our Customer Service  
5 Representatives undertook extensive efforts to connect payment-troubled  
6 customers with resources to assist with their utility charges. This helped  
7 our customers to avoid service disconnections that may have otherwise  
8 occurred if their arrearages were not paid.

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**VALLEY STAFFING**

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**Q. You previously mentioned that you are a C&T employee assigned to Valley.**

**Can you please describe the employment structure at Valley?**

A. C&T is both a holding company and a management services firm. Based on Valley's indications of need and preferred person to serve in each position, C&T provides the employees to fill all of Valley's employee positions. This includes management, administrative, customer support, and operational employees. In addition, C&T provides support services for activities that may not justify Valley employing its own full or part-time employee. Melissa Sullivan, Chief Financial Officer of C&T, will provide additional details regarding these shared services and how Valley compensates C&T for access to the services.

In total, Valley has 29 employees. This represents a significant increase from 2010, when Valley had 24 employees. In the current year and the FPFTY, Valley anticipates adding the following new position: Training and Compliance Coordinator. Ms. Levering will discuss how the additional position is reflected in the filing.

**Q. Why is Valley expanding its work-force?**

A. The Training and Compliance Coordinator position is needed to centralize training and operator qualification programs, enhance quality assurance measures, and perform internal operations auditing due to the increased complexity of regulatory requirements and training documentation.

**TARIFF CHANGES**

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**Q. Has Valley proposed any other changes that you wish to discuss?**

A. Yes. Valley is proposing a number of changes to its tariff.

**Q. Is Valley modifying its Rate IS-Interruptible Service tariff?**

A. Yes. We are adding language that will enable the Company to confirm the Rate IS customers' curtailment arrangements. Specifically, we will undergo an annual confirmation process. We also are clarifying the penalties that will apply if a Rate IS customer does not respond to the annual process or an actual curtailment request.

**Q. Are you proposing to modify the penalties under Rate T-Transportation Service for failing to adhere to notifications and usage limitations during critical situations?**

A. Yes. We are proposing to increase the penalty from \$3.00 per ccf to \$5.00 per ccf on pages 58 and 59 of our Tariff to be consistent with the penalty under Rate IS.

**Q. Please explain the change to the "availability" section in Rate R-Residential and Rate C-Commercial.**

A. Valley is providing a more comprehensive explanation that residential service is available for the primary gas line in a residential dwelling and for certain multi-family dwelling situations.

**Q. Has Valley proposed to clarify when "seasonal" service is provided under Rates R and C?**

A. Yes. We do not believe it is fair for an account to avoid paying the monthly customer charge simply by requesting to be disconnected during certain months of the year, only to be reconnected when gas is desired again by the same customer.

1 We are proposing changes to Rates R and C to address this potential gaming  
2 behavior. We are willing to turn the meter off for safety purposes in those  
3 situations, but we will require the customer to pay the monthly customer charge for  
4 the intervening months if the reconnection is requested within 12 months of the  
5 disconnection.

6 **Q. Please discuss the new gas quality provisions in the retail tariff and the  
7 supplier tariff.**

8 A. We are adding language in Rule 9 to the retail tariff and in the Company's supplier  
9 tariff to clarify the gas quality specifications and acceptable standards for the  
10 receipt of natural gas by interstate pipeline(s) or other receipt points other than an  
11 interstate pipeline. These gas quality requirements provide a uniform and  
12 consistent approach to establishing composition equivalency and interchangeability  
13 with potential Renewable Natural Gas (RNG) and pipeline supplies.

14 **Q. Why is the Company modifying its fee for disconnection and reconnection fee  
15 in Rules 7C and 8(2).**

16 The Company has not increased this fee since 2007, therefore an update is  
17 necessary to reflect the reconnection cost in today's dollars and the costs that the  
18 Company incurs to do these activities. The proposed fee is based on a study of  
19 previous disconnections and reconnections to determine the overall cost, which is  
20 comprised of labor, labor overheads, and transportation costs.

21 **Q. Please describe the change to the Company's disconnection and reconnection  
22 fee.**

**Valley Statement No. 4**

1           The Company proposes to increase the fee from \$25 to \$60 for disconnection and  
2           reconnections during normal business hours and increase the fee from \$30 to \$70  
3           for disconnections and reconnections that are completed after hours.

4   **Q.   Does this complete your testimony?**

5   A.   Yes

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission**

**v.**

**Valley, Energy, Inc.**

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**Docket No. R-2022-\_\_\_\_\_**

**DIRECT TESTIMONY  
AND EXHIBITS  
OF  
JAMIE LEVERING**

**ON BEHALF OF  
VALLEY ENERGY, INC.**

**APRIL 29, 2022**

BEFORE

THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission :  
v. : Docket No. R-2022-\_\_\_\_\_  
Valley Energy, Inc. :

DIRECT TESTIMONY OF JAMIE LEVERING  
ON BEHALF OF VALLEY ENERGY, INC.

1 Q. Please state your name and business address.

2 A. My name is Jamie Levering and my business address is 523 Keystone Avenue,  
3 Sayre, Pennsylvania.

4 Q. By whom are you employed and in what capacity do you serve at Valley  
5 Energy, Inc. ("Valley")?

6 A. I am employed by C&T Enterprises, Inc. ("C&T"), and assigned to Valley as the  
7 Vice President of Finance and Treasurer.

8 Q. Please describe your duties in this capacity.

9 A. My duties are to organize, direct, and coordinate the financial department. I provide  
10 administrative direction for billing for gas service to consumers. I also advise the  
11 President & CEO of the financial aspects of the company, manage the financial  
12 record keeping, coordinate the budget, coordinate with computer services, and  
13 coordinate with consumer services. I am also responsible for coordinating credit  
14 discussions with Valley's wholesale natural gas suppliers.

1 **Q. Please describe your educational and employment background.**

2 A. I attended Mansfield University from 2005 to 2008 and graduated with a BS in  
3 Business Management. I worked for Guthrie Healthcare Systems and Evangelical  
4 Community Hospital prior to joining Valley Energy.

5 **Q. What were your responsibilities with respect to this filing?**

6 A. As the Vice President of Finance and Treasurer, I was responsible for coordinating  
7 with our auditors and Company witness Mr. Gorman to ensure that historic and test  
8 year expenses, taxes, revenues, sales and rate base were appropriately reflected. I  
9 was responsible for ensuring that the expense, plant and sales information provided  
10 to Mr. Gorman that is reflected in Exhibit \_\_ (HSG-1) was correct.

11 **Q. Have you previously testified before the Pennsylvania Public Utility  
12 Commission?**

13 A. Yes. I provided Direct, Rebuttal and Oral Rejoinder testimony in Valley's 2019  
14 rate case at Docket No. R-2019-3008209.

15 **VALLEY FINANCIAL INFORMATION**

16 **Q. Are Valley and its records regularly audited by a licensed accounting firm?**

17 A. Yes. The accounting firm of BKD LLP audits the Company's financial records.  
18 They prepare an annual report of the Company operations and assist Company  
19 personnel on specific Pennsylvania Public Utility Commission ("PUC" or  
20 "Commission") filings, such as our State Tax Adjustment Surcharge filings. They  
21 also prepare our tax returns. A copy of our Annual Report for the year ended  
22 December 31, 2021, is attached as Exhibit\_\_(JL-1). A copy of our most recent  
23 STAS filing is attached as Exhibit\_\_(JL-2).



1 **Q. How did the Company develop the financial data provided to HSG Group?**

2 A. The Historic Test Year ("HTY") data is based on actual experiences during the  
3 HTY ending December 31, 2021. The Future Test Year ("FTY") data is based  
4 largely on our operating budget for the year ending December 31, 2022, with  
5 updates for any known and measurable changes that we have identified between  
6 the date that budget was approved by our Board of Directors and April 2022 when  
7 we are submitting this filing. The Fully-Projected Future Test Year ("FPFTY")  
8 data is based on our projections for the year ending December 31, 2023.

9 **Q. Please discuss the major expense categories for Valley.**

10 A. Valley's expenses are budgeted and tracked in the following categories: (1) Labor  
11 & Overheads, including C&T Shared Services; (2) Transportation; (3) Materials &  
12 Supplies (4) Administrative & General; (5) Outside Services; (6) Uncollectibles;  
13 (7) Depreciation & Amortization; (8) Regulatory Fees; and (9) Taxes. Valley also  
14 reports by account, corresponding to the FERC chart of accounts. Each Operating  
15 and Maintenance account includes (as appropriate) costs for Labor, Overhead,  
16 Material and Transportation. The information provided to Mr. Gorman is by FERC  
17 account, with subaccounts for Labor, Overhead, Material and Transportation.

18 **Q. What is the largest expense category?**

19 A. Labor & Overheads constitute the largest expense item. This category includes our  
20 employees and the various benefits that we provide (health, dental, vision,  
21 retirement, etc.). To develop the projected 2022 costs for Labor & Overheads, we  
22 examined the wages and benefits for our employees. In doing so, we made several  
23 adjustments to the prior year to reflect retirements and added employees during

1 2022, including the new training coordinator position discussed by Mr. Rogers. As  
2 explained by Ms. Sullivan, each year our overall wage increase contains two  
3 components: (1) a base compensation adjustment set by the C&T Board of  
4 Directors; and (2) merit adjustments for individual qualifying employees as  
5 determined by Valley's CEO. For 2022, our overall wage expense increase was  
6 3.31%. Our overall expense increase was lower than the base compensation  
7 adjustment percentage approved by the C&T Board of Directors because of the  
8 employee retirements that will occur in 2022. For 2023, we increased the wages  
9 by 5.7%. We developed those projected cost increases based on historic experience  
10 and our assessment of likely economic conditions for the remainder of 2022 and  
11 for 2023. We did not make any further adjustments to our employee complement  
12 for 2023. Ms. Sullivan's testimony discusses the 2022 and 2023 projections for the  
13 C&T Shared Services and for our insurance benefits.

14 **Q. Please discuss the Transportation projections.**

15 A. This item reflects the costs of our vehicles and other equipment, including fuel and  
16 maintenance expenses. For 2022 and 2023, we are projecting vehicle and  
17 equipment purchases. In 2022 we will be purchasing an equipment trailer for  
18 \$9,000 and two new vehicles for \$71,000. In 2023 we project to purchase four new  
19 vehicles for \$185,000. These purchases are replacements of vehicles based on our  
20 Fleet Utilization Analysis. The vehicles will be obtained via capital leases. We  
21 have also increased this expense in 2022 and 2023 to reflect the higher gasoline  
22 prices that we anticipate will remain for the near future.

1 **Q. Is Valley projecting increased Materials and Supplies costs?**

2 A. Yes. The various materials and supplies for our business have increased consistent  
3 with general inflation of many items. Each expense account was reviewed and  
4 projected known increases were included. Mr. Chapman will address the increases  
5 in our system materials.

6 **Q. Please discuss the costs incurred by Valley for Administrative and General.**

7 A. The items in this category include the general costs to heat, furnish and maintain  
8 our office space and warehouses. In 2022 and 2023, we are anticipating a few  
9 projects in our buildings, which Mr. Rogers will discuss.

10 **Q. What costs are included in Outside Services?**

11 A. Outside Services includes the charges by various vendors for their service. This  
12 includes attorneys, accountants, auditors, consultants, cleaning vendors and  
13 contractors that we hire for capital projects. Most of the construction contractor  
14 expense would be capitalized rather than expensed.

15 **Q. Could costs in the other categories that you addressed above be capitalized  
16 rather than being expensed?**

17 A. Yes. As part of this filing, we have made assumptions regarding the portion of  
18 Labor & Overheads, Transportation, Materials & Supplies and Administrative &  
19 General that will be capitalized rather than expensed. We have done this based on  
20 both historic experience and projected 2022 and 2023 capital projects.

21 **Q. How did Valley develop the Uncollectibles expenses?**

22 A. Uncollectibles expense is based on historic experience.

1 **Q. Please discuss the Depreciation and Amortization expense reflected in the**  
2 **filing.**

3 A. Depreciation expense is developed by Mr. Gorman, Exhibit\_\_(HSG-1), Schedule  
4 C3 and explained in his testimony.

5 **Q. Finally, what Regulatory Fees and Taxes are reflected in the filing?**

6 A. These are developed by Mr. Gorman, Exhibit\_\_(HSG-1), Schedule C1-3, and  
7 explained in his testimony.

8 **Q. Do you have any information regarding Valley's actual expenses during the**  
9 **FTY?**

10 A. Yes. Attached as Exhibit\_\_(JL-3) is a table showing the operating expenses for the  
11 HTY as contained in the filing in Schedule C1-1 of Exhibit\_\_(HSG-1), as well as  
12 actual expenses booked as of March 31, 2022. Although there is some variation  
13 within particular categories and expenses, on the whole, our actual year 2022  
14 expenses are tracking as we would expect at this point of the FTY. We will  
15 continue to update this Exhibit during the FTY to confirm that our projected  
16 expenses are accurate.

17 **Q. Is it unusual for Valley's expenses by Account to vary from quarter to quarter**  
18 **during the year?**

19 A. No. For many of our Accounts, our actual expenses vary quarter-to-quarter based  
20 on the activities that our workers and contractors are doing. Over the entire year,  
21 there can be some overall variation if more of our work is done on projects that are  
22 expensed rather than projects that are capitalized. Mr. Chapman will explain how  
23 the types of projects and focus of our workers may vary during the various quarters

1 of the year. The expenses can also vary due to unexpected weather or other  
2 circumstances.

3 **Q. Did the Company assist Mr. Gorman in the compilation of the plant account**  
4 **information included in Valley Exhibit HSG-1?**

5 A. Yes. We provided detailed information to Mr. Gorman regarding the original cost,  
6 book depreciation reserve, depreciation rates and depreciation expenses on the  
7 Company's books. With the exception of minor prospective changes to  
8 depreciation assumptions that were justified in Valley's 2010 base rate filing, the  
9 original cost and depreciation reserve reflect the amounts on NUI's books when  
10 C&T acquired the system on November 7, 2002, without any reflection of an  
11 "acquisition premium" or adjustment. We also provided data regarding the  
12 additions to utility plant that we anticipate will occur through 2023. Mr. Gorman's  
13 Exhibit\_\_(HSG-1) Schedule C3 shows the net increase in the original cost of our  
14 utility plant in service from the HTY to the FPFTY.

15 **Q. Do you have any information regarding Valley's actual plant during the FTY?**

16 A. Yes. Attached as Exhibit\_\_(JL-4) is a table showing the original cost of our plant  
17 in service for the HTY as contained in the filing, as well as the costs booked as of  
18 March 31, 2022. Although there is some variation within particular categories,  
19 again, on the whole our actual year 2022 capital additions are consistent with our  
20 expectations for this time of the year. As previously discussed and addressed in  
21 more detail by Mr. Chapman, some variation can be expected because we undertake  
22 capital improvement projects primarily during the warmer months of the year

1 (when the ground has thawed). We also will update this Exhibit during the course  
2 of this proceeding.

3 **Q. Does this conclude your testimony at this time?**

4 A. Yes.

5

6

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8 .

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket No. R-2022-_____</b>
	:	
<b>Valley, Energy, Inc.</b>	:	

**EXHIBITS**  
**OF**  
**JAMIE LEVERING**

**ON BEHALF OF**  
**VALLEY ENERGY, INC.**

**APRIL 29, 2022**

# **Valley Energy, Inc.**

Independent Auditor's Report and Financial Statements

December 31, 2021 and 2020



# Valley Energy, Inc.

## December 31, 2021 and 2020

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## Independent Auditor's Report

Board of Directors  
Valley Energy, Inc.  
Sayre, Pennsylvania

### ***Opinion***

We have audited the financial statements of Valley Energy, Inc. (the Company), which comprise the balance sheets as of December 31, 2021 and 2020, and the related statements of income, stockholder's equity, and cash flows for the years then ended, and the related notes to the financial statements.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

### ***Basis for Opinion***

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the "Auditor's Responsibilities for the Audit of the Financial Statements" section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### ***Responsibilities of Management for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that these financial statements are available to be issued.

### ***Auditor's Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional

Board of Directors  
Valley Energy, Inc.  
Page 2

omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

### ***Supplementary Information***

Our audits were conducted for the purpose of forming an opinion on the financial statements as a whole. The accompanying supplementary information listed in the table of contents is presented for purposes of additional analysis and is not a required part of the financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects, in relation to the financial statements as a whole.

*BKD, LLP*

Decatur, Illinois  
March 10, 2022

**Valley Energy, Inc.**  
**Balance Sheets**  
**December 31, 2021 and 2020**

**Assets**

	<u>2021</u>	<u>2020</u>
<b>Utility Plant, at Cost</b>		
Gas plant in service	\$ 49,203,724	\$ 46,842,789
Accumulated depreciation	<u>(24,272,668)</u>	<u>(22,924,604)</u>
	24,931,056	23,918,185
Construction work in progress	<u>17,941</u>	<u>19,826</u>
Net utility plant	<u>24,948,997</u>	<u>23,938,011</u>
<b>Other Assets</b>		
RS plan prepayment	94,000	188,032
Regulatory asset	<u>131,232</u>	<u>229,821</u>
Total other assets	<u>225,232</u>	<u>417,853</u>
<b>Current Assets</b>		
Cash and cash equivalents	1,052,864	635,649
Accounts receivable		
Customers, less allowance for uncollectible accounts;		
2021 - \$126,646, 2020 - \$180,220	973,471	834,899
Unbilled revenues	308,255	363,258
Other	931,792	184,146
Advances, affiliates	100,398	100,398
Inventories		
Natural gas	1,104,108	708,472
Materials and supplies	197,784	186,529
Prepaid taxes, net	65,686	153,541
Prepaid expenses and other	367,705	110,047
Under recovered gas costs	<u>477,618</u>	<u>-</u>
Total current assets	<u>5,579,681</u>	<u>3,276,939</u>
Total assets	<u>\$ 30,753,910</u>	<u>\$ 27,632,803</u>

## Liabilities and Stockholder's Equity

	<u>2021</u>	<u>2020</u>
<b>Stockholder's Equity</b>		
Common stock, no par or stated value, 1,000 shares authorized, issued and outstanding	\$ 3,000,000	\$ 3,000,000
Paid-in capital	94,885	94,885
Retained earnings	<u>11,267,032</u>	<u>10,643,171</u>
Total stockholder's equity	<u>14,361,917</u>	<u>13,738,056</u>
<b>Long-Term Debt</b>	<u>6,378,238</u>	<u>7,291,486</u>
<b>Capital Lease Obligations</b>	<u>48,405</u>	<u>78,303</u>
<b>Current Liabilities</b>		
Line of credit	2,500,000	-
Current maturities of long-term debt	803,708	718,592
Current maturities of capital lease obligations	50,829	45,844
Accounts payable	144,659	304,736
Due for purchased gas	1,067,022	397,837
Accrued expenses	514,459	655,647
Customer deposits	484,186	446,548
Over collected gas costs	<u>-</u>	<u>1,758</u>
Total current liabilities	<u>5,564,863</u>	<u>2,570,962</u>
<b>Deferred Charges and Other Liabilities</b>		
Deferred income taxes	3,206,500	2,747,300
Accrued postretirement cost	759,431	701,447
Regulatory liability	<u>434,556</u>	<u>505,249</u>
	<u>4,400,487</u>	<u>3,953,996</u>
Total liabilities and stockholder's equity	<u>\$ 30,753,910</u>	<u>\$ 27,632,803</u>

**Valley Energy, Inc.**  
**Statements of Income**  
**Years Ended December 31, 2021 and 2020**

	<u>2021</u>	<u>2020</u>
<b>Operating Revenues</b>	\$ 11,406,641	\$ 9,801,792
<b>Operating Expenses</b>		
Gas	4,576,857	3,228,029
Distribution expenses		
Operation	1,348,409	1,359,744
Maintenance	499,530	953,965
Customer accounts	753,193	748,685
General and administrative	1,236,944	1,206,161
Depreciation	1,498,024	1,419,900
Taxes, other than income	145,070	155,493
	<u>10,058,027</u>	<u>9,071,977</u>
<b>Operating Income Before Interest and Other Expenses</b>	<u>1,348,614</u>	<u>729,815</u>
<b>Other Income (Expenses)</b>		
Interest expense	(380,740)	(302,787)
Other income	184,261	154,785
Other expense	(8,380)	(10,842)
	<u>(204,859)</u>	<u>(158,844)</u>
<b>Income Before Income Taxes</b>	1,143,755	570,971
<b>Provision for Income Taxes</b>	<u>465,494</u>	<u>88,546</u>
<b>Net Income</b>	<u>\$ 678,261</u>	<u>\$ 482,425</u>

**Valley Energy, Inc.**  
**Statements of Stockholder's Equity**  
**Years Ended December 31, 2021 and 2020**

	<b>Common Stock</b>	<b>Paid-in Capital</b>	<b>Retained Earnings</b>	<b>Total</b>
<b>Balance, January 1, 2020</b>	\$ 3,000,000	\$ 94,885	\$ 10,322,846	\$ 13,417,731
Dividends	-	-	(162,100)	(162,100)
Net income	-	-	482,425	482,425
<b>Balance, December 31, 2020</b>	3,000,000	94,885	10,643,171	13,738,056
Dividends	-	-	(54,400)	(54,400)
Net income	-	-	678,261	678,261
<b>Balance, December 31, 2021</b>	<u>\$ 3,000,000</u>	<u>\$ 94,885</u>	<u>\$ 11,267,032</u>	<u>\$ 14,361,917</u>

**Valley Energy, Inc.**  
**Statements of Cash Flows**  
**Years Ended December 31, 2021 and 2020**

	<u>2021</u>	<u>2020</u>
<b>Operating Activities</b>		
Net income	\$ 678,261	\$ 482,425
Items not requiring (providing) cash		
Depreciation and amortization	1,596,613	1,488,397
Deferred income taxes	459,200	(57,700)
Provision for losses on accounts receivable	(53,574)	65,780
Gain on sales of utility plant	(31,587)	-
Changes in		
Accounts receivable	(777,641)	(286,607)
Inventories	(406,891)	127,574
Prepaid expenses and other	(257,658)	(20,143)
RS plan prepayment	94,032	94,032
Prepaid taxes, net	87,855	(37,967)
Regulatory assets/liabilities	(70,693)	102,824
Over/under recovered gas costs	(479,376)	(23,984)
Accounts payable and accrued expenses	(278,309)	113,591
Due for purchased gas	669,185	362
Customer deposits	37,638	(42,603)
Accrued postretirement costs	35,028	(213,426)
	<u>1,302,083</u>	<u>1,792,555</u>
<b>Investing Activities</b>		
Additions to utility plant, net	(2,480,342)	(1,830,578)
Proceeds from sales of utility plant	31,587	-
	<u>(2,448,755)</u>	<u>(1,830,578)</u>
<b>Financing Activities</b>		
Principal payments under capital lease obligations	(53,581)	(58,574)
Borrowings under line-of-credit agreement	3,100,000	-
Repayments under line-of-credit agreement	(600,000)	-
Proceeds from issuance of long-term debt	-	525,000
Principal payments on long-term debt	(828,132)	(767,237)
Dividends paid	(54,400)	(162,100)
	<u>1,563,887</u>	<u>(462,911)</u>
<b>Increase (Decrease) in Cash and Cash Equivalents</b>	417,215	(500,934)
<b>Cash, Beginning of Year</b>	635,649	1,136,583
<b>Cash and Cash Equivalents, End of Year</b>	<u>\$ 1,052,864</u>	<u>\$ 635,649</u>
<b>Supplemental Cash Flows Information</b>		
Interest paid	<u>\$ 380,740</u>	<u>\$ 302,787</u>
Capital lease obligation incurred for utility plant	<u>\$ 28,668</u>	<u>\$ -</u>



# Valley Energy, Inc.

## Notes to Financial Statements

### December 31, 2021 and 2020

#### Note 1: Nature of Operations and Summary of Significant Accounting Policies

##### ***Nature of Operations***

Valley Energy, Inc. (“Company”), a wholly-owned subsidiary of C & T Enterprises, Inc. (“C&T”), is a regulated public utility distributing natural gas to customers in the Sayre, Pennsylvania area, including Athens, Towanda, Wysox and Waverly, New York. The Company’s operations in Pennsylvania are regulated by the Pennsylvania Public Utility Commission (“PUC”) and its operations in New York are regulated by the State of New York Public Service Commission (“NYPSC”). The Company extends unsecured credit to its customers.

##### ***Basis of Accounting***

The Company maintains its accounting records in accordance with the Federal Energy Regulatory Commission’s (“FERC”) uniform system of accounts for public utilities as modified and adopted by the PUC and NYPSC. The accompanying financial statements and the related notes have been prepared on the basis of U.S. generally accepted accounting principles (“GAAP”).

In accordance with FERC guidelines, the Company also maintains its accounts in accordance with Codification Topic 980, *Regulated Operations*. On a regular basis, the Company reevaluates its application of accounting for regulated operations. The Company has determined that regulatory assets and liabilities should continue to be accounted for under provisions of Codification Topic 980 because it is reasonable to assume that the Company will continue to be able to charge and collect its cost of service-based rates.

##### ***Purchased Gas***

The Company obtains all of its natural gas from an agreement with an energy broker that expires March 2022. The agreement will automatically renew for a subsequent five-year term period. Gas costs can be different than what is recovered in base charges, resulting in over or under collected gas costs.

##### ***Use of Estimates***

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Significant estimates include the allowance for accounts receivable, unbilled revenues and utility plant.

**Valley Energy, Inc.**  
**Notes to Financial Statements**  
**December 31, 2021 and 2020**

***Cash and Cash Equivalents***

The Company considers all liquid investments with original maturities of three months or less to be cash equivalents. At December 31, 2021 and 2020, cash equivalents consisted of a daily investment fund account. At December 31, 2021, the Company's cash accounts exceeded federally insured limits by approximately \$251,000.

***Accounts Receivable***

Accounts receivable include billed and unbilled amounts for services provided to customers for which the Company has an unconditional right to payment. The Company provides an allowance for doubtful accounts, which is based upon a review of outstanding receivables, historical collection information and existing economic conditions.

Accounts receivable are ordinarily due 21 days after the issuance of the invoice. Accounts that are unpaid after the due date bear interest at 1.25 percent per month. Accounts past due more than 30 days are considered delinquent. Interest continues to accrue on delinquent accounts until the account is no longer classified as delinquent. Delinquent receivables are written off based on individual credit evaluation and specific circumstances of the customer.

During the years ended December 31, 2021 and 2020, bad debt expense related to doubtful accounts receivable, where collectability is not reasonably assured, was approximately \$17,000 and \$84,000, respectively.

***Inventories***

Inventories consist of natural gas and materials and supplies and are stated at the lower of cost or net realizable value. Cost is determined based on average cost.

***Utility Plant***

Utility plant is carried at cost. Additions to utility plant and replacements of property are capitalized at cost. Retirements of utility plant or replacements are removed from utility plant accounts at cost and these costs plus cost of removal less salvage are charged to accumulated depreciation. Depreciation of utility plant is provided over the estimated useful life of the respective assets on a straight line basis, as follows:

<b>Utility Plant</b>	<b>Years</b>
Gas plant acquisition	8 - 41
Transmission plant	25 - 50
Distribution plant	33 - 50
General plant	10 - 15

Maintenance and repairs of property and replacements are charged to expense.

**Valley Energy, Inc.**  
**Notes to Financial Statements**  
**December 31, 2021 and 2020**

***Impairment of Long-Lived Assets***

The Company reviews the carrying amount of an asset for possible impairment whenever events or changes in circumstances indicate that such amounts may not be recoverable. If a long-lived asset is tested for recoverability and the undiscounted estimated future cash flows expected to result from the use and eventual disposition of the asset is less than the carrying amount of the asset, the asset cost is adjusted to fair value and an impairment loss is recognized as the amount by which the carrying amount of a long-lived asset exceeds its fair value. No asset impairment was recognized during the years ended December 31, 2021 and 2020.

***Income Taxes***

The Company is included in the consolidated federal and State of New York income tax returns filed by C&T. The Company files its own tax return in Pennsylvania. The Company's federal income tax expense is computed using the separate return method for intercorporate tax allocation.

The Company accounts for income taxes in accordance with income tax accounting guidance (ASC 740, *Income Taxes*). The income tax accounting guidance results in two components of income tax expense: current and deferred. Current income tax expense reflects taxes to be paid or refunded for the current period by applying the provisions of the enacted tax law to the taxable income or excess of deductions over revenues. The Company determines deferred income taxes using the liability (or balance sheet) method. Under this method, the net deferred tax asset or liability is based on the tax effects of the differences between the book and tax bases of assets and liabilities, and enacted changes in tax rates and laws are recognized in the period in which they occur. Deferred income tax expense results from changes in deferred tax assets and liabilities between periods. Deferred tax assets are reduced by a valuation allowance if, based on the weight of evidence available, it is more likely than not that some portion or all of a deferred tax asset will not be realized.

Tax positions are recognized if it is more likely than not, based on the technical merits, that the tax position will be realized or sustained upon examination. The term more likely than not means a likelihood of more than 50 percent; the terms examined and upon examination also include resolution of the related appeals or litigation processes, if any. A tax position that meets the more likely than not recognition threshold is initially and subsequently measured as the largest amount of tax benefit that has a greater than 50 percent likelihood of being realized upon settlement with a taxing authority that has full knowledge of all relevant information. The determination of whether or not a tax position has met the more likely than not recognition threshold considers the facts, circumstances and information available at the reporting date and is subject to the management's judgment.

The Company recognizes interest and penalties on income taxes as a component of income tax expense.

# Valley Energy, Inc.

## Notes to Financial Statements

### December 31, 2021 and 2020

#### ***Regulatory Matters***

The Company is subject to the authoritative accounting guidance applicable to rate-regulated organizations. The Pennsylvania PUC and NYPSC approve natural gas rates for each state respectively. Certain items collected in rates have been recorded as regulatory liabilities. These amounts will be recognized as revenue in future periods as costs for which the amounts have been collected are incurred, or when authorized by the Pennsylvania PUC and NYPSC. Certain expenses have been recorded as regulatory assets, and management believes these amounts are probable of future rate recovery.

#### ***Revenue Recognition***

Revenue from the sale of natural gas is recognized as gas is delivered to customers. Revenues also include amounts receivable from or payable to customers through gas recovery clauses, which are adjusted annually.

Costs that are recoverable or refundable in future periods through the gas recovery clauses are deferred. Costs that are refundable or recoverable in future periods through gas cost recovery rates are subject to audit and approval by the appropriate regulatory body. Changes to the related asset or liability amounts that result from these audits are recorded as a charge to current operations.

The amount and timing of revenue recognition varies based on the nature of the goods or services provided and the terms and conditions of the customer contract. Unbilled revenues of \$308,255 and \$363,258 at December 31, 2021 and 2020, respectively, represent amounts delivered through December 31 and not billed to the customers until the following month. Customer deposits of \$484,186 and \$446,548 at December 31, 2021 and 2020, respectively, represent amounts received in advance of services provided. See Note 11 for additional information about the Company's revenue.

For significant financing components, the Company elected a practical expedient, which allows an entity to recognize the promised amount of consideration without adjusting for the time value of money if the contract has a duration of one year or less, or if the reason the contract extended beyond one year is because the timing of delivery of the product is at the customer's discretion. As the Company's contracts are typically less than one year in length and do not have significant financing components, the Company does not present revenue on a present value basis.

#### ***Taxes Collected from Customers and Remitted to Governmental Authorities***

Sales and gross receipts taxes collected from customers and remitted to governmental authorities are presented in the accompanying statements of income on a net basis.

**Valley Energy, Inc.**  
**Notes to Financial Statements**  
**December 31, 2021 and 2020**

**Note 2: Utility Plant**

Utility plant consists of the following at December 31:

	<b>2021</b>	<b>2020</b>
Gas plant in service		
Gas plant acquisition	\$ 4,621,318	\$ 4,621,318
Distribution plant	33,301,915	31,842,456
General plant	6,146,010	5,308,761
Transmission plant	5,134,481	5,070,254
	49,203,724	46,842,789
Construction work-in-progress	17,941	19,826
	49,221,665	46,862,615
Accumulated depreciation	(24,272,668)	(22,924,604)
	\$ 24,948,997	\$ 23,938,011

**Note 3: Regulatory Asset and Liability**

Regulatory liability of \$434,556 and \$505,249 at December 31, 2021 and 2020, respectively, consists of other postretirement benefits that resulted from unrecognized gains. The Company expects to recover the deferred other postretirement benefits consistent with the anticipated income recognition of other postretirement income.

The Company also has a regulatory asset of \$131,232 and \$229,821 as of December 31, 2021 and 2020, respectively, relating to a rate case. The amortization period began in May 2020 and runs for three years through April 2023, with \$98,589 and \$68,497 of amortization expense recognized in 2021 and 2020, respectively.

**Note 4: Line of Credit**

The Company has a \$7,000,000 revolving line of credit with C&T payable on demand. At December 31, 2021, there was \$2,500,000 borrowed against this line. At December 31, 2020, there were no borrowings against this line. Interest varies based on the CoBank quoted variable rate. The rate was 2.41 and 2.45 percent on December 31, 2021 and 2020, respectively, and is payable monthly.

**Valley Energy, Inc.**  
**Notes to Financial Statements**  
**December 31, 2021 and 2020**

**Note 5: Long-Term Debt and Capital Lease Obligations**

	<b>2021</b>	<b>2020</b>
Notes payable, C&T, quarterly principal and interest payments ranging from \$15,096 to \$50,284, interest ranging from 4.025% to 6.350%; collateralized by substantially all Company assets; due March 2032	\$ 6,425,956	\$ 6,908,396
Note payable, C&T, quarterly principal and interest payments of \$29,835, interest at 2.95%; collateralized by substantially all Company assets, due June 2022	59,016	174,479
Note payable, C&T, quarterly principal and interest payments ranging from \$1,469 to \$29,326, interest ranging from 2.41% to 3.22%; collateralized by substantially all Company assets; due December 2024; available borrowings up to \$1,125,000, with \$0 and \$525,000 borrowed during 2021 and 2020, respectively	696,974	927,203
Capital lease obligations for transportation equipment, requiring monthly principal and interest payments ranging from \$212 to \$1,140; collateralized by leased equipment; payments due in varying amounts through April 2024	99,234	124,147
	7,281,180	8,134,225
Less current maturities	854,537	764,436
	\$ 6,426,643	\$ 7,369,789

**Valley Energy, Inc.**  
**Notes to Financial Statements**  
**December 31, 2021 and 2020**

Aggregate annual maturities of long-term debt and payments on capital lease obligations at December 31, 2021, are:

	<b>Long-Term Debt (Exc. Leases)</b>	<b>Capital Lease Obligations</b>
2022	\$ 803,708	\$ 57,283
2023	774,164	45,637
2024	770,686	6,170
2025	578,977	-
2026	604,874	-
Thereafter	3,649,537	-
	\$ 7,181,946	109,090
Less amount representing interest		9,856
Present value of future minimum lease payments		\$ 99,234

Transportation equipment under capital leases is as follows:

	<b>2021</b>	<b>2020</b>
Transportation equipment	\$ 206,330	\$ 301,696
Accumulated depreciation	(112,445)	(182,212)
	\$ 93,885	\$ 119,484

C&T has a Master Letter of Credit agreement with National Cooperative Services Corporation. This Letter of Credit is for \$7,000,000 and expires October 2024. The Company has the ability to post letters of credit with wholesale gas suppliers under the terms of this agreement. As of December 31, 2021 and 2020, the Company had no outstanding letters of credit.

C&T holds a first lien secured interest in the assets of the Company that are located in Pennsylvania. C&T has pledged substantially all of the Company's assets as collateral for its borrowing arrangements.

**Valley Energy, Inc.**  
**Notes to Financial Statements**  
**December 31, 2021 and 2020**

**Note 6: Income Taxes**

The provision for income taxes includes these components:

	<u>2021</u>	<u>2020</u>
Taxes currently payable	\$ 6,294	\$ 146,246
Deferred income taxes	459,200	(57,700)
Income tax expense	<u>\$ 465,494</u>	<u>\$ 88,546</u>

A reconciliation of income tax expense at the statutory rate to the Company's actual income tax expense is shown below:

	<u>2021</u>	<u>2020</u>
Computed at the statutory rate (21%)	\$ 240,200	\$ 119,900
Increase (decrease) resulting from		
State income taxes	209,200	17,300
Other	16,094	(48,654)
Actual tax expense	<u>\$ 465,494</u>	<u>\$ 88,546</u>

The tax effects of temporary differences related to deferred taxes shown on the balance sheets were:

	<u>2021</u>	<u>2020</u>
Deferred tax assets		
Allowance for doubtful accounts	\$ 35,400	\$ 51,100
Postretirement benefits	238,000	227,900
Net operating loss carryforwards	87,500	-
Other	172,800	189,000
	<u>533,700</u>	<u>468,000</u>
Deferred tax liabilities		
Depreciation	(3,586,200)	(3,078,200)
Other	(154,000)	(137,100)
	<u>(3,740,200)</u>	<u>(3,215,300)</u>
Net deferred tax liability	<u>\$ (3,206,500)</u>	<u>\$ (2,747,300)</u>

At December 31, 2021, the Company's allocation of C&T's consolidated unused federal operating loss carryforwards is approximately \$420,000, which expire through 2041.



# Valley Energy, Inc.

## Notes to Financial Statements

### December 31, 2021 and 2020

#### Note 7: Pension and Postretirement Plans

##### ***Multiemployer Pension Plans***

C&T is a member of the National Rural Electric Cooperative Association (NRECA) Retirement Security Plan (RS Plan), a defined benefit pension plan qualified under Section 401 and tax-exempt under Section 501(a) of the Internal Revenue Code. It is a multiemployer plan under the accounting standards. The plan sponsor's Employer Identification Number is 53-0116145 and the Plan Number is 333.

A unique characteristic of a multiemployer plan compared to a single employer plan is that all plan assets are available to pay benefits of any plan participant. Separate asset accounts are not maintained for participating employers. This means that assets contributed by one employer may be used to provide benefits to employees of other participating employers.

C&T contributions to the RS Plan in 2021 and 2020 represented less than 5 percent of the total contributions made to the plan by all participating employers. C&T made contributions to the plan of \$2,647,072 and \$2,403,433 for the years ended December 31, 2021 and 2020, respectively. The Company reimbursed C&T \$491,787 and \$417,495 for its share of the contributions for the years ended December 31, 2021 and 2020, respectively. There have been no significant changes affecting the comparability of the 2021 and 2020 contributions.

In the RS Plan, a "zone status" determination is not required, and therefore not determined, under the *Pension Protection Act* (PPA) of 2006. In addition, the accumulated benefit obligations and plan assets are not determined or allocated separately by individual employer. In total, the RS Plan was over 80 percent funded on January 1, 2021 and 2020, based on the PPA funding target and PPA actuarial value of assets on those dates.

Because the provisions of the PPA do not apply to the RS Plan, funding improvement plans and surcharges are not applicable. Future contribution requirements are determined each year as a part of the actuarial valuation of the plan and may change as a result of plan experience.

C&T is also a member of the NRECA SelectRE Pension Plan. C&T makes a matching contribution of 200 percent of the employees' contributions up to 2.5 percent of compensation. The Company reimbursed C&T \$94,578 and \$82,676 for its share of contributions for the years ended December 31, 2021 and 2020, respectively.

##### ***RS Plan Prepayment***

At the December 2012 meeting of the Insurance and Financial Services (I&FS) Committee of the NRECA Board of Directors, the Committee approved an option to allow participating cooperatives in the RS Plan to make a prepayment and reduce future required contributions. The prepayment amount is a cooperative's share, as of January 1, 2013, of future contributions required to fund the RS Plan's unfunded value of benefits earned to date using Plan actuarial valuation assumptions. The prepayment amount will typically equal approximately 2.5 times a cooperative's annual RS Plan required contribution as of January 1, 2013. After making the prepayment, for most cooperatives the billing rate is reduced by approximately 25 percent, retroactive to January 1, 2013.

**Valley Energy, Inc.**  
**Notes to Financial Statements**  
**December 31, 2021 and 2020**

The 25 percent differential in billing rates is expected to continue for approximately 15 years. However, changes in interest rates, asset returns and other plan experience different from that expected, plan assumption changes, and other factors may have an impact on the differential in billing rates and the 15-year period.

Two prepayment options were available to participating cooperatives:

1. Use current assets to make the prepayment over a period of not more than four years.
2. Borrow funds sufficient to make the prepayment in a lump sum, with the repayment of the borrowed amount determined by the loan's amortization schedule.

On June 28, 2013, C&T made a lump sum prepayment of \$2,248,934 to the NRECA RS Plan. This prepayment was funded with a note through the National Cooperative Services Corporation. The Company's share of the prepayment, \$940,282, will be repaid to C&T under the terms of a note as described in Note 5 (with an outstanding balance of \$59,016 and \$174,479 at December 31, 2021 and 2020, respectively) and is recorded on the balance sheets as a prepaid asset. The Company is amortizing this amount over 10 years.

**Other Postretirement Benefit Plan**

C&T has a postretirement health care plan covering substantially all employees. The plan is unfunded. The estimated costs that will be paid after retirement are generally being accrued over the employees' active service periods to the dates they are fully eligible for benefits. The Company expects to contribute \$61,000 to the plan in 2022. The following table sets forth the plan's funded status and the amounts of accrued benefit cost of the C&T plan and the Company's allocation based on an actuarial valuation as of December 31, 2021 and 2020.

	<u>2021</u>	<u>2020</u>
C&T's benefit obligation	<u>\$ 5,928,389</u>	<u>\$ 5,773,135</u>
Company's allocation of benefit obligation	<u>\$ 826,401</u>	<u>\$ 791,373</u>
C&T's accrued benefit cost	<u>\$ 5,928,389</u>	<u>\$ 5,773,135</u>
Company's allocation of accrued benefit cost	<u>\$ 826,401</u>	<u>\$ 791,373</u>
Amounts recognized in the Company's balance sheets:		
Current liability, included in accrued expenses	\$ 66,970	\$ 89,926
Non-current liability	<u>759,431</u>	<u>701,447</u>
	<u>\$ 826,401</u>	<u>\$ 791,373</u>
C&T's benefit expense	<u>\$ 357,460</u>	<u>\$ 356,284</u>
Company's allocation of benefit expense	<u>\$ 54,220</u>	<u>\$ 48,412</u>

**Valley Energy, Inc.**  
**Notes to Financial Statements**  
**December 31, 2021 and 2020**

The Company uses a December 31 measurement date for the plans. For measurement purposes, a 6.80 percent annual rate of increase in the per capita cost of covered health care benefits was assumed in 2021. The rate was assumed to decrease gradually to 5.00 percent in 2028 and remain at that level thereafter.

The benefit obligation was calculated assuming a weighted average discount rate of 3.25 percent and 3.15 percent in 2021 and 2020, respectively.

The amount of net gain and net prior service cost expected to be recognized by the Company during 2022 is \$28,913 and \$-0-, respectively.

Benefits expected to be paid by the Company in each of the next five years and in the aggregate for the five years thereafter are as follows:

2022	\$ 66,970
2023	53,178
2024	55,463
2025	80,128
2026	83,575
2027-2031	206,619
	<u>\$ 545,933</u>

Because the Company is subject to regulation in the states in which it operates, it is required to maintain its accounts in accordance with the regulatory authority's rules and regulations, which may differ from other authoritative accounting pronouncements. In those instances, the Company follows the guidance of accounting for regulated operations. Based on prior regulatory practice, and in accordance with the related guidance, the Company recorded an unfunded postretirement obligation, which otherwise would be recognized as other comprehensive income, as a regulatory asset, and expects to recover those costs in rates charged to customers.

**Note 8: Related Party Transactions**

The Company has a contract for service with C&T to purchase all employee services. The contract automatically renews annually unless terminated by either party.

**Valley Energy, Inc.**  
**Notes to Financial Statements**  
**December 31, 2021 and 2020**

In the ordinary course of business, the Company's activities involve significant transactions with C&T. The activity between the Company and C&T for the years ended December 31, 2021 and 2020, and the effected account balances at December 31, 2021 and 2020, are as follows:

	<b>2021</b>	<b>2020</b>
Allocation of overhead recorded as operating expense	\$ 377,060	\$ 294,700
Other costs included in accounts receivable - other	\$ 283,600	\$ -
Other costs included in accounts payable	\$ -	\$ 135,100
Payroll related costs included in accrued expenses	\$ 232,635	\$ 246,726
Accrued vacation liability included in accrued expenses	\$ 165,341	\$ 150,955
Payroll costs paid in advance and included in advances, affiliates	\$ 100,398	\$ 100,398
Interest expense	\$ 359,366	\$ 268,790

The Company paid C&T \$2,221,570 and \$2,140,582 for payroll and \$1,048,376 and \$923,716 for benefits in 2021 and 2020, respectively.

**Note 9: Significant Concentration**

Accounting principles generally accepted in the United States of America require disclosure of certain vulnerabilities due to certain concentrations.

***Major Suppliers***

The Company obtains all of its natural gas from an agreement with an energy broker that is set to expire on March 31, 2022. The agreement will automatically renew for a subsequent five-year term period. The Company obtained approximately 97 percent and 92 percent of its natural gas and distribution from four and three suppliers during 2021 and 2020, respectively.

**Note 10: Commitments and Contingencies**

The Company has guaranteed payments on note payables that are the obligation of C&T. At December 31, 2021, the amounts outstanding on these obligations are \$7,181,946, which is fully recorded by the Company, see Note 5. This obligation is being repaid in quarterly payments of principal and interest through 2032. The Company would be required to perform under this guarantee if C&T were to default under the note payable and the bank were to demand the Company's performance.

# Valley Energy, Inc.

## Notes to Financial Statements

### December 31, 2021 and 2020

#### **COVID-19**

As a result of the spread of the SARS-CoV-2 virus and the incidence of COVID-19, economic uncertainties have arisen which may affect the financial position, results of operations and cash flows of the Company. The duration of these uncertainties and the ultimate financial effects cannot be reasonably estimated at this time.

#### **Note 11: Revenue from Contracts with Customers**

##### ***Performance Obligations***

The Company's revenues are derived primarily from the sale of natural gas to customers. Customers consist of commercial, industrial and residential accounts within dedicated territories in the Sayre, Pennsylvania and Waverly, New York areas.

Rates charged for natural gas sales to customers are established by the Pennsylvania PUC and NYPS&C for each state, respectively. The Company provides gas to customers as one stand-ready performance obligation. Sale of natural gas is recognized by the Company upon transfer of control of promised services to customers in an amount that reflects the consideration expected to be received in exchange for those services.

The Company transfers control of the natural gas to customers at each customer's meter point and the customers simultaneously receive and consume the benefits of the natural gas provided. Natural gas provided to customers is accounted for as a series of performance obligations. Progress towards completion is measured using the output method [hundreds of cubic feet (CCF) received by the customer], meter readings are taken at the end of each month for billing purposes, the quantity of energy transferred is determined after the meter readings. Payments from customers are received in accordance with each member's contract, which is ordinarily 21 days from the invoice date.

Revenue associated with the natural gas performance obligation to customers are recorded as sales of natural gas and capacity to customers in our accompanying statements of income.

The Company has determined that the nature, amount, timing and uncertainty of revenue and cash flows are primarily affected by factors that impact demand.

**Valley Energy, Inc.**  
**Notes to Financial Statements**  
**December 31, 2021 and 2020**

**Contract Balances**

The following table provides information about the Company's accounts receivable and customer deposits from contracts with customers:

	<b>2021</b>	<b>2020</b>
Accounts receivable - customers, beginning of year	\$ 834,899	\$ 800,114
Accounts receivable - customers, end of year	\$ 973,471	\$ 834,899
Unbilled revenues, beginning of year	\$ 363,258	\$ 312,822
Unbilled revenues, end of year	\$ 308,255	\$ 363,258
Customer deposits, beginning of year	\$ 446,548	\$ 489,151
Customer deposits, end of year	\$ 484,186	\$ 446,548

**Note 12: Subsequent Events**

Subsequent events have been evaluated through March 10, 2022, which is the date the financial statements were available to be issued.

## **Supplementary Information**

**Valley Energy, Inc.**  
**Prepaid Taxes, Net**  
**December 31, 2021 and 2020**

	<b>2021</b>	<b>2020</b>
State gross receipts tax	\$ (36,585)	\$ 12,801
State sales tax	(23,896)	(13,970)
State capital tax	14,074	14,074
State income tax	(49,954)	29,940
PUC assessment	24,193	19,962
Local and county taxes	(2,652)	28,984
PURTA	76,948	29,621
State assessment surcharges	65,178	33,818
State use tax	(1,620)	(1,689)
	\$ 65,686	\$ 153,541



**Valley Energy, Inc.**  
**Operating Revenues and Taxes, Other Than Income**  
**Years Ended December 31, 2021 and 2020**

	<b>2021</b>	<b>2020</b>
<b>Operating Revenues</b>		
Residential sales	\$ 5,850,706	\$ 5,314,006
Commercial and industrial sales	2,354,716	2,074,198
Interruptible sales	326,582	195,969
Customers' forfeited discounts	19,975	30,802
Transportation sales	2,605,908	2,502,604
Under (over) collected gas costs	243,467	(317,441)
Miscellaneous	5,287	1,654
	\$ 11,406,641	\$ 9,801,792
<b>Taxes, Other Than Income</b>		
Local and county taxes	\$ 113,522	\$ 112,402
PURTA	28,876	29,402
State use tax	2,672	13,689
	\$ 145,070	\$ 155,493

**Valley Energy, Inc.**  
**Distribution, Operation; Distribution, Maintenance; Customer Accounts and**  
**General and Administrative Expenses**  
**Years Ended December 31, 2021 and 2020**

	<u>2021</u>	<u>2020</u>
<b>Distribution, Operation Expenses</b>		
Mains and services	\$ 522,964	\$ 519,940
Measuring and regulating station - general	92,576	88,684
Measuring and regulating station - city gate	80,973	71,951
Industrial/commercial meters and regulators	91,492	84,142
Meters and house regulators	156,132	172,706
Customer installations	151,645	170,094
Distribution load dispatching	238,131	238,549
Other operating expense	14,496	13,678
	<u>\$ 1,348,409</u>	<u>\$ 1,359,744</u>
<b>Distribution, Maintenance Expenses</b>		
Structures and improvements	\$ 24,403	\$ 54,122
Mains	120,313	409,425
Measuring and regulating station - general	137,417	123,123
Measuring and regulating station - industrial	11,741	5,528
Measuring and regulating station - city gate	15,878	14,866
Services	68,361	170,490
Meters and house regulators	82,294	141,465
Supervision and engineering	39,123	34,946
	<u>\$ 499,530</u>	<u>\$ 953,965</u>
<b>Customer Accounts Expenses</b>		
Meter reading	\$ 59,165	\$ 58,453
Customer records and collections	669,499	578,681
Uncollectible accounts (recoveries), net	(2,614)	84,005
Miscellaneous customer	27,143	27,546
	<u>\$ 753,193</u>	<u>\$ 748,685</u>
<b>General and Administrative Expenses</b>		
Salaries and benefits	\$ 661,808	\$ 589,088
Pensions and benefits	39,629	61,586
Office supplies and expense	28,751	20,098
Outside services	70,332	83,109
Property insurance	19,488	17,749
Injuries and damage	104,510	107,463
General advertising	14,072	13,987
Miscellaneous general	26,044	78,402
Directors' committee	58,293	58,455
Travel and training	24,525	16,288
Regulatory commission, net	143,679	109,988
Maintenance, general plant	45,813	49,948
	<u>\$ 1,236,944</u>	<u>\$ 1,206,161</u>

## Valley Energy, Inc.

### Balance Sheet, by Division

#### December 31, 2021

	Valley Energy of PA	Valley Energy of NY	Eliminations	Total
<b>Assets</b>				
<b>Utility Plant, at Cost</b>				
Gas plant in service	\$ 43,270,680	\$ 5,933,044	\$ -	\$ 49,203,724
Accumulated depreciation	(20,545,026)	(3,727,642)	-	(24,272,668)
	22,725,654	2,205,402	-	24,931,056
Construction work in progress	17,886	55	-	17,941
Net utility plant	22,743,540	2,205,457	-	24,948,997
<b>Other Assets</b>				
RS plan prepayment	94,000	-	-	94,000
Regulatory asset	120,444	10,788	-	131,232
Total other assets	214,444	10,788	-	225,232
<b>Current Assets</b>				
Cash and cash equivalents	1,052,864	-	-	1,052,864
Accounts receivable				
Customers, net	557,676	415,795	-	973,471
Unbilled revenues	289,438	18,817	-	308,255
Other	902,111	29,681	-	931,792
Advances, affiliates	886,606	-	(786,208)	100,398
Inventories				
Natural gas	1,104,108	-	-	1,104,108
Materials and supplies	197,784	-	-	197,784
Prepaid taxes, net	50,963	14,723	-	65,686
Prepaid expenses and other	366,495	1,210	-	367,705
Under recovered gas costs	469,803	7,815	-	477,618
Total current assets	5,877,848	488,041	(786,208)	5,579,681
Total assets	\$ 28,835,832	\$ 2,704,286	\$ (786,208)	\$ 30,753,910

	Valley Energy of PA	Valley Energy of NY	Eliminations	Total
<b>Liabilities and Stockholder's Equity</b>				
<b>Stockholder's Equity</b>				
Common stock, no par or stated value, 1,000 shares authorized, issued and outstanding	\$ 673,408	\$ 2,326,592	\$ -	\$ 3,000,000
Paid-in capital	94,885	-	-	94,885
Retained earnings (deficit)	12,117,554	(850,522)	-	11,267,032
Total stockholder's equity	12,885,847	1,476,070	-	14,361,917
<b>Long-Term Debt</b>	6,378,238	-	-	6,378,238
<b>Capital Lease Obligations</b>	48,405	-	-	48,405
<b>Current Liabilities</b>				
Line of credit	2,500,000	-	-	2,500,000
Current maturities of long-term debt	803,708	-	-	803,708
Current maturities of capital lease obligations	50,829	-	-	50,829
Advances, due to affiliates	-	786,208	(786,208)	-
Accounts payable	144,659	-	-	144,659
Due for purchased gas	1,067,022	-	-	1,067,022
Accrued expenses	514,459	-	-	514,459
Customer deposits	410,578	73,608	-	484,186
Total current liabilities	5,491,255	859,816	(786,208)	5,564,863
<b>Deferred Charges and Other Liabilities</b>				
Deferred income taxes	2,838,100	368,400	-	3,206,500
Accrued postretirement cost	759,431	-	-	759,431
Regulatory liability	434,556	-	-	434,556
Total deferred charges and other liabilities	4,032,087	368,400	-	4,400,487
Total liabilities and stockholder's equity	\$ 28,835,832	\$ 2,704,286	\$ (786,208)	\$ 30,753,910

**Valley Energy, Inc.**  
**Statement of Income, by Division**  
**Year Ended December 31, 2021**

	<b>Valley Energy of PA</b>	<b>Valley Energy of NY</b>	<b>Eliminations</b>	<b>Total</b>
<b>Operating Revenues</b>	\$ 9,468,569	\$ 1,938,072	\$ -	\$ 11,406,641
<b>Operating Expenses</b>				
Gas	3,650,808	926,049	-	4,576,857
Distribution expenses:				
Operation	1,085,435	262,974	-	1,348,409
Maintenance	407,135	92,395	-	499,530
Customer accounts	591,065	162,128	-	753,193
General and administrative	1,046,919	190,025	-	1,236,944
Depreciation	1,302,740	195,284	-	1,498,024
Taxes, other than income	31,548	113,522	-	145,070
	<u>8,115,650</u>	<u>1,942,377</u>	<u>-</u>	<u>10,058,027</u>
<b>Operating Income (Loss) Before Interest and Other Expenses</b>	<u>1,352,919</u>	<u>(4,305)</u>	<u>-</u>	<u>1,348,614</u>
<b>Other Income (Expenses)</b>				
Interest expense	(317,986)	(62,754)	-	(380,740)
Other income	183,743	518	-	184,261
Other expense	(6,700)	(1,680)	-	(8,380)
	<u>(140,943)</u>	<u>(63,916)</u>	<u>-</u>	<u>(204,859)</u>
<b>Income (Loss) Before Income Taxes</b>	1,211,976	(68,221)	-	1,143,755
<b>Provision (Credit) for Income Taxes</b>	<u>487,096</u>	<u>(21,602)</u>	<u>-</u>	<u>465,494</u>
<b>Net Income (Loss)</b>	<u>\$ 724,880</u>	<u>\$ (46,619)</u>	<u>\$ -</u>	<u>\$ 678,261</u>

## Valley Energy, Inc.

### Utility Plant and Accumulated Depreciation - Pennsylvania

#### Year Ended December 31, 2021

Acct. No.	Account	Utility Plant				Accumulated Depreciation							
		Cost		Retirements	Cost	Balance		Retirements	Cost of Removals	Salvage Received	Depreciation		Balance
		January 1, 2021	Additions		December 31, 2021	January 1, 2021	December 31, 2021				Rate	Amount	
114	Gas Plan Acquisition Account	\$ 3,361,289	\$ -	\$ -	\$ 3,361,289	\$ 2,456,011	\$ -	\$ -	\$ -	4.21 %	\$ 111,880	\$ 2,567,891	
366	Structures & Improvements	69,564	64,227	-	133,791	5,099	-	-	-	0.62	432	5,531	
367	Mains	1,941,132	-	-	1,941,132	1,092,859	-	-	-	1.79	34,707	1,127,566	
369	Meas. & Reg. Station Equipment	3,017,391	-	-	3,017,391	937,318	-	-	-	4.4	132,886	1,070,204	
375	Structures & Improvements	201,411	-	-	201,411	84,269	-	-	-	2.63	5,293	89,562	
376	Mains	13,126,802	826,285	67,520	13,885,567	5,381,620	67,520	21,904	-	2.02-3.15	321,346	5,613,542	
378	Meas. & Reg Station Equipment	1,097,802	44,630	14,106	1,128,326	918,827	14,106	2,257	-	6.72	73,914	976,378	
380	Services	8,598,006	494,050	52,876	9,039,180	3,516,650	52,876	16,936	-	3.04 - 3.41	294,046	3,740,884	
381	Meters & Meter Installations	3,079,316	44,746	-	3,124,062	1,107,597	-	-	-	2.74	84,605	1,192,202	
383	House Reg & House Reg & Installations	319,759	1,831	-	321,590	218,629	-	-	-	3.22	10,298	228,927	
385	Ind. Meas. & Reg. Station Equipment	915,810	20,847	-	936,657	716,519	-	-	-	4.11	37,881	754,400	
387	Other Equipment	9,978	-	-	9,978	6,195	-	-	-	3.66	364	6,559	
390	Structures & Improvements	1,597,062	734,350	-	2,331,412	624,284	-	-	-	2.43	41,430	665,714	
391	Office Furniture & Equipment	1,164,051	163,252	6,249	1,321,054	651,084	6,249	-	-	8.00 - 20.00	147,968	792,803	
392	Transportation Equipment	1,107,682	28,668	109,713	1,026,637	871,838	109,713	-	-	10.82 - 33.33	100,170	862,295	
393	Stores Equipment	29,907	17,529	-	47,436	15,013	-	-	-	6.67	2,135	17,148	
394	Tools, Shop & Garage Equipment	613,531	2,722	-	616,253	420,135	-	-	-	5.00	26,763	446,898	
396	Power Operated Equipment	417,858	1,284	-	419,142	213,223	-	-	-	11.76	37,380	250,603	
397	Communication Equipment	216,154	1,168	-	217,322	131,907	-	-	-	6.67	13,653	145,560	
398	Miscellaneous Equipment	1,803	4,200	-	6,003	(9,781)	-	-	-	6.67	140	(9,641)	
301	Organization	18,666	-	-	18,666	-	-	-	-	-	-	-	
304	Land & Land Rights	3,442	-	-	3,442	-	-	-	-	-	-	-	
365.2	Rights of Way	42,166	-	-	42,166	-	-	-	-	-	-	-	
374	Land & Land Rights	15,652	-	-	15,652	-	-	-	-	-	-	-	
389	Land & Land Rights	105,121	-	-	105,121	-	-	-	-	-	-	-	
		41,071,355	2,449,789	250,464	43,270,680	\$ 19,359,296	\$ 250,464	\$ 41,097	\$ -		1,477,291	\$ 20,545,026	
	Construction work-in-process	(370)	18,256 <sup>(N)</sup>	-	17,886						(137,550)		
		\$ 41,070,985	\$ 2,468,045	\$ 250,464	\$ 43,288,566						(37,001)		
											Total Depreciation	\$ 1,302,740	

<sup>(N)</sup> Net Increase

**Valley Energy, Inc.**  
**Utility Plant and Accumulated Depreciation – New York**  
**Year Ended December 31, 2021**

Acct. No.	Account	Utility Plant				Accumulated Depreciation							
		Cost January 1, 2021	Additions	Retirements	Cost December 31, 2021	Balance January 1, 2021	Retirements	Cost of Removals	Salvage Received	Depreciation		Balance December 31, 2021	
										Rate	Amount		
114	Gas Plant Acquisition Account	\$ 1,260,029	\$ -	\$ -	\$ 1,260,029	\$ 764,684	\$ -	\$ -	\$ -	3.00 %	\$ 35,918	\$ 800,602	
375	Structures & Improvements	1,774	-	-	1,774	1,470	-	-	-	3.00	53	1,523	
376	Mains	1,793,512	11,997	4	1,805,505	1,631,003	4	-	-	3.00	27,782	1,658,781	
378	Meas. & Reg Station Equipment	115,295	23,836	-	139,131	30,353	-	-	-	3.00	3,331	33,684	
380	Services	1,495,384	77,604	6,190	1,566,798	733,637	6,190	2,223	12,468	3.00	39,167	776,859	
381	Meters & Meter Installations	908,870	42,117	-	950,987	286,532	-	-	-	3.00	48,069	334,601	
383	House Reg & House Reg & Installations	27,594	-	-	27,594	40,336	-	-	-	3.00	-	40,336	
385	Ind. Meas. & Reg. Station Equipment	131,697	12,250	-	143,947	77,633	-	-	-	3.00	3,963	81,596	
301	Organization	6,084	-	-	6,084	-	-	-	-	3.00	-	-	
302	Franchises/Consents	30,842	-	-	30,842	-	-	-	-	3.00	-	-	
374	Land & Land Rights	353	-	-	353	(340)	-	-	-	3.00	-	(340)	
		<u>5,771,434</u>	<u>167,804</u>	<u>6,194</u>	<u>5,933,044</u>	<u>\$ 3,565,308</u>	<u>\$ 6,194</u>	<u>\$ 2,223</u>	<u>\$ 12,468</u>		<u>158,283</u>	<u>\$ 3,727,642</u>	
Construction work-in-process		<u>20,196</u>	<u>-</u>	<u>20,141</u> <sup>(N)</sup>	<u>55</u>	Add depreciation expense allocated to New York operations					<u>37,001</u>		
		<u>\$ 5,791,630</u>	<u>\$ 167,804</u>	<u>\$ 26,335</u>	<u>\$ 5,933,099</u>	Total Depreciation					<u>\$ 195,284</u>		

<sup>(N)</sup> Net Decrease

**Valley Energy, Inc.**  
**Prepaid Taxes, Net, by Division**  
**December 31, 2021**

	<b>Valley Energy of PA</b>	<b>Valley Energy of NY</b>	<b>Total</b>
State gross receipts tax	\$ -	\$ (36,585)	\$ (36,585)
State sales tax	(10,657)	(13,239)	(23,896)
State capital tax	14,074	-	14,074
State income tax	(53,554)	3,600	(49,954)
PUC assessment	24,193	-	24,193
Local and county taxes	-	(2,652)	(2,652)
PURTA	76,948	-	76,948
State assessment surcharges	-	65,178	65,178
State use tax	(41)	(1,579)	(1,620)
	<u>\$ 50,963</u>	<u>\$ 14,723</u>	<u>\$ 65,686</u>



**Valley Energy, Inc.**  
**Operating Revenues and Taxes, Other Than Income, by Division**  
**Year Ended December 31, 2021**

	<b>Valley Energy of PA</b>	<b>Valley Energy of NY</b>	<b>Total</b>
<b>Operating Revenues</b>			
Residential sales	\$ 4,662,502	\$ 1,188,204	\$ 5,850,706
Commercial and industrial sales	1,774,158	580,558	2,354,716
Interruptible sales	326,582	-	326,582
Customers' forfeited discounts	14,197	5,778	19,975
Transportation sales	2,413,387	192,521	2,605,908
Under (over) recovered gas costs	273,082	(29,615)	243,467
Miscellaneous	4,661	626	5,287
	<u>\$ 9,468,569</u>	<u>\$ 1,938,072</u>	<u>\$ 11,406,641</u>
<b>Taxes, Other Than Income</b>			
Local and county taxes	\$ -	\$ 113,522	\$ 113,522
PURTA	28,876	-	28,876
State use tax	2,672	-	2,672
	<u>\$ 31,548</u>	<u>\$ 113,522</u>	<u>\$ 145,070</u>

**Valley Energy, Inc.**  
**Distribution, Operation; Distribution, Maintenance; Customer Accounts and**  
**General and Administrative Expenses, by Division**  
**Year Ended December 31, 2021**

	Valley Energy of PA	Valley Energy of NY	Total
<b>Distribution, Operation Expenses</b>			
Mains and services	\$ 424,866	\$ 98,098	\$ 522,964
Measuring and regulating station - general	77,321	15,255	92,576
Measuring and regulating station - city gate	72,931	8,042	80,973
Industrial/commercial meters and regulators	82,052	9,440	91,492
Meters and house regulators	135,368	20,764	156,132
Customer installations	127,574	24,071	151,645
Distribution load dispatching	156,157	81,974	238,131
Other operating expense	9,166	5,330	14,496
	<u>\$ 1,085,435</u>	<u>\$ 262,974</u>	<u>\$ 1,348,409</u>
<b>Distribution, Maintenance Expenses</b>			
Structures and improvements	\$ 21,942	\$ 2,461	\$ 24,403
Mains	90,905	29,408	120,313
Measuring and regulating station - general	114,865	22,552	137,417
Measuring and regulating station - industrial	11,402	339	11,741
Measuring and regulating station - city gate	15,878	-	15,878
Services	59,534	8,827	68,361
Meters and house regulators	62,780	19,514	82,294
Supervision and engineering	29,829	9,294	39,123
	<u>\$ 407,135</u>	<u>\$ 92,395</u>	<u>\$ 499,530</u>
<b>Customer Accounts Expenses</b>			
Meter reading	\$ 42,948	\$ 16,217	\$ 59,165
Customer records and collections	544,862	124,637	669,499
Uncollectible accounts (recoveries), net	(19,622)	17,008	(2,614)
Miscellaneous customer	22,877	4,266	27,143
	<u>\$ 591,065</u>	<u>\$ 162,128</u>	<u>\$ 753,193</u>
<b>General and Administrative Expenses</b>			
Salaries and benefits	\$ 557,944	\$ 103,864	\$ 661,808
Pensions and benefits	37,007	2,622	39,629
Office supplies and expense	23,835	4,916	28,751
Outside services	59,327	11,005	70,332
Property insurance	16,358	3,130	19,488
Injuries and damage	87,139	17,371	104,510
General advertising	12,042	2,030	14,072
Miscellaneous general	22,352	3,692	26,044
Directors' committee	48,981	9,312	58,293
Travel and training	21,063	3,462	24,525
Regulatory commission, net	122,392	21,287	143,679
Maintenance, general plant	38,479	7,334	45,813
	<u>\$ 1,046,919</u>	<u>\$ 190,025</u>	<u>\$ 1,236,944</u>

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

**Computation of State Tax Adjustment Surcredit  
for the Period January 1, 2022 through December 31, 2022**

	<u>Amount</u>	<u>Attachment Number</u>
1 Capital Stock Tax	\$ -	<b>A</b>
2 Corporate Net Income Tax	\$ -	
3 Utility Realty Tax	\$ 5,310	<b>B</b>
4 Gross Receipts Tax	<u>\$ -</u>	
5 Total of Lines 1, 2, 3, and 4	\$ 5,310	
6 PURTA Surcharge Rate Adjustment	\$ -	<b>C</b>
7 STAS reconciliation for period January 1, 2021 through December 31, 2021	<u>\$ 1,901</u>	<b>D</b>
8 Total of Lines 5, 6 and 7	\$ 7,210	
9 Gross Intrastate Operating Revenues derived from service under rates subject to the jurisdiction of the Pa. Public Utility Commission for the period January 1, 2020 through December 31, 2020 (Page 10)	\$ 3,063,473	<b>E</b>
10 Surcharge rate to be applied for the period January 1, 2022 through December 31, 2022 (Line 8 divided by Line 9)	<u>0.2354%</u>	

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

**ATTACHMENT A**

**Calculation of Surcharge Rate 1/1/22 - 12/31/22**

**\*\*Corporate Stock Tax Phased out 2016\*\***

**Capital Stock Tax @ .00 mills effective 1/1/19**

1	Tax Base -- year 2016 (see attached page 2 of 2016 PA Corporate Tax Report	\$	-
2	Jurisdictional Apportionment Proportion		<u>0.853219</u>
3	Tax Base Valley Energy - PA (Line 1 X Line 2)	\$	-
4	Tax Millage in basic rates (2011)		0.002890
5	Tax Millage effective 1/1/18		<u>0.000000</u>
6	Effective Rate Increase (Decrease) (Line 4 minus Line 5)		<u>(0.002890)</u>
7	Total Capital Stock/Franchise Tax Increase (Decrease) (Line 3 X Line 6)	\$	<u><u>-</u></u>

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

**ATTACHMENT B**

**Public Utility Realty Tax Assessment (PURTA)**

**Calculation of Surcharge Rate 1/1/22 - 12/31/22**

1	8/1/2021 Notice of Determination Adjustments: State Tax Property Value at December 31, 2020	\$ 1,221,304
2	Pa. Public Utility Realty Tax (Based on applied rate of 27.9975 mills x Line 1)	\$ 34,193
3	8/1/2020 Notice of Determination Adjustments: State Tax Property Value at December 31, 2019	\$ 1,009,316
4	Pa. Public Utility Realty Tax (Based on applied rate of 28.6091 mills x Line 1)	<u>\$ 28,876</u>
5	2021 PURTA Adjustment (Line 2 minus Line 4)	<u><u>\$ 5,318</u></u>

**continued on page 3A**

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

**ATTACHMENT B**

**Public Utility Realty Tax Assessment (PURTA)**

**Calculation of Surcharge Rate 1/1/22 - 12/31/22**

1	Continued from page 3 (Line 5)		\$	5,318
	8/1/2021 Notice of Determination Adjustments:			
2	<u>1998 PURTA</u>			
	Liability Adjustment	\$	-	\$ -
3	<u>1999 PURTA</u>			
	Liability Adjustment	\$	-	\$ -
4	<u>2000 PURTA</u>			
	Liability Adjustment	\$	-	\$ -
5	<u>2001 PURTA</u>			
	Liability Adjustment	\$	-	\$ -
6	<u>2002 PURTA</u>			
	Liability Adjustment	\$	-	\$ -
7	<u>2003 PURTA</u>			
	Liability Adjustment	\$	(1)	\$ (1)
8	<u>2004 PURTA</u>			
	Liability Adjustment	\$	-	\$ -
9	<u>2005 PURTA</u>			
	Liability Adjustment	\$	(1)	\$ (1)
10	<u>2006 PURTA</u>			
	Liability Adjustment	\$	-	\$ -
11	<u>2007 PURTA</u>			
	Liability Adjustment	\$	-	\$ -
12	<u>2008 PURTA</u>			
	Liability Adjustment	\$	-	\$ -
13	<u>2009 PURTA</u>			
	Liability Adjustment	\$	(1)	\$ (1)
14	<u>2010 PURTA</u>			
	Liability Adjustment	\$	(1)	\$ (1)
15	<u>2011 PURTA</u>			
	Liability Adjustment	\$	-	\$ -
16	<u>2012 PURTA</u>			
	Liability Adjustment	\$	(1)	\$ (1)
17	<u>2013 PURTA</u>			
	Liability Adjustment	\$	(1)	\$ (1)
18	<u>2014 PURTA</u>			
	Liability Adjustment	\$	(1)	\$ (1)
19	<u>2015 PURTA</u>			
	Liability Adjustment	\$	(1)	\$ (1)
20	Total 2022 PURTA Adjustment (Lines 1 through 19)		\$	<u>5,310</u>

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

**ATTACHMENT C**

**Calculation of Surcharge Rate 1/1/22 - 12/31/22**

**Public Utility Realty Tax Assessment Surcharge**

Tax Year Ending 2022

Projected taxable revenues for Pa. gross receipts tax for period January 1, 2022 to December 31, 2022 (Page 11)	\$ 4,596,854
PURTA surcharge rate as established by the Department of Revenue and published in the Pennsylvania Bulletin on September 11,2021	<u>0.0000</u>
2022 PURTA Surcharge	<u>\$ -</u>

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

**ATTACHMENT D**

**Reconciliation of State Tax Adjustment Surcharge  
for the Period ending December 31, 2021**

	<u>Amount</u>	<u>Schedule Number</u>
1 Capital Stock Tax	\$ -	1
2 Corporate Net Income Tax	\$ -	
3 Utility Realty Tax	\$ (737)	2
4 Gross Receipts Tax	<u>\$ -</u>	
5 Total of Items 1, 2, 3, and 4	\$ (737)	
6 PURTA Surcharge Rate Adjustment	<u>\$ -</u>	3
7 Total of Lines 5 and 6	\$ (737)	
8 STAS reconciliation for period Jan. 1, 2020 through December 31, 2020	<u>\$ (366)</u>	
9 Total of Lines 7 and 8	\$ (1,103)	
10 STAS Revenue Collections (Page 9)	<u>\$ (3,004)</u>	4
11 Balance to be (refunded) / collected (Line 9 minus Line 10)	<u><u>\$ 1,901</u></u>	



Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

VALLEY ENERGY, INC.

ATTACHMENT D

Schedule 1

Reconciliation of State Tax Adjustment Surcredit  
for the Period ending December 31, 2017

Calculation of Surcredit Rate 1/1/21 - 12/31/21

**\*\*Corporate Stock Tax Phased out 2016\*\***

**Capital Stock Tax @ .00 mills effective 1/1/17**

1	Tax Base -- year 2016 (see attached page 2 of 2015 PA Corporate Tax Report)	\$	-
2	Jurisdictional Apportionment Proportion		<u>0.853219</u>
3	Tax Base Valley Energy - PA (Line 1 X Line 2)	\$	-
4	Tax Millage in basic rates (2011)		0.002890
5	Tax Millage effective 1/1/18		<u>0.000000</u>
6	Effective Rate Increase (Decrease) (Line 4 minus Line 5)		<u>(0.002890)</u>
7	Total Capital Stock/Franchise Tax Increase (Decrease) (Line 3 X Line 6)	\$	<u><u>-</u></u>

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

**ATTACHMENT D**

**Reconciliation of State Tax Adjustment Surcredit  
for the Period ending December 31, 2021**

**Schedule 2**

**Public Utility Realty Tax Assessment (PURTA)**

Calculation of Surcredit Rate 1/1/21 - 12/31/21

1	8/1/2020 Notice of Determination Adjustments: State Tax Property Value at December 31, 2019	\$ 1,009,316
2	Pa. Public Utility Realty Tax (Based on applied rate of 28.6091 mills x Line 1)	\$ 28,876
3	8/05/19 Notice of Determination Adjustments: State Tax Property Value at December 31, 2018	\$ 980,840
4	Pa. Public Utility Realty Tax (Based on applied rate of 30.1894 mills x Line 1)	<u>\$ 29,611</u>
5	2021 PURTA Adjustment (Lines 2 minus Line 4)	\$ (735)

**Public Utility Realty Tax Assessment (PURTA)**

6	8/01/2020 Notice of Determination Adjustments: <u>1998 PURTA</u> Liability Adjustment	\$ -
7	<u>1999 PURTA</u> Liability Adjustment	\$ -
8	<u>2000 PURTA</u> Liability Adjustment	\$ -
9	<u>2001 PURTA</u> Liability Adjustment	\$ -
10	<u>2002 PURTA</u> Liability Adjustment	\$ -
11	<u>2003 PURTA</u> Liability Adjustment	\$ -
12	<u>2004 PURTA</u> Liability Adjustment	\$ -
13	<u>2005 PURTA</u> Liability Adjustment	\$ -
14	<u>2006 PURTA</u> Liability Adjustment	\$ -
15	<u>2007 PURTA</u> Liability Adjustment	\$ -
16	<u>2008 PURTA</u> Liability Adjustment	\$ -
17	<u>2009 PURTA</u> Liability Adjustment	\$ 1
18	<u>2010 PURTA</u> Liability Adjustment	\$ -
19	<u>2011 PURTA</u> Liability Adjustment	\$ (1)
20	<u>2012 PURTA</u> Liability Adjustment	\$ -
21	<u>2013 PURTA</u> Liability Adjustment	\$ -
22	<u>2014 PURTA</u> Liability Adjustment	\$ -
23	<u>2015 PURTA</u> Liability Adjustment	<u>\$ (2)</u>
24	Total 2021 PURTA Adjustment (Lines 5 through 22)	<u>\$ (737)</u>

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

**ATTACHMENT D**

**Schedule 3**

**Reconciliation of State Tax Adjustment Surcharge  
for the Period ending December 31, 2021**

**Public Utility Realty Tax Assessment Surcharge**

Tax Year Ending 2021

Projected taxable revenues for Pa. gross receipts tax for period January 1, 2021 to December 31, 2021 (Page 12)	\$ 4,301,790
PURTA surcharge rate as established by the Department of Revenue and published in the Pennsylvania Bulletin on September 12,2020	<u>0.0000</u>
2021 PURTA Surcharge	<u>\$ -</u>

**VALLEY ENERGY, INC.**

For the Period January 1, 2021 through December 31, 2021

**ATTACHMENT D**

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**Schedule 4**

STAS Revenue Collected / (Refunded) for period January 1, 2021 through December 31, 2021

<u>Month</u>	<u>Gas Revenue Billed</u>	<u>Amount Tax Surcharge</u>
January	\$ 591,302	\$ (416)
February	\$ 636,015	\$ (447)
March	\$ 573,069	\$ (403)
April	\$ 431,524	\$ (304)
May	\$ 342,041	\$ (241)
June	\$ 246,832	\$ (173)
July	\$ 198,156	\$ (137)
August	\$ 197,829	\$ (138)
September	\$ 191,773	\$ (133)
October	\$ 213,968	\$ (148)
November (estimated)	\$ 332,348	\$ (232)
December (estimated)	<u>\$ 332,348</u>	<u>\$ (232)</u>
Total STAS (Refunded) / Collected	<u>\$ 4,287,205</u>	<u>\$ (3,004)</u>

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

**ATTACHMENT E**

OPERATING REVENUES

Revenue billed for 12 month audited period ending December 31, 2020

Residential Sales	\$	2,302,787	
Commercial & Industrial Sales	\$	696,136	
Interruptible Sales	\$	34,961	
Transportation Sales	\$	1,795,029	
Customer' Forfeited Discounts	\$	<u>24,277</u>	
Total Gross Gas Revenue including Tax Surcharge	\$		4,853,190
Less: Tax Surcharge collected / (refunded)	\$		(5,312)
Less: Transportation Sales	\$		<u>1,795,029</u>
Total Gas Revenue projected for application period January 1, 2022 through December 31, 2022	\$		<u><u>3,063,473</u></u>

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

Projected Revenues from Service Under Rates  
for the Application Period January 1, 2022 to December 31, 2022

<u>Month</u>	<u>MCF's</u>	<u>Base Rate Revenue</u>	<u>Forfeited Discounts</u>	<u>Projected Revenues</u>
January	254,059	\$ 640,189	\$ 1,858	\$ 642,047
February	261,725	\$ 638,862	\$ 1,223	\$ 640,085
March	242,217	\$ 593,593	\$ 1,535	\$ 595,128
April	177,700	\$ 441,368	\$ 1,339	\$ 442,707
May	147,577	\$ 345,679	\$ 2,525	\$ 348,204
June	113,873	\$ 255,719	\$ 2,072	\$ 257,791
July	84,922	\$ 200,824	\$ 1,663	\$ 202,487
August	85,564	\$ 202,829	\$ 1,516	\$ 204,345
September	81,793	\$ 193,558	\$ 1,184	\$ 194,742
October	107,258	\$ 245,022	\$ 1,161	\$ 246,183
November	149,220	\$ 350,850	\$ 589	\$ 351,439
December	202,144	\$ 471,176	\$ 520	\$ 471,696
Totals	<u>1,908,052</u>	<u>\$ 4,579,669</u>	<u>\$ 17,185</u>	<u>\$ 4,596,854</u>

Valley Energy, Inc. (PA)  
Rate Case with Fully Projected Future Test Year 2023

**VALLEY ENERGY, INC.**

Revenues from Service Under Rates  
for the Application Period January 1, 2021 to December 31, 2021

<u>Month</u>	<u>2021 MCF's</u>	<u>2021 Base Rate Revenue</u>	<u>2021 Forfeited Discounts</u>	<u>2021 Total Revenues</u>
January	247,845	\$ 591,302	\$ 1,339	\$ 592,641
February	261,708	\$ 636,015	\$ 2,525	\$ 638,540
March	235,381	\$ 573,069	\$ 2,072	\$ 575,141
April	174,527	\$ 431,524	\$ 1,663	\$ 433,187
May	146,895	\$ 342,041	\$ 1,516	\$ 343,557
June	112,196	\$ 246,832	\$ 1,184	\$ 248,016
July	84,553	\$ 198,156	\$ 1,161	\$ 199,317
August	84,063	\$ 197,829	\$ 589	\$ 198,418
September	81,891	\$ 191,773	\$ 520	\$ 192,293
October	97,772	\$ 213,968	\$ 465	\$ 214,433
November (estimated)	142,503	\$ 332,348	\$ 775	\$ 333,123
December (estimated)	142,503	\$ 332,348	\$ 775	\$ 333,123
Totals	<u>1,811,837</u>	<u>\$ 4,287,205</u>	<u>\$ 14,585</u>	<u>\$ 4,301,790</u>

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**

Line	Acct	Account Description	Historic Year	Historic Year	Historic Year	Historic Year	Historic Year	Historic	Future Test	Actual	Fully
			Actual	Actual	Actual	Actual	Actual	Year Actual	Year	Actual	Projected
			Ended	Ended	Ended	Ended	Ended	Ended	Ended	Ended	Future Test
			12/31/2016	12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	3/31/2022	12/31/2023
1		<u>Distribution Expenses</u>									
2	842	Fuel	20,229	22,625	32,754	23,989	27,679	26,245	31,442	10,364	32,071
3	870	Labor Supv /Eng.	65,207	80,117	158,043	152,412	143,501	155,095	168,984	37,535	240,616
4	871	Distrib Load Disp	5,017	5,744	0	5,838	9,756	1,063	5,851	4,752	6,111
5	874	Mains & Services	407,629	425,516	449,306	459,445	387,732	398,302	426,192	135,262	448,230
6	875	Meas & Reg- Gen	45,070	59,771	49,259	59,266	76,371	77,321	78,888	26,786	82,408
7	876	Ind / Com Meters, Reg	53,818	53,967	65,404	67,015	74,823	82,052	87,784	36,936	92,212
8	877	Meas & Reg- City gate	54,341	36,856	45,852	59,375	54,772	43,642	42,694	15,273	44,337
9	878	Meters & House Reg	132,975	139,433	144,074	176,107	147,886	135,380	161,318	28,188	170,977
10	879	Cust installations	131,224	106,627	114,336	138,402	143,494	127,575	176,136	37,861	185,278
11	880	Other operating exp	2,555	3,642	3,893	3,958	4,416	4,393	4,256	0	4,341
12	881	Rents	2,626	1,045	1,871	3,180	3,917	4,773	5,823	901	7,104
13		<i>Total Operating Expense</i>	920,691	935,343	1,064,792	1,148,987	1,074,347	1,055,842	1,189,368	333,857	1,313,685
14											
15	885	Supv and eng	30,192	25,260	25,312	25,152	26,483	29,829	33,354	7,433	34,857
16	886	Structures & improve	26,214	26,268	37,189	64,471	46,330	21,942	25,590	16,062	26,660
17	887	Mains	86,503	89,888	56,809	69,915	76,018	85,519	86,555	18,256	90,081
18	889	Meas & Reg- Gen	22,205	34,174	27,158	28,849	64,814	114,865	106,250	15,662	110,856
19	890	Meas & Reg- Ind	24,466	18,825	17,371	29,058	48,581	11,400	51,180	11,732	53,290
20	891	Meas & Reg- City gate	8,130	6,827	11,207	8,438	14,376	15,270	15,242	2,386	15,918
21	892	Services	51,809	79,354	53,701	48,114	29,992	59,534	57,157	10,777	59,762
22	893	Meters & House Reg	104,484	65,985	56,282	60,147	122,720	62,779	81,378	13,901	86,118
23		<i>Total Maintenance Expense</i>	354,003	346,581	285,029	334,144	429,314	401,137	456,706	96,209	477,542
24		<i>Total Operating &amp; Maintenance Exp.</i>	1,274,694	1,281,924	1,349,821	1,483,131	1,503,661	1,456,979	1,646,074	430,066	1,791,227





**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023**  
**Original Cost of Utility Plant in Service**

Line	Acct No.	Account Title	Historic	Historic	Historic	Historic	Historic Actual	Future Test	Actual	Fully
			Actual	Actual	Actual	Actual	Actual	Year	Year	Projected
			12/31/2017	12/31/2018	12/31/2019	12/31/2020	12/31/2021	12/31/2022	3/31/2022	12/31/2023
			Balance	Balance	Balance	Balance	Balance	Forecast		Forecast
1		<i>Distribution Plant.</i>								
2	114	Gas Plant Acquisition Adjustment	3,361,289	3,361,289	3,361,289	3,361,289	3,361,289	3,361,289	3,361,289	3,361,289
3	366	Trans. Structures and improvements	61,054	61,054	69,564	69,564	115,685	264,316	115,685	264,316
4	367	Trans. Mains	1,941,132	1,941,132	1,941,132	1,941,132	1,918,973	1,918,973	1,918,973	1,918,973
5	369	Trans. Meas / Reg Sta Equip	2,941,049	3,013,627	3,013,627	3,017,392	297,194	345,438	297,924	345,438
6	369A	Customer		0	0	0	2,760,463	2,760,463		2,760,463
7	375	Structures and improvements	88,623	90,248	201,411	201,411	201,411	201,411	201,411	201,411
8	376S	Mains- Steel	3,224,724	3,227,846	3,773,381	3,762,218	3,765,210	3,764,558	3,765,210	3,801,703
9	376P	Mains- Plastic	7,843,747	8,121,330	8,416,638	9,364,583	10,120,320	10,390,111	10,133,819	10,509,354
10	378	Meas / Reg Sta Equip	817,992	839,630	957,357	1,097,804	1,128,328	1,322,623	1,128,328	1,704,684
11	380S	Services- Steel	525,508	537,758	546,829	544,559	542,732	546,475	542,732	543,623
12	380P	Services- Plastic	7,247,848	7,585,472	7,797,409	8,053,448	8,496,449	8,927,754	8,524,722	9,376,642
13	381	Meters	1,644,201	1,676,045	1,736,171	1,813,946	1,833,985	1,874,209	1,832,311	1,913,712
14	381AMR	Transponders- Old	745,535	1,010,227	1,115,047	1,010,227	1,010,227	1,010,227	1,010,227	1,010,227
15	381T	Transponders- New		0	0	0	0	15,821	0	15,821
16	381AMR	Meters-AMR		0	126,971	255,141	261,976	261,976	262,782	261,976
17		Meters-Protection		0	0	0	17,872	17,872	17,872	17,872
18	383	House regulators	299,708	302,873	313,468	319,759	321,589	325,189	321,589	328,789
19	385	Indu Meas / Reg Sta Equip	870,687	884,248	939,443	915,769	936,616	988,464	936,656	1,019,872
20	387	Other equipment	9,978	9,978	9,978	9,978	9,978	9,978	9,978	9,978
21		<b>Total Distribution Plant</b>	<b>31,623,075</b>	<b>32,662,756</b>	<b>34,319,715</b>	<b>35,738,218</b>	<b>37,100,295</b>	<b>38,307,145</b>	<b>34,381,507</b>	<b>39,366,141</b>
22										
23		<i>General Plant</i>								
24	390	Structures & Improvements	1,043,087	1,281,674	1,559,288	1,597,062	2,331,412	2,589,301	2,354,494	2,637,957
25		Warehouse Furniture		0	0	0	19,927	19,927	20,562	19,927
26	391	Office Furniture & Equipment	68,369	115,326	347,783	641,901	778,977	971,921	781,099	1,122,380
27	391C	Computer equipment	522,150	522,150	522,150	522,150	441,105	441,105	475,240	441,105
28	392	Transportation Equipment	827,322	947,439	981,382	1,107,687	1,125,216	1,253,216	1,160,884	1,438,216
29	393	Stores Equipment	29,907	29,907	29,907	29,907	32,629	32,629	32,629	32,629
30	394	Tools, Shop & Garage Equipment	479,482	487,664	561,225	613,531	614,814	678,441	632,833	733,941
31	396	Power Operated / Communication	209,893	209,893	286,790	359,011	359,011	365,011	359,011	375,511
32		Fully Depreciated	275,000	275,000	275,000	275,000	275,000	275,000	275,000	275,000
33	398	Miscellaneous Equipment	1,803	1,803	1,803	1,803	7,171	14,626	7,171	14,626
34	301	Intangible plant, organization	18,666	18,666	18,666	18,666	18,666	18,666	18,666	18,666
35	304	MGP , Tx-Dx-Gen ROW	166,421	166,421	166,421	166,421	166,421	166,421	166,421	166,421
36		<b>Total General Plant</b>	<b>3,642,100</b>	<b>4,055,942</b>	<b>4,750,415</b>	<b>5,333,138</b>	<b>6,170,347</b>	<b>6,826,262</b>	<b>6,284,008</b>	<b>7,276,377</b>
37										
38		Less: Acquisition, CIAC	(3,361,289)	(3,361,289)	(3,361,289)	(3,361,289)	(6,121,752)	(6,121,752)	(3,361,289)	(6,121,752)
39		<b>Total Plant in Service</b>	<b>\$31,903,886</b>	<b>\$33,357,408</b>	<b>\$35,708,841</b>	<b>\$37,710,067</b>	<b>\$37,148,890</b>	<b>\$39,011,655</b>	<b>\$37,304,227</b>	<b>\$40,520,766</b>

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission**

**v.**

**Valley, Energy, Inc.**

:  
:  
:  
:  
:

**Docket No. R-2022-\_\_\_\_\_**

**DIRECT TESTIMONY**

**OF**

**CODY CHAPMAN**

**ON BEHALF OF**

**VALLEY ENERGY, INC.**

**APRIL 29, 2022**

BEFORE

THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission :  
v. : Docket No. R-2022-\_\_\_\_\_  
Valley Energy, Inc. :

DIRECT TESTIMONY OF CODY CHAPMAN  
ON BEHALF OF VALLEY ENERGY, INC.

1 Q. Please state your name and business address.

2 A. My name is Cody E. Chapman, PE and my business address is 523 Keystone Avenue,  
3 Sayre, Pennsylvania.

4 Q. By whom are you employed and in what capacity do you serve at Valley Energy, Inc.  
5 ("Valley")?

6 A. I am employed by C&T Enterprises, Inc. ("C&T"), and assigned to Valley as the Vice  
7 President of Operations.

8 Q. Please describe your duties in this capacity.

9 A. My duties are to organize, direct, and coordinate the operations and engineering functions  
10 at Valley, including, but not limited to designing and coordinating all capital projects and  
11 managing all pipeline and facility maintenance activities. These duties include technical  
12 services functions in accordance with the objectives and policies of the Company, the  
13 Pennsylvania Public Utility Commission, the Federal Pipeline Hazardous Materials and  
14 Safety Administration's Office of Pipeline Safety, the Federal Occupational Safety and

1 Health Administration, and other related regulatory procedures. I also advise the President  
2 and CEO of the operational aspects of the company.

3 **Q. Please describe your educational and employment background.**

4 A. I attended Pennsylvania State University from 2003 to 2007 and graduated with a Bachelor  
5 of Science degree in Civil Engineering. In 2013, I received licensure as a Professional  
6 Engineer from the Pennsylvania State Board of Professional Engineers, Land Surveyors,  
7 and Geologists. I worked for Hawk Engineering, PC and JHA Companies prior to joining  
8 Valley Energy.

9 **Q. What were your responsibilities with respect to this filing?**

10 A. As the Vice President of Operations, I was responsible for coordinating with Company  
11 witness Mr. Gorman and our other witnesses to address the anticipated capital projects and  
12 other operational expenses that we will undertake during the Future Test Year and the  
13 Fully-Projected Future Test Year. This includes development of the capital budgets and  
14 assessing other operational needs such as vehicles.

15 **Q. Have you previously testified before the Pennsylvania Public Utility Commission?**

16 A. No.

17 **CAPITAL IMPROVEMENTS AND PROJECTS**

18 **Q. Please explain the Company's capital and system improvement activities reflected in  
19 the historic, future, and fully-projected future test years.**

20 A. In 2020, the Company completed the expansion of our system across the Susquehanna  
21 River into East Athens. From 2020 to 2022, Valley has continued to work on main  
22 replacements necessary to accommodate ongoing reconstruction of SR 199 by the  
23 Pennsylvania Department of Transportation. Valley's relocation work for this project will

1 be completed in 2022. Valley has been replacing vintage plastic (Aldyl-A) mains that were  
2 installed in the early-to-mid-1970s, with a project scheduled for 2022, and the remaining  
3 main replacements budgeted for 2023. In 2021, Valley's warehouse and operations offices  
4 were remodeled to improve the functionality of the space and improve operational  
5 efficiencies.

6 To reduce the risk of over pressurization of low-pressure distribution systems, the  
7 Company is installing redundant relief stations to each of our low-pressure systems. Four  
8 new relief stations are planned for 2022, with six new relief stations planned in 2023, and  
9 all of the remaining planned to be completed by the end of 2025.

10 In addition, the expenses and plant additions in the filing represent our annual routine  
11 efforts to maintain and replace, when necessary, our system, including replacement of  
12 antiquated or obsolete measurement and pressure regulating equipment.

13 **Q. What steps has Valley undertaken to mitigate Lost and Unaccounted For Gas?**

14 A. The Company performs accelerated leak surveys on leak prone pipe materials, as outlined  
15 in the Company's Distribution Integrity Management Plan, such as steel tubing services  
16 and vintage plastic (Aldyl-A) mains. In addition, the Company has eliminated all cast iron  
17 and bare steel mains, which are susceptible to joint leakage and cracking due to the severe  
18 frost conditions experienced in our area. Mitigating these leaks to atmosphere reduces our  
19 lost gas.

20 Another area of influence to Lost and Unaccounted for Gas is meter inaccuracies. To  
21 minimize meter inaccuracies, the Company tests large industrial meters at an advanced rate  
22 depending on usage. The Company also is approximately 6.1% ahead of the prescribed  
23 residential class meter testing schedule. The Company purposely works to maintain a

1 cushion ahead of the regulated meter testing scheduled to maintain compliance, but also to  
2 test meter accuracies to ensure gas is accounted for and billed for in a manner to minimize  
3 inaccuracies.

4 **Q. Are the improvements in the historic, future, and fully-projected future test years**  
5 **unique in comparison to Valley's historic practice?**

6 A. No. Our practice and criteria for replacement of pipelines and equipment as they become  
7 obsolete or to ensure compliance with safety regulations has not changed in many years;  
8 however, we are focusing more closely on pipeline safety improvements as a result of  
9 federal requirements and the Company's Distribution Integrity Management Plan.

10 **Q. Please explain how the current inflation and supply chain interruptions are impacting**  
11 **Valley?**

12 A. In 2021 and 2022, we have seen a sharp increase in material costs and a decrease in material  
13 availability. A sampling of reoccurring purchases from 2020, 2021, and 2022, has shown  
14 prices have increased an average of 9.4%, with outliers (not included in our analysis)  
15 increasing as much as 178%. As an example of material availability and lead time changes,  
16 we have seen large changes in the availability of 250 CF Class meters. In August of 2021,  
17 the lead time for these meters was 21 weeks and in February of 2022, the lead time  
18 increased to 60 weeks. These are just examples of the trends that we are seeing.

19 **Q. Does the information that you provided to Mr. Gorman reflect the current expected**  
20 **costs for materials and supplies?**

21 A. The information that we provided reflects our current assessment as of March 31, 2022.  
22 The costs could change based on general economic conditions and other factors.

23 **Q. Can you address how Valley's capital projects can vary from quarter to quarter?**

1 A. Our service territory is on the New York-Pennsylvania border and can experience cold  
2 weather and freezing. Ground frost depth can be a large factor as to capital project  
3 constructability. There are certain capital projects that we try to schedule for the months  
4 when we expect to have warmer weather. Another factor in scheduling capital projects is  
5 varying start dates due to municipal or Pennsylvania Department of Transportation  
6 seasonal start and/or stop guidelines. When our employees are not working on capital  
7 projects, they undertake other necessary activities that are reflected in O&M expenses.

8 **Q. Does this conclude your Direct Testimony?**

9 A. Yes.





McNees Wallace & Nurick LLC  
100 Pine Street  
P.O. Box 1166  
Harrisburg, PA 17108-1166

**Adeolu A. Bakare**  
Direct Dial: 717.237.5290  
Direct Fax: 717.260.1744  
abakare@mcneeslaw.com

July 11, 2022

**VIA E-MAIL**

Administrative Law Judge Eranda Vero  
Administrative Law Judge Charece Z. Collins  
Pennsylvania Public Utility Commission  
801 Market Street, Suite 4063  
Philadelphia, PA 19107

**RE: Valley Energy, Inc. – Supplement No. 59 to Tariff Gas – Pa. P.U.C. No. 2;  
Docket No. R-2022-3032300**

Your Honors:

Attached please find Valley Statement No. 1 (CU) – Corrections and Updates Testimony and Exhibits of Howard S. Gorman on behalf of Valley Energy, Inc. ("Valley") in the above-referenced proceeding.

As shown by the attached Certificate of Service, all parties to this proceeding are being duly served via email.

Sincerely,

A handwritten signature in black ink, appearing to read 'Adeolu A. Bakare', written over a horizontal line.

Adeolu A. Bakare  
MCNEES WALLACE & NURICK LLC

c: Rosemary Chiavetta, Secretary (Letter and Certificate of Service only)  
Certificate of Service

**CERTIFICATE OF SERVICE**

I hereby certify that I am this day serving a true copy of the foregoing document upon the participants listed below in accordance with the requirements of Section 1.54 (relating to service by a participant).

**VIA E-MAIL**

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Adeolu A. Bakare

Counsel to Valley Energy, Inc.

Dated this 11<sup>th</sup> day of July, 2022, in Harrisburg, Pennsylvania.

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket No. R-2022-3032300</b>
	:	
<b>Valley Energy, Inc.</b>	:	

**CORRECTIONS AND UPDATES  
TESTIMONY  
AND EXHIBITS  
OF  
HOWARD S. GORMAN**

**ON BEHALF OF  
OF VALLEY ENERGY, INC.**

**JULY 11, 2022**

BEFORE

THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2022-3032300
	:	
Valley Energy, Inc.	:	

CORRECTIONS AND UPDATES TESTIMONY OF HOWARD S. GORMAN ON BEHALF OF VALLEY ENERGY, INC.

1 Q. Please state your name and on whose behalf you are testifying.

2 A. My name is Howard Gorman. I am testifying on behalf of the petitioner, Valley Energy,  
3 Inc. ("Valley" or "Company"). Valley Statement No. 1 in this filing was my Direct  
4 Testimony. The terms defined in my Direct Testimony have the same meanings here.

5 Q. Please state the purposes of your testimony today.

6 A. The purpose of this Corrections and Updates (CU) testimony is to provide corrections to  
7 the testimony, exhibits and workpapers previously submitted. For the sake of completeness  
8 and ease, all of the testimony, exhibits and workpapers in Exhibit\_\_(HSG-1) are replaced  
9 in their entirety by the information submitted herewith.

10 Q. Please summarize the corrections that are being made.

11 A. In preparing responses to interrogatories, the Company found several items to be corrected  
12 in its Operating information for years 2019 through 2023. Many of these items were  
13 identified in those responses. The results of correcting those items, and others found by  
14 the Company, are presented in the schedules submitted today.

**Valley Statement No. 1 (CU)**

1 The changes are shown on Exhibit\_\_(HSG-1), Schedule C 1-1A. Account numbers are in  
2 the second column on the left. For changes that were discussed in responses to  
3 interrogatory requests, the request is identified in the column "Ref". The five columns  
4 under "Schedule C1-1 Original" show the amount in the account for each year 2019 through  
5 2023 in the original filing. The five columns under "Adjustments Made in CU" show the  
6 adjustment amount, if any, for each account in each year. The five columns under  
7 "Schedule C1-1 (CU)" show the updated amount for each account in each year, as  
8 presented in this CU filing. The net change from the original filing to this filing for each  
9 year is shown on line 25. For the Fully-Projected Future Test Year ("FPFTY"), there was  
10 a net decrease in expenses of \$14,518.

11 **Q. Is Valley changing the amount of its requested increase, the allocation of the revenue**  
12 **increase or any of the proposed rates?**

13 A. No. There are no changes proposed to any of those items.

14 The effect of the changes is to decrease the revenue requirement needed to produce the rate  
15 of return of 7.76% supported by Company witness Mr. D'Ascendis, from \$1,250,125 in the  
16 original filing, to \$1,234,913. Exhibit\_\_(HSG-1), Schedule C1 (CU).

17 Valley's request for an increase of just under \$1,000,000 (proposed rates would produce an  
18 increase of \$999,631), an increase of 18.2%, has not changed; this increase produces a  
19 return of 7.13% in the FPFTY. Exhibit\_\_(HSG-1), Schedule C1 (CU).

20 **Q. Do the proposed rates produce the required revenue?**

21 A. Yes. Schedule B4 (CU), line 26 shows the proposed rates produce FPFTY total distribution  
22 revenue of \$6,496,602 (excluding Other revenue), equal to Schedule C1 (CU), line 5. This  
23 is an increase of just under \$1,000,000, and produces a return of 7.13%,

1 **Q. Are you submitting any exhibits with your testimony today?**

2 A. Yes. I am submitting an updated Exhibit\_\_(HSG-1) (CU), which includes updated  
3 versions of the schedules and workpapers that were originally provided with my Direct  
4 Testimony.

5 **Q. Does this conclude your Corrections and Updates Testimony?**

6 A. Yes.

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission**

**v.**

**Valley Energy, Inc.**

**:  
:  
:  
:  
:**

**Docket No. R-2022-3032300**

**CORRECTIONS AND UPDATES  
EXHIBITS**

**OF**

**HOWARD S. GORMAN**

**ON BEHALF OF**

**VALLEY ENRGY, INC.**

**JULY 11, 2022**

Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (CU)  
INDEX TO SCHEDULES

Line	SCHEDULE	DESCRIPTION	PERIOD
1	<a href="#">A (CU)</a>	INDEX TO SCHEDULES	
2			
3	<b>RATES AND REVENUE</b>		
4	<a href="#">B (CU)</a>	Operating Revenue Under Present Rates and Proposed Rates	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
5	<a href="#">B1 (CU)</a>	Summary Of Sales, Customers And Revenue At Present Rates	Historic Year December 31, 2021
6	<a href="#">B1-1 (CU)</a>	Billing Units, Rates And Revenue At Present Rates	Historic Year December 31, 2021
7	<a href="#">B1-2 (CU)</a>	Bill Analysis- Revenues Under Present Rates	Historic Year December 31, 2021
8	<a href="#">B2 (CU)</a>	Summary Of Sales, Customers And Revenue At Present Rates	Future Test Year December 31, 2022
9	<a href="#">B2-1 (CU)</a>	Billing Units, Rates And Revenue At Present Rates	Future Test Year December 31, 2022
10	<a href="#">B3 (CU)</a>	Number of Customers Served Whose Bills Will be Increased	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
11	<a href="#">B4 (CU)</a>	Summary Of Sales, Customers And Revenue At Present and Proposed Rates	Fully Projected Future Test Year December 31, 2023
12	<a href="#">B4-1 (CU)</a>	Billing Units, Rates And Revenue At PRESENT Rates	Fully Projected Future Test Year December 31, 2023
13	<a href="#">B4-2 (CU)</a>	Billing Units, Rates And Revenue At PROPOSED Rates	Fully Projected Future Test Year December 31, 2023
14			
15	<b>TARIFF RATES</b>		
16	<a href="#">B5 (CU)</a>	Summary Of Present And Proposed Tariff Rates	Historic Year December 31, 2021 and Fully Projected Future Test Year December 31, 2023
17	<a href="#">B5-1 (CU)</a>	Bill Comparisons (including GCR present rate)	Fully Projected Future Test Year December 31, 2023
18	<a href="#">B5-2 (CU)</a>	Bill Comparisons (excluding GCR)	Fully Projected Future Test Year December 31, 2023
19			
20	<b>NET OPERATING INCOME AND RATES OF RETURN</b>		
21	<a href="#">C1 (CU)</a>	Net Operating Income And Rates of Return	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
22	<a href="#">C1-1 (CU)</a>	Support Sheet No. 1- Operating Expense and Going-Level Adjustments	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
23	<a href="#">C1-1A (CU)</a>	Adjustments and Reclasses Made for Corrections and Updates	
24	<a href="#">C1-2 (CU)</a>	Support Sheet No. 2- Summary of Cost of Capital and Fair Rate of Return Based upon a Hypothetical Ratemaking Capital Structure	12/31/2023
25	<a href="#">C1-3 (CU)</a>	Support Sheet No. 3- Taxes Other Than Income	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
26	<a href="#">C1-4 (CU)</a>	Support Sheet No. 4- Income Tax Calculations	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
27	<a href="#">C1-5 (CU)</a>	Support Sheet No. 5- Pension and OPEB	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
28	<a href="#">C1-6 (CU)</a>	Support Sheet No. 6- Computation of Rate Base	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
29	<a href="#">C1-7 (CU)</a>	Extraordinary Coronavirus Pandemic Costs	
30	<a href="#">C1-8 (CU)</a>	Comparison to Prior Rate Case	Prior Rate Case and Fully Projected Future Test Year December 31, 2023
31	<a href="#">C2 (CU)</a>	Balance Sheets	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
32	<a href="#">C3 (CU)</a>	Original Cost of Utility Plant in Service	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
33			
34	<b>WORKPAPERS</b>		
35	<a href="#">WP (CU)</a>	Workpapers	See separate index



B (CU)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Operating Revenue Under Present Rates and Proposed Rates**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 b[4]**

Line	Operating Revenues	Historic Year December 31, 2021		PRESENT RATES	PRESENT RATES	PROPOSED RATES
		Per Books	Distribution Only	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023	Fully Projected Future Test Year December 31, 2023
1	Residential sales	\$4,523,971	\$2,500,218	\$2,643,225	2,695,871	3,276,012
2	Commercial and Industrial sales	2,014,680	\$832,275	856,824	861,522	1,040,333
3	Transportation	1,886,645	1,886,645	1,925,649	1,939,577	2,180,256
4	Subtotal	8,425,296	5,219,138	5,425,698	5,496,970	6,496,602
5						
6	Forfeited Discounts	14,197	14,197	14,197	14,197	14,197
7	Other operating revenue	4,661	4,661	4,661	4,661	4,661
8	Non-operating revenue	7,659	7,659	5,348	5,348	5,348
9	Total Operating Revenues	\$8,451,812	\$5,245,654	\$5,449,903	\$5,521,175	\$6,520,807

B1 (CU)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Summary Of Sales, Customers And Revenue At Present Rates  
Historic Year December 31, 2021**

Line	Rate Class	Volumes (ccf)	Customers	Revenue - Present Rates		
				Fixed Customer Charge	Variable Distribution-Commodity	Distribution Total
1	<u>Residential Sales Customers</u>					
2	Rate R- Residential	5,598,048	6,307	\$892,291	\$1,607,927	2,500,218
3						
4	<u>Commercial and Industrial Sales Customers</u>					
5	Rate C- Commercial	2,495,606	831	201,595	562,834	764,429
6	Rate IS- Interruptible Service	700,210	3	2,708	50,275	52,983
7	Rate SI- Small Industrial	72,875	4	3,611	11,252	14,863
8		<u>3,268,691</u>	<u>838</u>	<u>207,914</u>	<u>624,361</u>	<u>832,275</u>
9						
10	<u>Transportation Customers</u>					
11	Transport. Firm	2,566,772	12	10,833	396,310	407,143
12	Transport. Firm- Fixed	8,670,950	1	460,887		460,887
13	Transport. Firm- Volumetric	7,164,700	1		337,072	337,072
14	Transport. Firm- DDQ	947,195	56	13,682	213,621	227,303
15	Transport. Interruptible	6,276,177	4	3,611	450,630	454,241
16		<u>25,625,794</u>	<u>74</u>	<u>489,013</u>	<u>1,397,632</u>	<u>1,886,645</u>
17						
18	<b>TOTAL</b>	<u><u>34,492,533</u></u>	<u><u>7,220</u></u>	<u><u>\$1,589,218</u></u>	<u><u>\$3,629,920</u></u>	<u><u>\$5,219,138</u></u>



B1-2 (CU)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Bill Analysis- Revenues Under Present Rates**  
**Historic Year December 31, 2021**

Line	Customer Type	Per Books 12/31/2021 Revenue
1	Residential sales	\$4,523,971
2	Commercial and Industrial sales	2,014,680
3	Transportation	1,886,645
4	<b>Distribution Revenue</b>	<b>8,425,296</b>
5		
6	Forfeited Discounts	14,197
7	Other operating	4,661
8	Patronage Capital	7,659
9	<b>Total Revenue for Rate case</b>	<b>8,451,812</b>
10		
11	GCR under (over)	273,082
12	GCR Prior- Residential	165,548
13	GCR Prior- C&I	96,647
14	GCR Prior- computation	2,742
15	Delivery computation	9,278
16	STAS	(3,095)
17	Unbilled	(36,987)
18	Other Operating revenue	507,215
19		
20	Total Operating revenue	<b>8,959,027</b>
21	Cost recovery	517,200
22	Less: Patronage Capital	(7,659)
23	<b>Total Operating Revenue per Financials</b>	<b>\$9,468,568</b>

B2 (CU)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Summary Of Sales, Customers And Revenue At Present Rates  
Future Test Year December 31, 2022**

Line	Rate Class	Volumes (ccf)	Customers	Revenue - Present Rates		Distribution Total
				Fixed Customer Charge	Variable Distribution-Commodity	
1	<u>Residential Sales Customers</u>					
2	Rate R- Residential	5,987,484	6,527	\$923,440	\$1,719,785	2,643,225
3						
4	<u>Commercial and Industrial Sales Customers</u>					
5	Rate C- Commercial	2,630,805	851	206,385	593,325	799,710
6	Rate IS- Interruptible Service	587,921	3	2,708	42,213	44,921
7	Rate SI- Small Industrial	55,582	4	3,611	8,582	12,193
8		<u>3,274,308</u>	<u>858</u>	<u>212,704</u>	<u>644,120</u>	<u>856,824</u>
9						
10	<u>Transportation Customers</u>					
11	Transport. Firm	2,663,890	13	11,736	411,305	423,041
12	Transport. Firm- Fixed	8,384,920	1	477,333		477,333
13	Transport. Firm- Volumetric	7,541,703	1		358,858	358,858
14	Transport. Firm- DDQ	924,708	56	13,581	208,549	222,131
15	Transport. Interruptible	6,137,556	4	3,611	440,677	444,288
16		<u>25,652,778</u>	<u>75</u>	<u>506,261</u>	<u>1,419,388</u>	<u>1,925,649</u>
17						
18	<b>TOTAL</b>	<u><u>34,914,570</u></u>	<u><u>7,460</u></u>	<u><u>\$1,642,405</u></u>	<u><u>\$3,783,293</u></u>	<u><u>\$5,425,698</u></u>



B3 (CU)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Number of Customers Served Whose Bills Will be Increased**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 b[3]**

Line	Customer Type	Average Number of Customers During the Year		
		12/31/2021	12/31/2022	12/31/2023
1	Residential sales	6,307	6,527	6,657
2	Commercial and Industrial sales	838	858	863
3	Transportation	72	73	73
4	Customers with rates changing	7,218	7,458	7,593
5	Rates not changing	2	2	2
6	Total Customers Served	7,220	7,460	7,595
7				
8				
9				







**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Billing Units, Rates And Revenue At PROPOSED Rates**  
**Fully Projected Future Test Year December 31, 2023**

Line	Description	Rate R- Residential	Rate C- Commercial	Rate IS- Interruptible Service	Rate SI- Small Industrial	Rate ST- Transport Firm	Transport Firm- Contract	Transport. Firm- DDQ	Transport. Interruptible	Total
1		<b>BILLING UNITS</b>								
2	ccf Sales	6,106,738	2,646,262	587,921	55,582	2,663,890	15,926,624	924,708	6,137,556	35,049,281
3										
4	Number of Bills	79,884	10,272	36	48	156	24	672	48	91,140
5	Average Monthly Bills	6,657	856	3	4	13	2	56	4	7,595
6										
7		<b>RATES AND CHARGES</b>								
8		<b>Tariff Rates</b>								
9	Customer Charge	\$12.90	\$21.95	\$82.00	\$82.00	\$82.00	\$0.00	\$21.95	\$82.00	
10							Contract-2			
11	Commodity Block 1	\$0.36771	\$0.28196	\$0.08737	\$0.18833	\$0.18833	\$0.0484	\$0.28196	\$0.08737	
12	Commodity Block 2						\$0.0484			
13	Commodity Block 3						9.2%			
14	Commodity Block 4						Dec ccf %			
15										
16	Demand Block 1									
17	Demand Block 2						Contract-1			
18	Fixed Monthly, Oct-Dec						40,224	10/22-9/23, monthly		
19	Fixed Monthly, Jan-Sep						41,028	10/23-9/24, monthly		
20		<b>COMPUTATION OF REVENUE</b>								
21	Fixed Charge Revenue	1,030,504	225,470	2,952	3,936	12,792	485,100	14,750	3,936	1,779,441
22	Volumetric Revenue	2,245,509	746,140	51,367	10,468	501,690	365,018	260,731	536,238	4,717,161
23	<b>Total Distribution Revenue</b>	<b>\$3,276,012</b>	<b>\$971,610</b>	<b>\$54,319</b>	<b>\$14,404</b>	<b>\$514,483</b>	<b>\$850,118</b>	<b>\$275,481</b>	<b>\$540,174</b>	<b>\$6,496,602</b>
24	Target	3,276,021	977,517	54,588	14,817	514,079	850,118	269,933	539,898	6,496,970
25		<b>BILLING UNITS- DETAIL</b>								
26	Block 1 ccf Sales	6,106,738	2,646,262	587,921	55,582	2,663,890	15,926,624	924,708	6,137,556	35,049,281
27									Check	35,049,281

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Summary Of Present And Proposed Tariff Rates**  
**Historic Year December 31, 2021 and Fully Projected Future Test Year December 31, 2023**

Line	Present Rates (excluding GCR)	GCR Current	Present Rates (including GCR present rate)	Proposed Rates (excluding GCR)	GCR Current	Proposed Rates (including GCR present rate)	Proposed Increase (excluding GCR)	Proposed Increase (including GCR present rate)	
1	<b>Rate R- Residential</b>								
2	Customer Charge per Bill		\$11.79	\$11.79		\$12.90	\$12.90	9.41%	9.41%
3									
4	<u>Commodity charge per ccf</u>								
5	All usage	\$0.28723	\$0.41748	\$0.70471	\$0.36771	\$0.41748	\$0.78519	28.02%	11.42%
6	<b>Rate C- Commercial</b>								
7	Customer Charge per Bill		\$20.21	\$20.21		\$21.95	\$21.95	8.61%	8.61%
8									
9	<u>Commodity charge per ccf</u>								
10	All usage	\$0.22553	\$0.41748	\$0.64301	\$0.28196	\$0.41748	\$0.69944	25.02%	8.78%
11	<b>Rate I- Large Industrial Firm</b>								
12	Customer Charge per Bill		\$0.00	\$0.00		\$0.00			
13									
14	<u>Commodity charge per ccf</u>								
15	Block 1	\$0.11738	\$0.41748	\$0.53486	\$0.14264	\$0.41748	\$0.56012	21.52%	4.72%
16	Block 2	\$0.07210	\$0.41748	\$0.48958	\$0.08762	\$0.41748	\$0.50510	21.53%	3.17%
17	Block 3	\$0.04723	\$0.41748	\$0.46471	\$0.05739	\$0.41748	\$0.47487	21.51%	2.19%
18									
19	<u>Demand charge per mcf</u>								
20	Block 1	\$1.288650		\$1.28865		\$1.56597	\$1.56597	21.52%	21.52%
21	Block 2	\$0.668730		\$0.66873		\$0.81264	\$0.81264	21.52%	21.52%
22	<b>Rate IS- Interruptible Service</b>								
23	Customer Charge per Bill		\$75.23	\$75.23		\$82.00	\$82.00	9.00%	9.00%
24									
25	<u>Transport charge per ccf</u>								
26	All usage	\$0.07180		\$0.0718		\$0.08737	\$0.0874	21.69%	21.69%

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Summary Of Present And Proposed Tariff Rates**  
**Historic Year December 31, 2021 and Fully Projected Future Test Year December 31, 2023**

Line	Present Rates (excluding GCR)	GCR Current	Present Rates (including GCR present rate)	Proposed Rates (excluding GCR)	GCR Current	Proposed Rates (including GCR present rate)	Proposed Increase (excluding GCR)	Proposed Increase (including GCR present rate)
27	<b>Rate SI- Small Industrial</b>							
28	Customer Charge per Bill	\$75.23	\$75.23	\$82.00		\$82.00	9.00%	9.00%
29								
30	<u>Demand charge per mcf</u>							
31	All usage	\$0.1544	\$0.4175	\$0.1883	\$0.4175	\$0.6058	21.98%	5.93%
32	<b>Rate ST- Transport Firm</b>							
33	Customer Charge per Bill	\$75.23	\$75.23	\$82.00		\$82.00	9.00%	
34								
35	<u>Transport charge per ccf</u>							
36	All usage	\$0.1544	\$0.1544	\$0.1883		\$0.1883	21.98%	21.98%
37	<b>Transport. Firm- DDQ</b>							
38	Customer Charge per Bill	\$20.21	\$20.21	\$21.95		\$21.95	8.61%	8.61%
39								
40	<u>Transport charge per ccf</u>							
41	All usage	\$0.2255	\$0.2255	\$0.2820		\$0.2820	25.02%	25.02%
42	<b>Transport. Interruptible</b>							
43	Customer Charge per Bill	\$75.23	\$75.23	\$82.00		\$82.00	9.00%	
44								
45	<u>Transport charge per ccf</u>							
46	All usage	\$0.0718	\$0.0718	\$0.0874		\$0.0874	21.69%	21.69%

5-1 (CU)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Bill Comparisons (including GCR present rate)  
Fully Projected Future Test Year December 31, 2023  
Rate R- Residential**

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
1		Minimum	\$11.79		\$12.90		\$1.11	9.41%
2		10	18.84	\$1.88371	20.75	\$2.07519	1.91	10.17%
3		20	25.88	1.29421	28.60	1.43019	2.72	10.51%
4	All Residential, Apr-Sep	36	37.16	1.03221	41.17	1.14352	4.01	10.78%
5		50	47.03	0.94051	52.16	1.04319	5.13	10.92%
6	All Residential, Annual	76	65.35	0.85984	72.57	0.95493	7.23	11.06%
7	All Residential, Oct-Mar	117	94.24	0.80548	104.77	0.89545	10.53	11.17%
8		150	117.50	0.78331	130.68	0.87119	13.18	11.22%
9		200	152.73	0.76366	169.94	0.84969	17.21	11.27%
10		250	187.97	0.75187	209.20	0.83679	21.23	11.29%

**Rate C- Commercial**

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
16		Minimum	\$20.21		\$21.95		\$1.74	8.61%
17		25	36.29	\$1.45141	39.44	\$1.57744	3.15	8.68%
18		50	52.36	1.04721	56.92	1.13844	4.56	8.71%
19		100	84.51	0.84511	91.89	0.91894	7.38	8.74%
20		200	148.81	0.74406	161.84	0.80919	13.03	8.75%
21	All Commercial, Annual	258	186.11	0.72134	202.41	0.78452	16.30	8.76%
22		300	213.11	0.71038	231.78	0.77261	18.67	8.76%
23		400	277.41	0.69354	301.73	0.75432	24.31	8.76%
24		500	341.72	0.68343	371.67	0.74334	29.96	8.77%
25		750	502.47	0.66996	546.53	0.72871	44.06	8.77%
26		1,000	663.22	0.66322	721.39	0.72139	58.17	8.77%

5-1 (CU)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Bill Comparisons (including GCR present rate)  
Fully Projected Future Test Year December 31, 2023**

**Rate SI- Small Industrial**

28  
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35  
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40  
41  
42  
43

Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
		Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
	Minimum	\$75.23		\$82.00		\$6.77	9.00%
	2,000	1,218.99	\$0.60950	1,293.62	\$0.64681	74.63	6.12%
	4,000	2,362.75	0.59069	2,505.24	0.62631	142.49	6.03%
	6,000	3,506.51	0.58442	3,716.86	0.61948	210.35	6.00%
	8,000	4,650.27	0.58128	4,928.48	0.61606	278.21	5.98%
	10,000	5,794.03	0.57940	6,140.10	0.61401	346.07	5.97%
	12,000	6,937.79	0.57815	7,351.72	0.61264	413.93	5.97%
	14,000	8,081.55	0.57725	8,563.34	0.61167	481.79	5.96%
	16,000	9,225.31	0.57658	9,774.96	0.61094	549.65	5.96%
	18,000	10,369.07	0.57606	10,986.58	0.61037	617.51	5.96%
	20,000	11,512.83	0.57564	12,198.20	0.60991	685.37	5.95%

5-2 (CI)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Bill Comparisons (excluding GCR)**  
**Fully Projected Future Test Year December 31, 2023**  
**Rate R- Residential**

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
1		Minimum	\$11.79		\$12.90		\$1.11	9.41%
2		10	14.66	\$1.46623	16.58	\$1.65771	1.91	13.06%
3		20	17.53	0.87673	20.25	1.01271	2.72	15.51%
4	All Residential, Apr-Sep	36	22.13	0.61473	26.14	0.72604	4.01	18.11%
5		50	26.15	0.52303	31.29	0.62571	5.13	19.63%
6	All Residential, Annual	76	33.62	0.44236	40.85	0.53745	7.23	21.49%
7	All Residential, Oct-Mar	117	45.40	0.38800	55.92	0.47797	10.53	23.19%
8		150	54.87	0.36583	68.06	0.45371	13.18	24.02%
9		200	69.24	0.34618	86.44	0.43221	17.21	24.85%
10		250	83.60	0.33439	104.83	0.41931	21.23	25.40%

**Rate C- Commercial**

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
16		Minimum	\$20.21		\$21.95		\$1.74	8.61%
17		25	25.85	\$1.03393	29.00	\$1.15996	3.15	12.19%
18		50	31.49	0.62973	36.05	0.72096	4.56	14.49%
19		100	42.76	0.42763	50.15	0.50146	7.38	17.26%
20		200	65.32	0.32658	78.34	0.39171	13.03	19.94%
21	All Commercial, Annual	258	78.40	0.30386	94.70	0.36704	16.30	20.79%
22		300	87.87	0.29290	106.54	0.35513	18.67	21.25%
23		400	110.42	0.27606	134.73	0.33684	24.31	22.02%
24		500	132.98	0.26595	162.93	0.32586	29.96	22.53%
25		750	189.36	0.25248	233.42	0.31123	44.06	23.27%
26		1,000	245.74	0.24574	303.91	0.30391	58.17	23.67%

5-2 (CI)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Bill Comparisons (excluding GCR)  
Fully Projected Future Test Year December 31, 2023  
Rate SI- Small Industrial**

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Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
		Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
	Minimum	\$75.23		\$82.00		\$6.77	9.00%
	2,000	384.03	\$0.19202	458.66	\$0.22933	74.63	19.43%
	4,000	692.83	0.17321	835.32	0.20883	142.49	20.57%
	6,000	1,001.63	0.16694	1,211.98	0.20200	210.35	21.00%
	8,000	1,310.43	0.16380	1,588.64	0.19858	278.21	21.23%
	10,000	1,619.23	0.16192	1,965.30	0.19653	346.07	21.37%
	12,000	1,928.03	0.16067	2,341.96	0.19516	413.93	21.47%
	14,000	2,236.83	0.15977	2,718.62	0.19419	481.79	21.54%
	16,000	2,545.63	0.15910	3,095.28	0.19346	549.65	21.59%
	18,000	2,854.43	0.15858	3,471.94	0.19289	617.51	21.63%
	20,000	3,163.23	0.15816	3,848.60	0.19243	685.37	21.67%



**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**

Line	Description	Historic Year December 31, 2021		Future Test Year December 31, 2022	Present Rates Fully Projected Future Test Year December 31, 2023	Full Revenue Requirement Fully Projected Future Test Year December 31, 2023	Proposed Rates Fully Projected Future Test Year December 31, 2023
		Per Books	Distribution Only	Distribution Only	Distribution Only	Distribution Only	Distribution Only
1	<b>REVENUE</b>						
2	Residential	\$4,523,971	\$2,500,218	\$2,643,225	\$2,695,871		3,276,012
3	Commercial and industrial	2,014,680	832,275	856,824	861,522		1,040,333
4	Transportation	1,886,645	1,886,645	1,925,649	1,939,577		2,180,256
5	Operating revenue	8,425,296	5,219,138	5,425,698	5,496,970	6,731,883	6,496,602
6	Other revenue, net	26,516	26,516	24,205	24,205	24,205	24,205
7	Total Revenue	8,451,812	5,245,654	5,449,903	5,521,175	6,756,088	6,520,807
8	<i>ccf</i>	34,492,533		34,914,570		35,049,281	35,049,281
9	<b>EXPENSES</b>						
10	Purchased gas (in revenue)	3,650,808					
11	Distribution	1,456,979	1,456,979	1,680,980	1,808,705	1,808,705	1,808,705
12	Customer accounting & collection	603,108	603,108	676,444	694,687	702,968	701,393
13	Rate case expense normalization				122,359	122,359	122,359
14	Administrative & general expenses	1,028,273	1,028,273	1,079,960	997,478	997,478	997,478
15	Total Operating expenses	6,739,168	3,088,360	3,437,384	3,623,229	3,631,510	3,629,935
16							
17	Depreciation expense	1,063,704	1,063,704	937,616	1,178,428	1,178,428	1,178,428
18	Taxes other than income	31,548	31,548	32,996	34,169	34,169	34,169
19							
20	Total Expenses	7,834,420	4,183,612	4,407,996	4,835,825	4,844,107	4,842,532
21							
22	Net operating income before income tax	617,392	1,062,042	1,041,907	685,350	1,911,981	1,678,275
23							
24	Income tax expense	(385,379)	(222,867)	(194,770)	(18,524)	335,875	268,353
25							
26	NET UTILITY OPERATING INCOME (LOSS) (A)	\$1,002,771	\$1,284,909	\$1,236,677	\$703,874	\$1,576,106	\$1,409,923
27							
28	RATE BASE (B)	\$18,947,158	\$18,947,158	\$19,778,566	\$19,775,484	\$19,775,484	\$19,775,484
29	RATE OF RETURN ON RATE BASE (C)	5.29%	6.78%	6.25%	3.56%	7.97%	7.13%
30							

C1-1 (CU)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1] - Support Sheet No. 1**  
**Support Sheet No. 1- Operating Expense and Going-Level Adjustments**

Line	Acct	Account Description	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020	Historic Year December 31, 2021	Adjust HTY to FTY	Future Test Year December 31, 2022	Adjust FTY to FPFTY	Fully	LABOR	LABOR
												Projected Future Test Year December 31, 2023	Future Test Year December 31, 2022	Projected Future Test Year December 31, 2023
1		<u>Distribution Expenses</u>												
2	842	Fuel	20,229	22,625	32,754	23,989	27,679	26,245	5,197	31,442	629	32,071	0	0
3	870	Labor Supv /Eng.	65,207	80,117	158,043	152,412	143,501	155,095	6,191	161,286	67,183	228,469	68,593	98,718
4	871	Distrib Load Disp	5,017	5,744	0	5,838	9,756	1,063	4,788	5,851	260	6,111	0	0
5	874	Mains & Services	407,629	425,516	449,306	459,476	387,097	398,302	44,840	443,142	21,852	464,994	135,743	144,437
6	875	Meas & Reg- Gen	45,070	59,771	49,259	59,266	76,371	77,321	5,392	82,714	3,511	86,225	28,690	30,374
7	876	Ind / Com Meters, Reg	53,818	53,967	65,404	67,015	74,823	82,052	6,846	88,899	4,317	93,215	33,497	35,464
8	877	Meas & Reg- City gate	54,341	36,856	45,852	59,375	54,772	43,642	(266)	43,376	1,637	45,013	6,162	6,524
9	878	Meters & House Reg	132,975	139,433	144,074	176,107	152,279	135,380	30,203	165,583	9,381	174,965	63,569	68,175
10	879	Cust installations	131,224	106,627	114,336	138,402	143,494	127,575	46,947	174,523	8,737	183,260	70,416	74,901
11	880	Other operating exp	2,555	3,642	3,893	3,958	4,416	4,393	(137)	4,256	85	4,341	0	0
12	881	Rents	2,626	1,045	1,871	3,180	3,917	4,773	1,050	5,823	1,281	7,104	0	0
13		<i>Total Operation</i>	920,691	935,343	1,064,792	1,149,018	1,078,105	1,055,842	151,053	1,206,895	118,873	1,325,767	406,670	458,593
14														
15	885	Super and eng	30,192	25,260	25,312	25,152	26,483	29,829	2,724	32,553	1,425	33,978	13,539	14,301
16	886	Structures & improve	26,214	26,268	37,189	64,471	46,330	21,942	3,608	25,550	1,033	26,583	9,576	10,101
17	887	Mains	86,503	89,888	56,809	69,915	76,018	85,519	6,690	92,209	3,576	95,785	27,736	29,365
18	889	Meas & Reg- Gen	22,205	34,174	27,158	28,849	64,814	79,831	23,324	103,155	4,355	107,510	36,655	38,807
19	890	Meas & Reg- Ind	24,466	18,825	17,371	29,058	48,581	46,434	14,668	61,102	(9,403)	51,699	16,040	16,982
20	891	Meas & Reg- City gate	8,130	6,827	11,207	8,438	14,376	15,270	291	15,560	662	16,222	5,464	5,785
21	892	Services	51,809	79,354	53,701	48,114	29,992	59,534	101	59,635	2,572	62,207	18,314	19,579
22	893	Meters & House Reg	104,484	65,985	56,282	60,147	122,720	62,779	21,542	84,321	4,632	88,954	26,829	28,936
23		<i>Total Maintenance</i>	354,003	346,581	285,029	334,144	429,314	401,137	72,948	474,085	8,852	482,938	154,153	163,856
24		<i>Total Distribution</i>	1,274,694	1,281,924	1,349,821	1,483,162	1,507,419	1,456,979	224,001	1,680,980	127,725	1,808,705	560,823	622,449

C1-1 (CU)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1] - Support Sheet No. 1**  
**Support Sheet No. 1- Operating Expense and Going-Level Adjustments**

Line	Acct	Account Description	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020	Historic Year December 31, 2021	Adjust HTY to FTY	Future Test Year December 31, 2022	Adjust FTY to FPFTY	Fully	LABOR	LABOR	
												Projected Future Test Year December 31, 2023	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023	
25															
26		<u>Customer Accounting &amp; Collection Expenses:</u>													
27	902	Meter Reading Exp	84,694	105,993	84,847	73,254	40,927	42,948	(13,548)	29,400	1,233	30,633	10,008	10,595	
28	903	Cust Rec & Coll Exp	432,803	448,576	467,964	484,462	469,847	544,861	30,526	575,387	16,277	591,664	178,585	186,180	
29	904	Uncollect Acct (Dist)	20,749	39,383	54,012	35,221	69,691	(19,622)	54,622	35,000	0	35,000	0	0	
30	905	Miscellaneous cust	4,132	15,190	28,364	21,602	22,690	22,877	633	23,510	470	23,980	0	0	
31	909	Info & Inst Advert	2,527	1,240	1,276	9,908	9,439	7,633	1,360	8,993	180	9,173	0	0	
32	913	Advertising	6,986	4,143	3,828	6,641	2,243	4,409	(255)	4,154	83	4,237	0	0	
33		<i>Total Cust Acct &amp; Coll</i>	551,891	614,525	640,291	631,088	614,837	603,108	73,336	676,444	18,243	694,687	188,593	196,775	
34															
35		<u>Administrative &amp; General Expenses:</u>													
36	920	A&G Salaries	443,785	522,229	442,616	486,687	494,299	557,944	38,819	596,762	14,337	611,099	248,780	257,617	
37	921	Office Supp & Exp	27,756	37,612	52,025	56,086	30,312	44,898	22,066	66,964	13,410	80,374	0	0	
38	923	Outside Services	69,145	77,054	115,613	140,566	69,740	56,267	11,006	67,273	3,053	70,326	0	0	
39	924	Property Insurance	10,930	11,156	11,456	12,350	14,721	16,358	1,990	18,348	2,759	21,107	0	0	
40	925	Injuries and damage	60,294	56,695	55,616	79,058	89,148	87,139	2,452	89,591	4,444	94,035	0	0	
41	926	Empl Pens & Bene	834	2,916	2,150	9,087	8,015	11,387	231	11,618	232	11,850	0	0	
42	928	Reg Comm Exp	41,372	38,446	35,992	33,470	148,136	122,392	797	123,189	(123,189)	0	0	0	
43	930	General advertising	49,049	52,295	73,436	70,951	123,762	67,795	8,886	76,681	2,500	79,181	0	0	
44	930CV	COVID-related	0	0	0	0	0	25,620	(25,620)	0	0	0	0	0	
45	932	Maint Gen plant	10,638	19,479	22,214	32,946	41,292	38,473	(8,939)	29,534	(29)	29,505	13,735	14,540	
46		<i>Total A&amp;G</i>	713,803	817,882	811,118	921,201	1,019,425	1,028,273	51,687	1,079,960	(82,483)	997,478	262,515	272,157	
47															
48		<b>Total Oper &amp; Maint</b>	<b>2,540,388</b>	<b>2,714,331</b>	<b>2,801,230</b>	<b>3,035,451</b>	<b>3,141,681</b>	<b>3,088,360</b>	<b>349,024</b>	<b>3,437,384</b>	<b>63,486</b>	<b>3,500,870</b>	<b>1,011,931</b>	<b>1,091,381</b>	
49															
50		Labor	790,833	827,348	859,534	921,836	994,791	921,705	90,226	1,011,931	79,450	1,091,381			
51		Transportation	114,959	143,350	150,543	176,859	139,265	127,971	24,122	152,093	11,940	164,033			
52		Material	237,057	258,927	247,422	275,112	240,749	212,869	64,957	277,826	7,317	285,143			
53		OH	969,471	1,018,242	1,005,589	1,075,311	1,054,579	1,186,815	124,087	1,310,902	73,862	1,384,764			
54		Other	428,068	466,464	538,142	586,302	695,793	642,059	38,505	680,564	(90,097)	590,467			
55			<b>2,540,388</b>	<b>2,714,331</b>	<b>2,801,230</b>	<b>3,035,420</b>	<b>3,125,177</b>	<b>3,091,419</b>	<b>341,897</b>	<b>3,433,316</b>	<b>82,472</b>	<b>3,515,788</b>			

**Rate Case with Fully Projected Future Test Year 2023 (CU)  
Adjustments and Reclasses Made for Corrections and Updates**

Line	Ref	Account	Schedule C1-1 Original					Adjustments Made in CU					Schedule C1-1 (CU)					
			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	
1	RE-2	870	152,412	143,501	155,095	168,984	240,616				(7,698)	(12,147)	152,412	143,501	155,095	161,286	228,469	
2	RE-3	874	459,445	387,732	398,302	426,192	448,230	31	(635)		16,950	16,764	459,476	387,097	398,302	443,142	464,994	
3		875	59,266	76,371	77,321	78,888	82,408				3,826	3,817	59,266	76,371	77,321	82,714	86,225	
4	RE-4	876	67,015	74,823	82,052	87,784	92,212				1,115	1,003	67,015	74,823	82,052	88,899	93,215	
5		877	59,375	54,772	43,642	42,694	44,337				682	676	59,375	54,772	43,642	43,376	45,013	
6	RE-5	878	176,107	147,886	135,380	161,318	170,977		4,393		4,265	3,988	176,107	152,279	135,380	165,583	174,965	
7	RE-6	879	138,402	143,494	127,575	176,136	185,278				(1,613)	(2,018)	138,402	143,494	127,575	174,523	183,260	
8		885	25,152	26,483	29,829	33,354	34,857				(801)	(879)	25,152	26,483	29,829	32,553	33,978	
9		886	64,471	46,330	21,942	25,590	26,660				(40)	(77)	64,471	46,330	21,942	25,550	26,583	
10		887	69,915	76,018	85,519	86,555	90,081				5,654	5,704	69,915	76,018	85,519	92,209	95,785	
11	RE-8	889	28,849	64,814	114,865	106,250	110,856			(35,034)	(3,095)	(3,346)	28,849	64,814	79,831	103,155	107,510	
12	RE-9	890	29,058	48,581	11,400	51,180	53,290			35,034	9,922	(1,591)	29,058	48,581	46,434	61,102	51,699	
13		891	8,438	14,376	15,270	15,242	15,918				318	304	8,438	14,376	15,270	15,560	16,222	
14	RE-10	892	48,114	29,992	59,534	57,157	59,762				2,478	2,445	48,114	29,992	59,534	59,635	62,207	
15	RE-11	893	60,147	122,720	62,779	81,378	86,118				2,943	2,836	60,147	122,720	62,779	84,321	88,954	
16		902	73,254	40,927	42,948	28,197	29,437				1,203	1,196	73,254	40,927	42,948	29,400	30,633	
17	RE-12	903	484,462	469,847	544,861	598,896	616,215				(23,509)	(24,551)	484,462	469,847	544,861	575,387	591,664	
18	RE-13	920	486,687	494,299	557,944	613,182	628,218				(16,420)	(17,119)	486,687	494,299	557,944	596,762	611,099	
19	RE-14	921	56,086	30,312	44,898	66,964	80,374						56,086	30,312	44,898	66,964	80,374	
20	RE-15	923	140,566	69,740	59,326	67,673	70,726			(3,059)	(400)	(400)	140,566	69,740	56,267	67,273	70,326	
21	RE-16	924	12,350	14,721	16,358	18,348	21,107						12,350	14,721	16,358	18,348	21,107	
22	RE-17	926	9,087	8,015	11,387	11,618	11,850						9,087	8,015	11,387	11,618	11,850	
23	RE-18	930	70,951	111,016	67,795	76,681	79,181						70,951	123,762	67,795	76,681	79,181	
24		932	32,946	41,292	38,473	21,246	21,028			12,746			32,946	41,292	38,473	29,534	29,505	
25	Total									<b>31</b>	<b>16,504</b>	<b>(3,059)</b>	<b>(6,932)</b>	<b>(14,518)</b>				

11-2 (CU)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Support Sheet No. 2- Summary of Cost of Capital and Fair Rate of Return Based upon a  
Hypothetical Ratemaking Capital Structure  
12/31/2023**

<u>Line</u>	<u>Type of Capital</u>	<u>Ratios (1)</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
1	Long-Term Debt	50.47%	4.49%	2.27%
2	Common Equity	49.53%	11.50%	5.70%
3	Total	<u>100.00%</u>		<u>7.97%</u>
4	TargetROR			<u>7.9700%</u>
5				
6	[1] Recommended hypothetical capital structure ratios as discussed in direct testimony.			

11-3 (CU)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 3- Taxes Other Than Income**

Line	Description	Historic Year December 31, 2021		Future Test Year December 31, 2022	PRESENT RATES Fully Projected Future Test Year December 31, 2023	PROPOSED RATES Fully Projected Future Test Year December 31, 2023
		Per Books	Distribution Only	Distribution Only	Distribution Only	Distribution Only
1	<u>Taxes other than income:</u>					
2	Pennsylvania Use Tax					
3	Public Utility Realty Tax	28,876	28,876	30,324	31,497	31,497
4	Pennsylvania PUC assessment	2,672	2,672	2,672	2,672	2,672
5		<u>\$31,548</u>	<u>\$31,548</u>	<u>\$32,996</u>	<u>\$34,169</u>	<u>\$34,169</u>
6						
7	Plant assets		37,148,890	39,011,655	40,520,766	40,520,766
8	Tax rate		0.07773%			
9						
10	<b>Rate case expense amortization</b>					
11	Estimated expenses				\$334,500	
12	Amortization period (years)				<u>3</u>	
13					\$111,500	
14	Recovery of COVID extraordinary costs		Schedule C1-7 (CU)		<u>10,859</u>	
15	Annual amortization expense				<u>\$122,359</u>	<u>\$122,359</u>

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 4- Income Tax Calculations**

Line	Description	Historic Year December 31, 2021		Future Test Year	PRESENT RATES	FULL REVENUE	PROPOSED RATES	
		Per Books	Distribution Only	December 31, 2022	Fully Projected Future Test Year December 31, 2023	REQUIREMENT Fully Projected Future Test Year December 31, 2023	Fully Projected Future Test Year December 31, 2023	
1	Net Operating Income Excluding Income Taxes	\$617,392	\$1,062,042	\$1,041,907	\$685,350	\$1,911,981	\$1,678,275	
2								
3	<u>Non-Operating Expenses:</u>							
4	Synchronized interest expense:							
5	Rate base	18,947,158	18,947,158	19,778,566	19,775,484	19,775,484	19,775,484	
6	Less: CWIP	(18,028)	(18,028)	(18,028)	(18,028)	(18,028)	(18,028)	
7	Rate base for interest computation	18,929,130	18,929,130	19,760,538	19,757,456	19,757,456	19,757,456	
8	Weighted Cost of debt	2.270%	2.270%	2.270%	2.270%	2.270%	2.270%	
9	Synchronized interest expense	429,691	429,691	448,564	448,494	448,494	448,494	
10	Taxable income before depreciation tax adjustments	187,700	632,350	593,343	236,856	1,463,487	1,229,781	
11								
12	<u>Pennsylvania depreciation adjustment:</u>							
13	Tax depreciation (using DDB method)	(1,643,478)	(1,643,478)	(1,484,706)	(1,887,016)	(1,887,016)	(1,887,016)	
14	Book depreciation	1,063,704	1,063,704	937,616	1,178,428	1,178,428	1,178,428	
15	Pennsylvania depreciation adjustment	(579,774)	(579,774)	(547,090)	(708,588)	(708,588)	(708,588)	
16	Pennsylvania taxable income	(392,073)	483,931	390,526	(471,732)	754,899	521,193	
17	Regulatory Pennsylvania income tax expense	9.99%	(39,168)	48,345	39,014	(47,126)	75,414	52,067
18								
19	<u>Federal depreciation adjustment:</u>							
20	Tax depreciation (using SL method)	(2,895,636)	(2,895,636)	(2,561,639)	(1,282,651)	(1,282,651)	(1,282,651)	
21	Book depreciation	1,063,704	1,063,704	937,616	1,178,428	1,178,428	1,178,428	
22	Federal depreciation adjustment	(1,831,932)	(1,831,932)	(1,624,023)	(104,223)	(104,223)	(104,223)	
23								
24	Taxable income before depreciation tax adjustments	187,700	632,350	593,343	236,856	1,463,487	1,229,781	
25	Federal depreciation adjustment	(1,831,932)	(1,831,932)	(1,624,023)	(104,223)	(104,223)	(104,223)	
26	Pennsylvania income tax expense	39,168	(48,345)	(39,014)	47,126	(75,414)	(52,067)	
27	Federal taxable income	(1,605,063)	(1,247,926)	(1,069,694)	179,759	1,283,850	1,073,491	
28	Regulatory Federal income tax expense	21.00%	(337,063)	(262,064)	(224,636)	37,749	269,608	225,433
29	EDIT Accretion	(9,148)	(9,148)	(9,148)	(9,148)	(9,148)	(9,148)	
30	Regulatory Total income tax expense		(\$385,379)	(\$222,867)	(\$194,770)	(\$18,524)	\$335,875	\$268,353
31								
32	<u>Deferred Federal Income Tax expense (included in above):</u>							
33	Tax depreciation (using SL method)	2,895,636	2,895,636	2,561,639	1,282,651	1,282,651	1,282,651	
34	Tax depreciation (using DDB method)	1,643,478	1,643,478	1,484,706	1,887,016	1,887,016	1,887,016	
35		(1,252,158)	(1,252,158)	(1,076,933)	604,365	604,365	604,365	
36	Federal tax rate	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%	
37	Deferred Federal income tax (credit)		(\$262,953)	(\$226,156)	\$126,917	\$126,917	\$126,917	
38	<b>Combined statutory tax rate</b>		<b>28.89%</b>					





1-6 (C)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 6- Computation of Rate Base**

Line	Description	Source	12/31/2017	Historic Year December 31, 2021	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023
1	<u>Utility Plant in Service</u>					
2	Assets	Schedule C3		\$ 37,148,890	\$ 39,011,655	\$ 40,520,766
3	Less: Accumulated Depreciation	Schedule C3		(17,226,992)	(18,302,157)	(19,618,136)
4				19,921,899	20,709,498	20,902,631
5	Construction work in progress	Schedule C2		18,028	18,028	18,028
6	Less: Accumulated deferred income taxes	Line 33		(251,718)	(253,856)	(467,154)
7	Less: Excess deferred income taxes (EDIT)	Line 40		(82,329)	(73,182)	(64,034)
8	Less: Customer deposits	Schedule C2		(410,578)	(410,578)	(410,578)
9	Natural gas inventories- avg balance for year	Workpaper 5 to Sch C		1,413,315	1,413,315	1,413,315
10	Unbundled, to be Recovered in GCR	To Schedule C4		(1,413,315)	(1,413,315)	(1,413,315)
11	Accrued OPEB Liability / OPEB asset, net	Line 47		(834,426)	(834,426)	(834,426)
12	Materials & Supplies	Schedule C2		197,784	197,784	197,784
13				18,558,660	19,353,268	19,342,250
14	Cash Working Capital Allowance	Line 26		388,498	425,298	433,234
15	<b>RATE BASE</b>			<b>\$ 18,947,158</b>	<b>\$ 19,778,566</b>	<b>\$ 19,775,484</b>
16						

1-6 (C)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 6- Computation of Rate Base**

Line	Description	Source	12/31/2017	Historic Year December 31, 2021	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023
17	<u>Cash Working Capital Allowance:</u>					
18	Operating Expenses	Schedule C1		\$ 7,834,420	\$ 4,407,996	\$ 4,835,825
19						
20	Deductions:					
21	Purchased Gas	Schedule C1		3,650,808	0	0
22	Depreciation Expense, Uncollectible, TOTI	Schedule C1		1,075,631	1,005,612	1,369,956
23	Total Deductions			<u>4,726,439</u>	<u>1,005,612</u>	<u>1,369,956</u>
24	Cash Operating Expenses			3,107,982	3,402,384	3,465,870
25	Cash Operating Expenses Ratio			1/8	1/8	1/8
26	Cash Working Capital Allowance			<u>\$ 388,498</u>	<u>\$ 425,298</u>	<u>\$ 433,234</u>
27						
28	<u>Regulatory Accumulated deferred income tax:</u>					
29	Accumulated depreciation based on tax expense borne by ratepayers			32,740,763	35,277,257	36,492,535
30	Accumulated depreciation based on taxes paid by company			33,939,419	36,486,095	38,717,080
31	(Excess) depreciation taken by company			(1,198,656)	(1,208,838)	(2,224,545)
32	Federal tax rate			21.00%	21.00%	21.00%
33	Regulatory Accumulated deferred income tax (liability)			<u>\$ (251,718)</u>	<u>\$ (253,856)</u>	<u>\$ (467,154)</u>
34						
35	<u>Excess deferred income tax:(EDIT)</u>					
36	Accumulated depreciation based on tax expense borne by ratepayers		23,781,445	Use actual for 2020		
37	Accumulated depreciation based on taxes paid by company		24,485,114	Use actual for 2020		
38	(Excess) depreciation taken by company		(703,669)			
39	Change in Federal tax rate			13.00%		
40	Excess deferred income tax:(EDIT)			<u>(91,477)</u>	(82,329)	(73,182)
41	Annual Amortization	10		(9,148)	(9,148)	(9,148)
42						
43	<u>Accrued OPEB Liability / OPEB asset, net</u>					
44	Accrued postretirement cost			(674,095)	(674,095)	(674,095)
45	Regulatory asset- OPEB			(354,467)	(354,467)	(354,467)
46	Deferred tax asset related to OPEB			194,137	194,137	194,137
47				<u>(834,426)</u>	<u>(834,426)</u>	<u>(834,426)</u>
48						
49	OPEB Expense (for future rate cases)			17,964	21,825	22,480

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Extraordinary Coronavirus Pandemic Costs**

Line	Description	Amount		
1	Carrying charge on Excess AR, 2021	7.231%	4,094	
2	Carrying charge on Excess AR, 2022	7.231%	4,390	
3	Extraordinary costs		18,075	
4	Carrying charge on costs		1,441	
5	Total Costs to 12/31/2022		<u>27,999</u>	
6	Carrying rate and Recovery period, years	7.970%	3.0	
7	<b>Annual amount</b>	To Schedule C1-3 (CU)	<b>10,859</b>	
9	<b>AR Balances</b>	2022	2020-2021	2019
10	January	427,437	473,053	
11	February		634,171	
12	March		630,723	
13	April		549,524	
14	May		533,738	
15	June		367,012	
16	July		246,396	
17	August		207,367	
18	September		176,208	
19	October		159,553	
20	November		233,317	
21	December		488,388	
22	January		674,954	380,762
23	February		957,443	748,983
24	March		667,328	646,726
25	April		561,512	570,343
26	May		509,913	402,955
27	June		313,304	271,372
28	July		174,802	119,234
29	August		140,215	73,396
30	September		10,311	12,290
31	October		(47,919)	(34,584)
32	November		38,064	158,052
33	December		306,522	346,811
34	Next January		427,437	473,053
35	Average		<u>377,333</u>	<u>320,723</u>
36	<b>Excess AR</b>		<b>56,611</b>	
38	<b>Extraordinary Costs</b>	Total	2021	2020
39	Materials and Other	18,075	2,979	15,097
40		<u>18,075</u>	<u>2,979</u>	<u>15,097</u>

1-8 (CU)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Comparison to Prior Rate Case  
Prior Rate Case and Fully Projected Future Test Year December 31, 2023**

Line	Description	Fully Projected Future Test Year December 31, 2023	R-2019-3008209, Order	Difference- Needs Higher (Lower) Revenue
1	Revenue	5,521,175	5,528,407	7,232
2	<i>ccf</i>	35,049,281	26,569,046	
3				
4				
5	O&M	3,500,870	2,995,053	505,816
6	Taxes other than income, Rate Case	156,528	124,629	31,899
7	Depreciation	1,178,428	970,394	208,034
8	Income tax	335,875	191,302	144,573
9				
10	Rate Base	\$19,775,484	\$17,159,915	
11	Required Return	7.97%	7.27%	
12	Target Return	1,576,106	1,247,526	328,580
13				1,226,134
14	Uncollectibles	0.675%		8,278
15				
16	Rounding			501
17	Revenue Increase Required at Recommended Return			1,234,913
18	Per Schedule C1			1,234,913
19				

22 (CU)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Balance Sheets**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[2]**

Line	Account Title	Per Books 12/31/2021	Pro Forma 12/31/2022	Pro Forma 12/31/2023
1	<b>Assets and Other Debits</b>			
2	<u>Utility Plant</u>			
12	Gas plant in service for ratemaking	\$37,148,890	\$39,011,655	\$40,520,766
13	Adjustments, net	2,803,614	668,128	551,492
14	Construction work in progress	18,028	18,028	18,028
15	Accumulated depreciation for ratemaking	(17,226,992)	(18,302,157)	(19,618,136)
16	<i>Total utility plant</i>	22,743,541	21,395,654	21,472,150
17				
18	<u>Other Property and Investments:</u>			
19	RS Plan Prepayment	94,000	94,000	94,000
20	Regulatory asset	120,444	120,444	120,444
21	<i>Total other property and investments</i>	214,444	214,444	214,444
22				
23	<u>Current Assets:</u>			
24	Cash	1,052,864	1,052,864	1,052,864
25	Customer accounts receivable	1,749,225	1,749,225	1,749,225
26	Unrecovered Gas costs	469,803		
27	Advances to affiliates	886,606	886,606	886,606
28	Natural gas inventories	1,104,108	1,104,108	1,104,108
29	Materials and supplies	197,784	197,784	197,784
30	Prepayments	417,458	417,458	417,458
31	<i>Total current assets</i>	5,877,848	5,408,045	5,408,045
32				
33	<b>Total Assets and Other Debits</b>	<b>\$28,835,833</b>	<b>\$27,018,143</b>	<b>\$27,094,639</b>
34				

22 (CU)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**

**Balance Sheets**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[2]**

Line	Account Title	Per Books 12/31/2021	Pro Forma 12/31/2022	Pro Forma 12/31/2023
35	<b>Liabilities and Other Credits</b>			
36	<u>Proprietary Capital:</u>			
37	Common stock Issued	\$768,293	\$768,293	\$768,293
38	Retained earnings	12,117,554	13,354,231	14,058,105
39	<i>Total proprietary capital</i>	12,885,847	14,122,524	14,826,398
40				
41	<u>Long-Term Debt:</u>			
42	Long Term Debt incl Cap Leases	6,426,643	5,572,106	4,717,569
43	<i>Total long-term debt</i>	6,426,643	5,572,106	4,717,569
44				
45	<u>Current and Accrued Liabilities:</u>			
46	Cash (over) under	2,500,000	300,171	527,330
47	Current maturities of Long Term Debt	854,537	854,537	854,537
48	Accounts payable and accruals	659,118	659,118	659,118
49	Due for purchased gas	1,067,022	1,067,022	1,067,022
50	Customer deposits	410,578	410,578	410,578
51	Over collected gas costs		0	0
52	<i>Total current and accrued liabilities</i>	5,491,255	3,291,426	3,518,585
53				
54	<u>Deferred Credits and Other Liabilities:</u>			
55	Deferred taxes	2,838,100	2,838,100	2,838,100
56	Accrued postretirement cost	759,431	759,431	759,431
57	Regulatory liability	434,556	434,556	434,556
58	<i>Total deferred credits</i>	4,032,087	4,032,087	4,032,087
59				
60	<b>Total Liabilities and Other Credits</b>	<b>\$28,835,832</b>	<b>\$27,018,143</b>	<b>\$27,094,639</b>









## Rate Case with Fully Projected Future Test Year 2023

## Original Cost of Utility Plant in Service

Years Ended 12/31/2021, 12/31/2022 and 12/31/202

Answer to 52 Pa. Code 53.52 c[3]

Line	Acct No.	Account Title	Accumulated Depreciation			Accumulated Depreciation				
			12/31/2017	Year 2018	Year 2018	12/31/2018	Year 2019	Year 2019	12/31/2019	
			Depr. Rate	Per Books	Depr Exp	Removal	Per Books	Depr Exp	Removals	Balance
1		<i>Distribution Plant.</i>								
2	114	Gas Plant Acquisition Adjustment	3.47%	2,109,977	116,637		2,226,614	116,637		2,343,250
3	366	Trans. Structures and improvements	0.62%	3,909	379		4,288	405		4,692
4	367	Trans. Mains	1.79%	988,738	34,746		1,023,484	34,746		1,058,231
5	369	Trans. Meas / Reg Sta Equip	4.40%	543,234	131,026		674,260	132,600		806,860
6	369A	Customer	4.40%		0		0	0		0
7	375	Structures and improvements	2.63%	74,264	2,352		76,616	3,835		80,451
8	376S	Mains- Steel	3.15%	2,016,306	101,686	(8,144)	2,109,848	110,333	(18,783)	2,201,398
9	376P	Mains- Plastic	2.02%	2,687,923	161,351	(14,077)	2,835,197	167,246	(27,745)	2,974,698
10	378	Meas / Reg Sta Equip	6.72%	755,259	55,696	(961)	809,994	60,379	(7,590)	862,783
11	380S	Services- Steel	3.04%	177,536	16,255	(10,878)	182,913	16,546	(10,798)	188,662
12	380P	Services- Plastic	3.41%	2,686,143	253,255	(30,048)	2,909,350	263,020	(52,653)	3,119,718
13	381	Meters	2.74%	756,603	45,487		802,090	46,747		848,838
14	381AMR	Transponders- Old	2.74%	119,388	24,054		143,442	29,116		172,558
15	381T	Transponders- New	2.74%		0		0	0		0
16	381AMR	Meters-AMR	2.74%		0		0	1,739		1,739
17		Meters-Protection	2.74%		0		0	0		0
18	383	House regulators	3.22%	188,884	9,702		198,586	9,923		208,509
19	385	Indu Meas / Reg Sta Equip	4.11%	605,058	36,064		641,122	37,477		678,599
20	387	Other equipment	3.66%	5,103	365		5,468	365		5,833
21		Total Distribution Plant		13,718,325	989,055	(64,108)	14,643,272	1,031,115	(117,569)	15,556,819
22										
23		<i>General Plant</i>								
24	390	Structures & Improvements	2.43%	531,688	28,361		560,049	34,518		594,567
25		Warehouse Furniture			0		0	0		0
26	391	Office Furniture & Equipment	6.75%	73,244	6,200		79,444	15,630	17,132	112,206
27	391C	Computer equipment	6.75%	427,454	35,245		462,699	35,245		497,944
28	392	Transportation Equipment	12.00%	500,757	106,486		607,243	115,729		722,972
29	393	Stores Equipment	6.67%	10,348	1,995		12,343	1,995		14,338
30	394	Tools, Shop & Garage Equipment	5.00%	564,984	24,179	137	589,300	26,222	10,634	626,156
31	396	Power Operated / Communication	6.67%	91,574	14,000		105,574	17,810	(64,266)	59,118
32		Fully Depreciated			0		0	0		0
33	398	Miscellaneous Equipment	0.00%	(9,781)	0		(9,781)	0		(9,781)
34	301	Intangible plant, organization	0.00%		0		0	0		0
35	304	MGP , Tx-Dx-Gen ROW	0.00%		0		0	0		0
36		Total General Plant		2,190,268	216,465	137	2,406,870	247,149	(36,500)	2,617,519
37										
38		Less: Acquisition, CIAC		(2,109,977)	(116,637)	0	(2,226,614)	(116,637)	0	(2,343,250)
39		Total Plant in Service		\$13,798,616	\$1,088,884	(\$63,971)	\$14,823,529	\$1,161,627	(\$154,069)	\$15,831,087
40		Less: Clearing, Charged to NY			(117,664)			(148,573)		
41					\$971,220			\$1,013,055		

## Rate Case with Fully Projected Future Test Year 2023

## Original Cost of Utility Plant in Service

Years Ended 12/31/2021, 12/31/2022 and 12/31/202

Answer to 52 Pa. Code 53.52 c[3]

Line	Acct No.	Account Title	Accumulated Depreciation			Accumulated Depreciation				
			Year 2020	Year 2020	12/31/2020	Year 2021	Year 2021	12/31/2021		
			Depr Exp	Removals	Balance	Depr Exp	Removals	Balance		
1		<i>Distribution Plant.</i>								
2	114	Gas Plant Acquisition Adjustment	116,637		2,459,887	116,637		2,576,524		
3	366	Trans. Structures and improvements	431		5,124	630	(420)	5,334		
4	367	Trans. Mains	34,746		1,092,977	34,746	(2,443)	1,125,280		
5	369	Trans. Meas / Reg Sta Equip	132,682		939,542	13,077	(738,751)	213,868		
6	369A	Customer	0		0	0	741,614	741,614		
7	375	Structures and improvements	5,297		85,749	5,297		91,046		
8	376S	Mains- Steel	118,861	(12,625)	2,307,634	118,679	(7,751)	2,418,562		
9	376P	Mains- Plastic	180,255	(80,967)	3,073,985	197,401	(59,769)	3,211,618		
10	378	Meas / Reg Sta Equip	69,362	(13,650)	918,495	75,272	(14,106)	979,661		
11	380S	Services- Steel	16,727	(14,930)	190,458	16,685	(10,419)	196,725		
12	380P	Services- Plastic	271,164	(64,662)	3,326,220	282,900	(42,457)	3,566,662		
13	381	Meters	48,637		897,474	49,977		947,451		
14	381AMR	Transponders- Old	29,116		201,674	27,680		229,355		
15	381T	Transponders- New	0		0	0		0		
16	381AMR	Meters-AMR	5,235		6,974	7,085		14,059		
17		Meters-Protection	0		0	245		245		
18	383	House regulators	10,195		218,704	10,326		229,029		
19	385	Indu Meas / Reg Sta Equip	38,125		716,723	38,066		754,790		
20	387	Other equipment	365		6,199	365		6,564		
21		Total Distribution Plant	1,077,835	(186,834)	16,447,820	995,068	(134,502)	17,308,386		
22										
23		<i>General Plant</i>								
24	390	Structures & Improvements	38,350		632,917	47,731		680,648		
25		Warehouse Furniture	0		0	0		0		
26	391	Office Furniture & Equipment	33,402		145,607	48,166		193,773		
27	391C	Computer equipment	35,245	(11,039)	522,150	36,213		558,363		
28	392	Transportation Equipment	125,344		848,316	133,974	(114,818)	867,472		
29	393	Stores Equipment	1,995		16,332	2,086		18,418		
30	394	Tools, Shop & Garage Equipment	29,369	1,481	657,006	30,709		687,714		
31	396	Power Operated / Communication	21,537	7,239	87,894	23,946		111,840		
32		Fully Depreciated	0	11,039	11,039	0	117,258	128,297		
33	398	Miscellaneous Equipment	0		(9,781)	0		(9,781)		
34	301	Intangible plant, organization	0		0	0		0		
35	304	MGP , Tx-Dx-Gen ROW	0		0	0		0		
36		Total General Plant	285,242	8,720	2,911,481	322,824	2,440	3,236,744		
37										
38		Less: Acquisition, CIAC	(116,637)	0	(2,459,887)	(116,637)	(741,614)	(3,318,138)		
39		Total Plant in Service	\$1,246,440	(\$178,114)	\$16,899,413	\$1,201,254	(\$873,676)	\$17,226,992		
40		Less: Clearing, Charged to NY	(142,769)			(137,550)				
41			\$1,103,671			\$1,063,704				

## Rate Case with Fully Projected Future Test Year 2023

## Original Cost of Utility Plant in Service

Years Ended 12/31/2021, 12/31/2022 and 12/31/202

Answer to 52 Pa. Code 53.52 c[3]

Line	Acct No.	Account Title	Accumulated Depreciation			Accumulated Depreciation			
			Year 2022	Year 2022	12/31/2022	Year 2023	Year 2023	12/31/2023	
			Depr Exp	Removals	Balance	Depr Exp	Removals	Balance	
1		<i>Distribution Plant.</i>							
2	114	Gas Plant Acquisition Adjustment	116,637		2,693,161	116,637			2,809,797
3	366	Trans. Structures and improvements	1,178		6,512	1,639			8,151
4	367	Trans. Mains	34,350		1,159,630	34,350			1,193,979
5	369	Trans. Meas / Reg Sta Equip	14,138		228,006	15,199			243,205
6	369A	Customer	121,460		863,074	121,460			984,535
7	375	Structures and improvements	5,297		96,343	5,297			101,640
8	376S	Mains- Steel	118,604		2,537,166	119,197			2,656,363
9	376P	Mains- Plastic	207,194		3,418,811	211,145			3,629,956
10	378	Meas / Reg Sta Equip	82,352		1,062,013	101,894			1,163,907
11	380S	Services- Steel	16,724		213,449	16,835			230,284
12	380P	Services- Plastic	297,247		3,863,910	312,719			4,176,628
13	381	Meters	50,802		998,253	51,895			1,050,148
14	381AMR	Transponders- Old	27,680		257,035	27,680			284,715
15	381T	Transponders- New	217		217	433			650
16	381AMR	Meters-AMR	7,178		21,237	7,178			28,415
17		Meters-Protection	490		735	490			1,224
18	383	House regulators	10,413		239,442	10,529			249,971
19	385	Indu Meas / Reg Sta Equip	39,560		794,350	41,271			835,622
20	387	Other equipment	365		6,929	365			7,294
21		Total Distribution Plant	1,151,886		18,460,272	1,196,213			19,656,485
22									
23		<i>General Plant</i>							
24	390	Structures & Improvements	59,787		740,434	63,511			803,946
25		Warehouse Furniture	0		0	0			0
26	391	Office Furniture & Equipment	59,093		252,866	70,683			323,548
27	391C	Computer equipment	(117,258)		441,105	0			441,105
28	392	Transportation Equipment	142,706		1,010,178	161,486			1,171,663
29	393	Stores Equipment	2,176		20,594	2,176			22,771
30	394	Tools, Shop & Garage Equipment	(9,273)		678,441	35,310			713,751
31	396	Power Operated / Communication	24,146		135,986	24,696			160,683
32		Fully Depreciated	0		128,297	0			128,297
33	398	Miscellaneous Equipment	0		(9,781)	0			(9,781)
34	301	Intangible plant, organization	0		0	0			0
35	304	MGP , Tx-Dx-Gen ROW	0		0	0			0
36		Total General Plant	161,377		3,398,120	357,862			3,755,982
37									
38		Less: Acquisition, CIAC	(238,097)	0	(3,556,235)	(238,097)	0		(3,794,332)
39		Total Plant in Service	\$1,075,166		\$18,302,157	\$1,315,978			\$19,618,136
40		Less: Clearing, Charged to NY	(\$137,550)			(\$137,550)			
41			\$937,616			\$1,178,428			

WP (CU)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**  
**INDEX TO WORKPAPERS**

<u>Line</u>	<u>SCHEDULE</u>	<u>DESCRIPTION</u>	<u>PERIOD</u>
1	Index To Workpapers		
2	<a href="#">Workpaper 1 to Schedule B (CU)</a>	Monthly Billing Units, Rates And Revenue	Historic Year December 31, 2021- Present Rates
3	<a href="#">Workpaper 1 to Schedule C (CU)</a>	Historic O&M	Years 2016 through 2020
4	<a href="#">Workpaper 2 to Schedule C (CU)</a>	Historic O&M	Historic Year December 31, 2021
5	<a href="#">Workpaper 3 to Schedule C (CU)</a>	Future O&M	Years 2022 and 2023
6	<a href="#">Workpaper 4 to Schedule C (CU)</a>	Accumulated Deferred Income Taxes	Years 2017 through 2023
7	<a href="#">Workpaper 5 to Schedule C (CU)</a>	Gas Inventory Balances	Years 2014 through 2023
8			

'1\_B (Valley Energy Company (PA))  
 Rate Case with Fully Projected Future Test Year 2023 (CU)  
 Workpaper 1 to Schedule B (CU)  
 Monthly Billing Units, Rates And Revenue  
 Historic Year December 31, 2021- Present Rates

Line		Rate R- Residential	Rate C- Commercial	Rate IS- Interruptible Service	Rate SI- Small Industrial	Rate ST- Transport Firm	Transport Firm- Contract	Transport. Firm- DDQ	Transport. Interruptible	
1		<b>BILLING UNITS</b>								
2		<b>ccf Sales Historic Year December 31, 2021</b>								
3	Jan-21	983,277	429,608	1,050	12,763	208,545	1,692,860	150,853	692,348	4,171,304
4	Feb-21	1,082,674	477,587	0	14,318	247,804	1,621,060	169,360	625,335	4,238,138
5	Mar-21	947,368	409,380	0	13,920	231,387	1,496,660	147,646	604,098	3,850,459
6	Apr-21	624,295	259,293	10,190	8,963	250,553	1,279,530	104,361	487,616	3,024,801
7	May-21	397,048	167,502	37,550	4,909	250,663	1,309,870	70,410	540,872	2,778,824
8	Jun-21	187,084	77,602	121,430	1,992	217,275	1,121,640	35,594	480,983	2,243,600
9	Jul-21	83,812	52,161	72,860	648	176,885	915,810	24,140	435,018	1,761,334
10	Aug-21	74,323	53,384	109,130	793	198,219	1,182,120	24,459	380,323	2,022,751
11	Sep-21	71,162	48,547	117,500	622	165,241	1,146,870	23,193	392,642	1,965,777
12	Oct-21	95,094	58,228	80,730	1,105	203,848	1,245,050	28,386	510,320	2,222,761
13	Nov-21	304,311	142,063	84,930	2,967	229,451	1,417,270	59,865	577,345	2,818,202
14	Dec-21	747,600	320,251	64,840	9,875	186,901	1,406,910	108,928	549,277	3,394,582
15		<u>5,598,048</u>	<u>2,495,606</u>	<u>700,210</u>	<u>72,875</u>	<u>2,566,772</u>	<u>15,835,650</u>	<u>947,195</u>	<u>6,276,177</u>	<u>34,492,533</u>
16	<i>Check to Forecast file</i>	<u>5,598,048</u>	<u>2,495,606</u>	<u>700,210</u>	<u>72,875</u>	<u>18,402,422</u>		<u>947,195</u>	<u>6,276,177</u>	<u>34,492,533</u>
17		<b>Customers Historic Year December 31, 2021</b>								
18	Jan-21	6,337	834	3	4	12	2	57	4	7,253
19	Feb-21	6,344	832	3	4	12	2	58	4	7,259
20	Mar-21	6,342	834	3	4	12	2	58	4	7,259
21	Apr-21	6,304	830	3	4	12	2	57	4	7,216
22	May-21	6,268	825	3	4	12	2	57	4	7,175
23	Jun-21	6,247	825	3	4	12	2	56	4	7,153
24	Jul-21	6,238	825	3	4	12	2	56	4	7,144
25	Aug-21	6,234	825	3	4	12	2	55	4	7,139
26	Sep-21	6,263	824	3	4	12	2	55	4	7,167
27	Oct-21	6,324	832	3	4	12	2	56	4	7,237
28	Nov-21	6,384	843	3	4	12	2	56	4	7,308
29	Dec-21	6,397	846	3	4	12	2	56	4	7,324
30	Annual Bills	<u>75,682</u>	<u>9,975</u>	<u>36</u>	<u>48</u>	<u>144</u>	<u>24</u>	<u>677</u>	<u>48</u>	<u>86,634</u>
31	Average Monthly Bills	<u>6,307</u>	<u>831</u>	<u>3</u>	<u>4</u>	<u>12</u>	<u>2</u>	<u>56</u>	<u>4</u>	<u>7,220</u>

'1\_B (Valley Energy Company (PA))  
 Rate Case with Fully Projected Future Test Year 2023 (CU)  
 Workpaper 1 to Schedule B (CU)  
 Monthly Billing Units, Rates And Revenue  
 Historic Year December 31, 2021- Present Rates

Line		Rate R- Residential	Rate C- Commercial	Rate IS- Interruptible Service	Rate SI- Small Industrial	Rate ST- Transport Firm	Transport Firm- Contract	Transport. Firm- DDQ	Transport. Interruptible		
32	<b>RATES AND CHARGES</b>										
33	<b>Tariff Rates</b>										
34	Customer Charge	Tariff	\$11.79	\$20.21	\$75.23	\$75.23	\$75.23	\$0.00	\$20.21	\$75.23	
35											
36	Commodity Block 1		\$0.28723	\$0.22553	\$0.071800	\$0.154400	\$0.154400	\$0.047000	\$0.225530	\$0.071800	12/20-11/21 -
37	Commodity Block 2						\$0.047500				12/21-11/22 -
38	Commodity Block 3						9.2%				
39	Commodity Block 4						Dec ccf %				
40											
41	Demand Block 1										
42	Demand Block 2										
43	GCR Jan-Oct	\$0.34856	\$0.34856	\$0.34856	\$0.34856		\$38,000				Contract-1, 10/20-9/21, monthly
44	GCR Nov-Dec	\$0.41748	\$0.41748	\$0.41748	\$0.41748		\$39,629				Contract-1, 10/21-9/22, monthly





'1\_B (Valley Energy Company (PA))  
 Rate Case with Fully Projected Future Test Year 2023 (CU)  
 Workpaper 1 to Schedule B (CU)  
 Monthly Billing Units, Rates And Revenue  
 Historic Year December 31, 2021- Present Rates

Line		Rate R- Residential	Rate C- Commercial	Rate IS- Interruptible Service	Rate SI- Small Industrial	Rate ST- Transport Firm	Transport Firm- Contract	Transport. Firm- DDQ	Transport. Interruptible	
76		<b>GCR Revenue</b>								
77	Jan-21	\$342,731	\$149,744	\$366	\$4,449					\$497,290
78	Feb-21	377,377	166,468	0	4,991					548,835
79	Mar-21	330,215	142,693	0	4,852					477,760
80	Apr-21	217,604	90,379	3,552	3,124					314,659
81	May-21	138,395	58,384	13,088	1,711					211,579
82	Jun-21	65,210	27,049	42,326	694					135,279
83	Jul-21	29,214	18,181	25,396	226					73,017
84	Aug-21	25,906	18,608	38,038	276					82,828
85	Sep-21	24,804	16,922	40,956	217					82,898
86	Oct-21	33,146	20,296	28,139	385					81,966
87	Nov-21	127,044	59,308	35,457	1,239					223,047
88	Dec-21	312,108	133,698	27,069	4,123					476,998
89		<b>\$2,023,753</b>	<b>\$901,731</b>	<b>\$254,387</b>	<b>\$26,286</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,206,158</b>
90		<b>Total Revenue</b>								
91		<b>Total Revenue</b>								
92	Jan-21	\$699,871	\$263,489	\$667	\$6,720	\$33,102	\$75,796	\$35,174	\$50,012	\$1,164,830
93	Feb-21	763,149	290,993	226	7,502	39,164	73,108	39,368	45,200	1,258,709
94	Mar-21	677,099	251,876	226	7,302	36,629	71,470	34,471	43,675	1,122,748
95	Apr-21	471,245	165,632	4,509	4,809	39,588	66,171	24,689	35,312	811,954
96	May-21	326,339	112,834	16,010	2,770	39,605	63,398	17,032	39,136	617,124
97	Jun-21	192,598	61,224	51,270	1,303	34,450	61,267	9,159	34,835	446,107
98	Jul-21	126,833	46,618	30,853	627	28,214	52,926	6,576	31,535	324,182
99	Aug-21	120,753	47,320	46,100	700	31,508	63,925	6,628	27,608	344,541
100	Sep-21	119,085	44,523	49,618	614	26,416	63,011	6,342	28,493	338,101
101	Oct-21	135,020	50,243	34,161	857	32,377	66,537	7,534	36,942	363,670
102	Nov-21	289,718	108,385	41,780	1,998	36,330	69,296	14,633	41,754	603,895
103	Dec-21	602,262	223,022	31,951	5,948	29,760	71,054	25,698	39,739	1,029,435
104		<b>\$4,523,971</b>	<b>\$1,666,160</b>	<b>\$307,371</b>	<b>\$41,149</b>	<b>\$407,143</b>	<b>\$797,959</b>	<b>\$227,303</b>	<b>\$454,241</b>	<b>\$8,425,296</b>

/P1_C (CU) Valley Energy Company (PA)			rAcct	rType	rHist16	rHist17	rHist18	rHist19	rHist20
<b>Rate Case with Fully Projected Future Test Year 2023 (CU)</b>					-	-	-	-	-
<b>Workpaper 1 to Schedule C (CU)</b>									
<b>Historic O&amp;M</b>									
<b>Years 2016 through 2020</b>									
Line:	Account	Description	Acct	Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual
1	6.	Distribution Expense - Operation							
2	842.1	FUEL (COMPANY USE)	842	Other	20,229	22,625	32,754	23,989	27,679
3	870.01	LABOR OPER SUPR & ENG	870	Labor	26,277	34,194	66,749	66,896	66,495
4	870.02	TRANSP OPER SUPR & ENG	870	Trans	4,504	3,557	4,925	3,921	1,991
5	870.03	C&T OH OPER SUPR & ENG	870	OH	6,030	7,744	14,918	13,425	13,053
6	870.05	VE OH OPER SUPR & ENG	870	OH	28,077	34,622	65,825	68,113	61,962
7	870.45	MAT & SUP OPER SUPR & ENG	870	Mat	319	-	5,626	57	-
8	871.45	DISTRIB LOAD DISPATCHING	871	Mat	5,017	5,744	-	5,838	9,756
9	874.01	LABOR MAINS & SERV EXP	874	Labor	138,332	144,802	153,323	147,918	123,297
10	874.02	TRANSP MAINS & SERVICE EXP	874	Trans	25,669	31,447	39,673	44,294	33,742
11	874.03	C&T OH MAINS & SERVICE EXP	874	OH	32,185	32,622	34,172	29,811	24,297
12	874.05	VE OH MAINS & SERVICE EXP	874	OH	145,753	151,824	153,558	149,617	113,241
13	874.11	EMER LABOR MAINS-SERVICE EXP.	874	Labor	189	-	-		
14	874.13	C&T EMER OH MAINS-EXP	874	OH	40	-	-		
15	874.15	EMERGENCY-OVHD	874	OH	182	-	-		
16	874.45	MAT & SUP MAINS & SERV EXP	874	Mat	35,058	34,056	36,522	43,727	41,109
17	874.5	CALL CENTER EXPENSE	874	Labor	30,221	30,765	32,058	44,078	52,046
18	875.01	LABOR MEAS & REG STAT EXP	875	Labor	16,367	20,597	16,140	19,254	28,977
19	875.02	TRNSP MEAS & REG STAT EXP	875	Trans	7,322	10,932	8,845	9,337	9,220
20	875.03	C&T OH MEAS & REG STAT EXP	875	OH	3,793	4,656	3,808	3,726	5,676
21	875.05	VE OH MEAS & REG STAT EXP	875	OH	16,838	21,016	16,514	18,878	25,365
22	875.45	MAT/SUP MEAS & REG STAT EXP	875	Mat	750	2,570	3,952	8,071	7,133
23	876.01	LABOR IND/CM MTR/REG MNT	876	Labor	21,012	20,863	25,474	26,789	30,246
24	876.02	TRANS IND/CM/MTR/REG/MNT	876	Trans	3,644	4,581	4,607	5,175	6,242
25	876.03	C&T OH IND/CM MTR/REG MNT	876	OH	4,879	4,702	5,623	5,299	5,887
26	876.05	VE OH IND/CM/MTR/REG MNT EXP	876	OH	21,356	21,292	26,027	26,441	29,125
27	876.45	MAT & SUP IND/CM/MTR/REG/MNT	876	Mat	2,927	2,529	3,673	3,311	3,323
28	877.01	LABOR MEAS & REG CITY GATE	877	Labor	2,020	2,853	3,859	6,891	6,950
29	877.02	TRANSP MEAS & REG CITY GATE	877	Trans	392	1,155	1,396	1,467	2,072
30	877.03	C&T OH CITY GATE MEAS/REG STAT	877	OH	475	623	880	1,071	1,403
31	877.05	VE OH CITY GATE MEAS & REG	877	OH	2,147	2,865	4,141	5,429	6,566
32	877.45	MAT/SUP CITYGATE MEAS/REG STA	877	Mat	49,307	29,360	35,576	44,517	37,781
33	878.01	LABOR MTR/HSE REG EXP	878	Labor	52,208	52,342	54,563	64,921	60,701
34	878.02	TRANSP MTR/HSE REG EXP	878	Trans	12,521	17,914	18,828	23,113	11,862
35	878.03	C&T OH MTR/HSE REG EXP	878	OH	12,191	11,865	12,197	12,640	11,839
36	878.05	VE OH MTR/HSE REG EXP	878	OH	54,161	54,521	53,913	65,188	57,942
37	878.45	MAT & SUP MTR/HSE REG EXP	878	Mat	1,894	2,791	4,573	10,245	5,542
38	879.01	LABOR CUST INSTALL EXP	879	Labor	53,713	41,963	44,949	56,534	62,631

/P1_C (CU) Valley Energy Company (PA)			rAcct	rType	rHist16	rHist17	rHist18	rHist19	rHist20
<b>Rate Case with Fully Projected Future Test Year 2023 (CU)</b>					-	-	-	-	-
<b>Workpaper 1 to Schedule C (CU)</b>									
<b>Historic O&amp;M</b>									
<b>Years 2016 through 2020</b>									
Line:	Account	Description	Acct	Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual
39	879.02	TRANSP CUST INSTALL EXP	879	Trans	6,907	7,698	9,638	9,008	7,846
40	879.03	C&T OH CUST INSTALL EXP	879	OH	12,494	9,582	10,059	11,283	12,297
41	879.05	VE OH CUST INSTALL EXP	879	OH	55,546	43,537	44,657	57,825	58,293
42	879.45	MAT/SUP CUST INSTALL EXP	879	Mat	2,564	3,847	5,033	3,752	2,427
43	880.45	MAT/SUP OTHER DIST EXP	880	Mat	2,555	3,642	3,893	3,958	4,416
44	881.45	RENTS - DISTRIBUTION EXPENSE	881	Other	2,626	1,045	1,871	3,180	3,917
45					920,691	935,343	1,064,792	1,148,987	1,074,347
46	7.	Distribution Expense - Maintenance							
47	885.01	LABOR MAINT SUPV & ENG	885	Labor	8,769	10,339	10,886	10,706	12,002
48	885.02	TRANSP MAINT SUPV & ENG	885	Trans	1,161	1,092	1,095	1,167	843
49	885.03	C&T OH MAINT SUPV & ENG	885	OH	2,042	2,347	2,420	2,148	2,349
50	885.05	VE OH MAINT SUPV & ENG	885	OH	9,110	10,828	10,911	11,074	11,289
51	885.45	MAT/SUPP MAINT SUPV & ENG	885	Mat	9,110	654	-	57	-
52	886.01	LABOR STURCTURES & IMPR	886	Labor	8,595	10,158	14,687	12,433	15,229
53	886.02	TRANSP MAINT STRUCTURES & IMPR	886	Trans	2,777	2,481	2,663	2,606	1,246
54	886.03	C&T OH MAINT STRUCTURES & IMPR	886	OH	1,996	2,324	3,290	2,512	2,983
55	886.05	VE OH MAINT STRUCTURES & IMPR	886	OH	8,751	10,341	14,864	12,749	14,429
56	886.45	MAT/SUP MAINT STRUCTURE/IMPR	886	Mat	4,095	964	1,685	34,171	12,443
57	887.01	LABOR MAINT OF MAIN	887	Labor	22,521	21,406	16,181	23,157	27,463
58	887.02	TRANSP MAINT OF MAIN	887	Trans	7,727	9,324	7,263	7,175	7,331
59	887.03	C&T OH MAINT OF MAIN	887	OH	5,188	5,473	4,188	4,688	5,485
60	887.05	VE OH MAINT OF MAIN	887	OH	22,828	21,451	16,336	22,844	23,986
61	887.45	MAT/SUPP MAINT OF MAIN	887	Mat	23,089	30,632	12,334	11,803	11,753
62	887.99	MAINT MAIN MATERIAL WRITTEN OFF	887	Other	5,150	1,602	507	248	-
63	889.01	LABOR MEAS & REG STAT EQUIP	889	Labor	4,266	7,681	5,624	8,142	21,637
64	889.02	TRANSP MAINT MEAS/REG STAT EQ	889	Trans	1,463	1,223	1,500	2,397	5,383
65	889.03	C&T OH MAINT M&R STAT EQUIP	889	OH	1,006	1,653	1,208	1,644	4,248
66	889.05	VE OH MAINT M&R STAT EQUIP	889	OH	4,304	7,579	5,704	7,728	19,170
67	889.45	MAT/SUP MAINT M&R STAT EQUIP	889	Mat	11,166	16,038	13,122	8,938	14,376
68	890.01	LABOR MAINT. INDUST. M&R STATION	890	Labor	9,606	7,104	5,300	10,298	20,304
69	890.02	TRANSP MAINT INDUS M&R STAT	890	Trans	572	-	61	3,029	1,907
70	890.03	C&T OH MAINT INDUST M&R STATION E	890	OH	2,178	1,555	1,190	2,083	3,958
71	890.05	VE OH MAINT.Industr. M&R STATION	890	OH	9,497	7,030	5,389	9,702	19,213
72	890.45	MAT/SUP MAINT M&R INDUST EQUIP	890	Mat	2,613	3,136	5,431	3,946	3,199
73	891.01	LABOR MAINT CITY GATE STAT	891	Labor	2,733	2,030	3,513	3,055	5,105
74	891.02	TRANSP MAINT CITY GATE STAT	891	Trans	1,436	916	2,067	1,186	1,431
75	891.03	C&T OH MAINT CITY GATE STAT	891	OH	634	446	785	619	976
76	891.05	VE OH MAINT CITY GATE STAT	891	OH	2,841	2,029	3,358	2,843	4,830

/P1\_C (CU) Valley Energy Company (PA)

rAcct rType rHist16 rHist17 rHist18 rHist19 rHist20

Rate Case with Fully Projected Future Test Year 2023 (CU)

- - - - -

Workpaper 1 to Schedule C (CU)

Historic O&M

Years 2016 through 2020

Line:	Account	Description	Acct	Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual
77	891.45	MAT/SUP MAINT CITY GATE STAT	891	Mat	486	1,406	1,484	735	2,034
78	892.01	LABOR MAINT OF SERVICE	892	Labor	18,107	17,105	11,243	13,228	11,668
79	892.02	TRANSP MAINT OF SERVICE	892	Trans	4,786	9,140	7,852	11,404	2,645
80	892.03	C&T OH MAINT SERVICES EXP	892	OH	4,265	4,198	2,903	3,068	2,536
81	892.05	VE OH MAINT OF SERVICE	892	OH	17,764	18,177	11,386	13,357	10,792
82	892.45	MAT/SUP MAINT OF SERVICES	892	Mat	6,752	30,734	20,268	7,057	2,351
83	892.99	MAINT SERV MATERIAL WRITTEN OFF	892	Other	135	-	49	-	-
84	893.01	LABOR MAINT MTR & HSE REG	893	Labor	36,360	22,695	18,391	20,327	41,563
85	893.02	TRANSP MAINT MTR HSE REG	893	Trans	7,122	6,566	4,244	6,014	14,236
86	893.03	C&T OH MAINT MTR & HSE REG	893	OH	8,415	4,899	4,068	4,003	8,063
87	893.05	LABOR OH MAINT MTR & HSE REG	893	OH	37,478	23,016	17,855	21,311	40,376
88	893.45	MAT/SUPP MAINT MTR & HSE REG	893	Mat	15,109	8,809	11,724	8,492	18,482
89					354,003	346,581	285,029	334,144	429,314
90	8.	Customer Accounts Expense							
91	902.01	LABOR METER READING EXP	902	Labor	30,628	33,853	29,548	25,222	14,762
92	902.02	TRANS METER READING EXP	902	Trans	10,934	14,099	12,167	10,560	4,612
93	902.03	C&T OH METER READING EXP	902	OH	7,149	7,701	6,614	5,062	2,879
94	902.05	VE OH METER READING EXP	902	OH	32,134	35,582	29,628	25,945	14,042
95	902.45	MAT/SUPP METER READING EXP	902	Mat	3,849	14,758	6,890	6,465	4,632
96	903.01	LABOR CUST REC/COLLECTIONS	903	Labor	116,889	119,629	136,676	140,111	153,480
97	903.02	TRANSP CUST REC/COLLECTIONS	903	Trans	2,830	3,419	4,223	4,894	2,446
98	903.03	C&T OH CUST REC/COLLECTIONS	903	OH	27,250	27,119	30,562	28,101	30,181
99	903.05	VE OH CUST REC/COLLECTIONS	903	OH	123,314	136,241	146,645	157,205	140,822
100	903.25	NISC BILLING	903	Other	101,264	108,508	99,595	102,749	100,517
101	903.45	MAT/SUP CUST REC/COLLECTIONS	903	Mat	56,024	48,564	45,902	48,281	37,156
102	903.55	DOLLAR ENERGY FUND EXPENSES	903	Other	5,232	5,096	4,361	3,121	5,245
103	904.0	BAD DEBT EXPENSE	904	Other	20,749	39,383	54,012	35,221	69,691
104	905.45	MAT/SUP MISC CUST ACCT EXP	905	Mat	4,132	15,190	28,364	21,602	22,690
105	909.45	INFORMATION/INSTRUCTIONAL EXP	909	Other	2,527	1,240	1,276	9,908	9,439
106	913.45	ADVERTISING EXPENSES	913	Other	6,986	4,143	3,828	6,641	2,243
107					551,891	614,525	640,291	631,088	614,837
108	11.	Administrative and General Expense							
109	920.01	LABOR ADMINISTRATION	920	Labor	189,551	222,496	193,530	209,062	225,451
110	920.02	TRANSP ADMINISTRATION	920	Trans	11,981	15,091	16,625	19,561	18,357
111	920.03	C&T OH ADMINISTRATION	920	OH	43,934	50,230	43,121	41,614	44,372
112	920.05	VE OH ADMINISTRATION	920	OH	198,078	230,909	187,970	216,361	205,973
113	920.45	MAT/SUP ADMINISTRATIVE	920	Mat	241	3,503	1,370	89	146
114	921.0	GENERAL OFFICE SUPPLIES & EXP	921	Other	6,752	7,890	10,218	16,279	11,548

/P1_C (CU) Valley Energy Company (PA)			rAcct	rType	rHist16	rHist17	rHist18	rHist19	rHist20
<b>Rate Case with Fully Projected Future Test Year 2023 (CU)</b>					-	-	-	-	-
<b>Workpaper 1 to Schedule C (CU)</b>									
<b>Historic O&amp;M</b>									
<b>Years 2016 through 2020</b>									
Line:	Account	Description	Acct	Type	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Actual
115	921.4	MEAL EXPENSES	921	Other	1,724	2,338	4,126	4,785	1,693
116	921.45	TRAVEL AND TRAINING	921	Other	16,449	24,600	34,952	32,337	12,087
117	921.5	COMMUNICATION EQUIP	921	Other	2,831	2,784	2,729	2,685	4,984
118	923.0	OUTSIDE SERVICES EMPLOYED	923	Other	8,917	14,676	13,156	13,267	14,617
119	923.25	AUDITOR FEES EXPENSE	923	Other	30,038	26,446	47,837	26,565	36,598
120	923.4	GCR EXPENSE	923	Other	-	-	531	-	-
121	923.45	ATTORNEY FEES EXPENSE	923	Other	30,190	35,932	54,089	100,734	18,525
122	924.0	PROPERTY INSURANCE EXPENSE	924	Other	10,930	11,156	11,456	12,350	14,721
123	925.0	INJURIES AND DAMAGES	925	Other	59,544	55,945	54,866	78,308	88,007
124	925.1	INSURANCE ST OPENING BONDS	925	Other	750	750	750	750	1,141
125	926.45	EMPLOYEE BENEFITS-DIRECT EXP.	926	Other	834	2,916	2,150	9,087	8,015
126	928.0	REGULATORY COMMISSION EXPENSES	928	Other	41,372	38,446	35,916	33,106	89,933
127	930CV		930	Other	-	-	-	-	45,312
128	930.2	REGULATORY COMMISSION EXPENSES	928	Other	-	-	76	364	58,203
129	930.21	LABOR - VOLUNTEER	930	Labor	-	-	9,643	5,144	145
130	930.22	DUES/COMPANY MEMBERSHIPS	930	Other	10,426	13,624	13,227	17,649	17,072
131	930.23	VOLUNTEER EXPENSES	930	Other	-	-	788	336	-
132	930.25	DIRECTOR EXP	930	Other	38,623	38,671	47,029	47,061	47,989
133	930.45	DIRECTOR EXP. - TRAVEL/TRAINING	930	Other	-	-	2,749	761	498
134	932.01	LABOR GENERAL PLT MAINTENANCE	932	Labor	2,469	4,473	7,197	7,670	14,639
135	932.02	TRANS MAINT GENERAL PLANT	932	Trans	1,211	2,715	2,871	10,551	5,853
136	932.03	C&T OVHD GENERAL PLANT	932	OH	576	1,002	1,627	1,535	2,954
137	932.05	OH MAINT PLANT	932	OH	2,592	4,641	7,275	8,369	11,727
138	932.45	MAINT GENERAL PLANT	932	Other	3,790	6,648	3,244	4,821	6,119
139					713,803	817,882	811,118	921,201	1,006,679
140									
141				Labor	790,833	827,348	859,534	921,836	994,791
142				Trans	114,959	143,350	150,543	176,859	139,265
143				Mat	237,057	258,927	247,422	275,112	240,749
144				OH	969,471	1,018,242	1,005,589	1,075,311	1,054,579
145				Other	428,068	466,464	538,142	586,302	695,793
146					2,540,388	2,714,331	2,801,230	3,035,420	3,125,177

WP2\_C (CU) Valley Energy Company (PA)

Rate Case with Fully Projected Future Test Year 2023 (CU)

Workpaper 2 to Schedule C (CU)

Historic O&M

rType21

rAcct21

12 Month

rHTY21

Historic Year December 31, 2021

Line	Co.	Account		Account	Total
1		<b>PAYROLL - DIRECT LABOR</b>			
2	20	870.01	Labor Oper Supr & Eng	Labor 870	67,985
3	20	874.01	Labor Mains & Serv Exp	Labor 874	124,674
4	20	874.11	Emergency Labor Mains And Service Exp.	Labor 874	-3,566
5	20	875.01	Labor Meas & Reg Stat Exp	Labor 875	26,756
6	20	876.01	Labor Ind/Cm Mtr/Reg Mnt	Labor 876	31,469
7	20	877.01	Labor Meas & Reg City Gate	Labor 877	5,788
8	20	878.01	Labor Mtr/Hse Reg Exp	Labor 878	51,099
9	20	879.01	Labor Cust Install Exp	Labor 879	52,124
10	20	885.01	Labor Maint Supv & Eng	Labor 885	12,590
11	20	886.01	Labor Sturctures & Impr	Labor 886	8,422
12	20	887.01	Labor Maint Of Main	Labor 887	25,494
13	20	889.01	Labor Meas & Reg Stat Equip	Labor 889	31,185
14	20	890.01	Labor Maint. Indust. M&R Station	Labor 889	15,046
15	20	891.01	Labor Maint City Gate Stat	Labor 891	5,133
16	20	892.01	Labor Maint Of Service	Labor 892	14,017
17	20	893.01	Labor Maint Mtr & Hse Reg	Labor 893	19,753
18	20	902.01	Labor Meter Reading Exp	Labor 902	16,611
19	20	903.01	Labor Cust Rec/Collections	Labor 903	167,453
20	20	920.01	Labor Administration	Labor 920	236,771
21	20	932.01	Labor General Plt Maintenance	Labor 932	12,903
22	<b>Total Direct Labor</b>				<b>921,705</b>
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## WP2\_C (CU) Valley Energy Company (PA)

## Rate Case with Fully Projected Future Test Year 2023 (CU)

## Workpaper 2 to Schedule C (CU)

## Historic O&amp;M

*rType21**rAcct21*

12 Month

*rHTY21*

## Historic Year December 31, 2021

Line	Co.	Account		Account	Total
24		<b>TRANSPORTATION EXPENSES</b>			
25	20	870.02	Transp Oper Supr & Eng	Trans 870	2,517
26	20	874.02	Transp Mains & Service Exp	Trans 874	33,646
27	20	875.02	Trnsp Meas & Reg Stat Exp	Trans 875	8,105
28	20	876.02	Trans Ind/Cm/Mtr/Reg/Mnt	Trans 876	4,871
29	20	877.02	Transp Meas & Reg City Gate	Trans 877	1,717
30	20	878.02	Transp Mtr/Hse Reg Exp	Trans 878	12,497
31	20	879.02	Transp Cust Install Exp	Trans 879	7,771
32	20	885.02	Transp Maint Supv & Eng	Trans 885	1,188
33	20	886.02	Transp Maint Structures & Impr	Trans 886	1,306
34	20	887.02	Transp Maint Of Main	Trans 887	7,589
35	20	889.02	Transp Maint Meas/Reg Stat Eq	Trans 889	2,166
36	20	890.02	Transp Maint Indus M&R Stat	Trans 890	993
37	20	891.02	Transp Maint City Gate Stat	Trans 891	1,112
38	20	892.02	Transp Maint Of Service	Trans 892	6,441
39	20	893.02	Transp Maint Mtr Hse Reg	Trans 893	2,331
40	20	902.02	Trans Meter Reading Exp	Trans 902	2,679
41	20	903.02	Transp Cust Rec/Collections	Trans 903	2,980
42	20	920.02	Transp Adminstration	Trans 920	20,240
43	20	932.02	Trans Maint General Plant	Trans 932	7,822
44		<b>Total Trans. Exp</b>			<b>127,971</b>
45					

## WP2\_C (CU) Valley Energy Company (PA)

## Rate Case with Fully Projected Future Test Year 2023 (CU)

## Workpaper 2 to Schedule C (CU)

## Historic O&amp;M

*rType21**rAcct21*

12 Month

*rHTY21*

## Historic Year December 31, 2021

Line	Co.	Account		Account	Total
46		<b>C&amp;T OVERHEAD</b>			
47	20	602.03	C&T OH Pto - Covid-19	OH 930CV	2,735
48	20	870.03	C&T OH Oper Supr & Eng	OH 870	15,833
49	20	874.03	C&T OH Mains & Service Exp	OH 874	28,987
50	20	875.03	C&T OH Meas & Reg Stat Exp	OH 875	6,197
51	20	876.03	C&T OH Ind/Cm Mtr/Reg Mnt	OH 876	7,292
52	20	877.03	C&T OH City Gate Meas/Reg Stat	OH 877	1,362
53	20	878.03	C&T OH Mtr/Hse Reg Exp	OH 878	11,989
54	20	879.03	C&T OH Cust Install Exp	OH 879	12,189
55	20	885.03	C&T OH Maint Supv & Eng	OH 885	2,941
56	20	886.03	C&T OH Maint Structures & Impr	OH 886	1,961
57	20	887.03	C&T OH Maint Of Main	OH 887	5,958
58	20	889.03	C&T OH Maint M&R Stat Equip	OH 889	7,143
59	20	890.03	C&T OH Maint Indust M&R Station Exp.	OH 889	3,521
60	20	891.03	C&T OH Maint City Gate Stat	OH 891	1,204
61	20	892.03	C&T OH Maint Services Exp	OH 892	3,670
62	20	893.03	C&T OH Maint Mtr & Hse Reg	OH 893	4,693
63	20	902.03	C&T OH Meter Reading Exp	OH 902	3,908
64	20	903.03	C&T OH Cust Rec/Collections	OH 903	39,035
65	20	920.03	C&T OH Adminstration	OH 920	54,972
66	20	932.03	C&T Ovhd General Plant	OH 932	2,959
67		<b>Total C&amp;T OH</b>			<b>218,548</b>
68					



## WP2\_C (CU) Valley Energy Company (PA)

## Rate Case with Fully Projected Future Test Year 2023 (CU)

## Workpaper 2 to Schedule C (CU)

## Historic O&amp;M

*rType21**rAcct21*

12 Month

*rHTY21*

## Historic Year December 31, 2021

Line	Co.	Account		Account	Total
69		<b>VE LABOR OVERHEAD</b>			
70	20	602.05	VE OH Pto - Covid-19	OH 930CV	7,721
71	20	870.05	VE OH Oper Supr & Eng	OH 870	68,761
72	20	874.05	VE OH Mains & Service Exp	OH 874	131,510
73	20	875.05	VE OH Meas & Reg Stat Exp	OH 875	26,838
74	20	876.05	VE OH Ind/Cm/Mtr/Reg Mnt Exp	OH 876	33,626
75	20	877.05	VE OH City Gate Meas & Reg	OH 877	5,727
76	20	878.05	VE OH Mtr/Hse Reg Exp	OH 878	55,772
77	20	879.05	VE OH Cust Install Exp	OH 879	53,690
78	20	885.05	VE OH Maint Supv & Eng	OH 885	13,110
79	20	886.05	VE OH Maint Structures & Impr	OH 886	8,651
80	20	887.05	VE OH Maint Of Main	OH 887	26,482
81	20	889.05	VE OH Maint M&R Stat Equip	OH 889	29,440
82	20	890.05	VE OH Maint. Industr. M&R Station Exp.	OH 889	16,468
83	20	891.05	VE OH Maint City Gate Stat	OH 891	5,994
84	20	892.05	VE OH Maint Of Service	OH 892	16,917
85	20	893.05	Labor OH Maint Mtr & Hse Reg	OH 893	22,093
86	20	902.05	VE OH Meter Reading Exp	OH 902	17,267
87	20	903.05	VE OH Cust Rec/Collections	OH 903	172,384
88	20	920.05	VE OH Administration	OH 920	245,317
89	20	932.05	OH Maint Plant	OH 932	10,500
90		<b>Total VE Labor OH</b>			<b>968,267</b>
91					

## WP2\_C (CU) Valley Energy Company (PA)

## Rate Case with Fully Projected Future Test Year 2023 (CU)

## Workpaper 2 to Schedule C (CU)

## Historic O&amp;M

*rType21**rAcct21*

12 Month

*rHTY21*

## Historic Year December 31, 2021

Line	Co.	Account		Account	Total
92		<b><u>DIRECT O&amp;M EXPENSES</u></b>			
93	20	602.0	Pto - Covid-19	Other 930CV	12,186
94	20	602.45	Mat/Sup Pto - Covid-19	Mat 930CV	2,979
95	20	842.1	Fuel (Company Use)	Other 842	26,245
96	20	871.45	Distrib Load Dispatching	Mat 871	1,063
97	20	874.45	Mat & Sup Mains & Serv Exp	Mat 874	34,996
98	20	874.5	Call Center Expense	Other 874	48,835
99	20	874.55	Mains & Serv Exp Emerg Acct	Other 874	(779)
100	20	875.45	Mat/Sup Meas & Reg Stat Exp	Mat 875	9,425
101	20	876.45	Mat & Sup Ind/Cm/Mtr/Reg/Mnt	Mat 876	4,795
102	20	877.45	Mat/Sup Citygate Meas/Reg Sta	Mat 877	29,048
103	20	878.45	Mat & Sup Mtr/Hse Reg Exp	Mat 878	4,024
104	20	879.45	Mat/Sup Cust Install Exp	Mat 879	1,800
105	20	880.45	Mat/Sup Other Distribution Exp	Mat 880	4,393
106	20	881.45	Rents - Distribution Expense	Other 881	4,773
107	20	886.45	Mat/Sup Maint Structure/Impr	Mat 886	1,602
108	20	887.45	Mat/Supp Maint Of Main	Mat 887	20,015
109	20	887.99	Maint Main Material Written Off	Other 887	(19)
110	20	889.45	Mat/Sup Maint M&R Stat Equip	Mat 889	9,896
111	20	890.45	Mat/Sup Maint M&R Indust Equip	Mat 890	10,406
112	20	891.45	Mat/Sup Maint City Gate Stat	Mat 891	1,827
113	20	892.0	Maint Of Services	Other 892	10
114	20	892.45	Mat/Sup Maint Of Services	Mat 892	18,480
115	20	893.45	Mat/Supp Maint Mtr & Hse Reg	Mat 893	13,564
116	20	893.99	Maint Mtr Material Written Off	Other 893	346
117	20	902.45	Mat/Supp Meter Reading Exp	Mat 902	2,483
118	20	903.25	NISC Billing	Other 903	107,070
119	20	903.45	Mat/Sup Cust Rec/Collections	Other 903	50,321

## WP2\_C (CU) Valley Energy Company (PA)

## Rate Case with Fully Projected Future Test Year 2023 (CU)

## Workpaper 2 to Schedule C (CU)

## Historic O&amp;M

*rType21**rAcct21*

12 Month

*rHTY21*

## Historic Year December 31, 2021

Line	Co.	Account		Account	Total
120	20	903.55	Dollar Energy Fund Expenses	Other 903	5,618
121	20	904.0	Bad Debt Expense	Other 904	(19,622)
122	20	905.45	Mat/Sup Misc Cust Acct Exp	Mat 905	22,877
123	20	909.45	Information/Instructional Exp	Other 909	7,633
124	20	913.45	Advertising Expenses	Other 913	4,409
125	20	920.45	Mat/Sup Administrative	Mat 920	644
126	20	921.0	General Office Supplies & Exp	Other 921	12,122
127	20	921.4	Meal Expenses	Other 921	2,511
128	20	921.45	Travel And Training	Mat 921	18,552
129	20	921.5	Communication Equip	Other 921	11,714
130	20	923.0	Outside Services Employed	Other 923	19,142
131	20	923.25	Auditor Fees Expense	Other 923	29,692
132	20	923.4	Gcr Expense	Other 923	3,059
133	20	923.45	Attorney Fees Expense	Other 923	7,433
134	20	924.0	Property Insurance Expense	Other 924	16,358
135	20	925.0	Injuries And Damages	Other 925	85,979
136	20	925.1	Insurance St Opening Bonds	Other 925	1,160
137	20	926.45	Employee Benefits-Direct Exp.	Other 926	11,387
138	20	928.0	Regulatory Commission Expenses	Other 928	122,392
139	20	930.2	Miscellaneous General Expense	Other 930	1,325
140	20	930.22	Dues/Company Memberships	Other 930	17,490
141	20	930.25	Director Expense	Other 930	48,980
142	20	932.45	Maint General Plant	Other 932	4,289
143	<b>Total Direct Expenses</b>				<b>854,928</b>
144					<b>3,091,419</b>
				Other	642,059
				Mat	212,869
					<b>854,928</b>

WP3\_C (CU) Valley Energy Company (PA)

Rate Case with Fully Projected Future Test Year 2023 (CU)

Workpaper 3 to Schedule C (CU)

rFTY22 rFPFTY23

Future O&M

rType22 rAcct22

Years 2022 and 2023

Line	Dept.	Account			Total 2,022	Total 2,023
1	<b><u>PAYROLL - DIRECT LABOR</u></b>					
2	20	870.01	Labor	870	68,593	98,718
3	20	874.01	Labor	874	135,743	144,437
4	20	875.01	Labor	875	28,690	30,374
5	20	876.01	Labor	876	33,497	35,464
6	20	877.01	Labor	877	6,162	6,524
7	20	878.01	Labor	878	63,569	68,175
8	20	879.01	Labor	879	70,416	74,901
9	20	885.01	Labor	885	13,539	14,301
10	20	886.01	Labor	886	9,576	10,101
11	20	887.01	Labor	887	27,736	29,365
12	20	889.01	Labor	889	36,655	38,807
13	20	890.01	Labor	890	16,040	16,982
14	20	891.01	Labor	891	5,464	5,785
15	20	892.01	Labor	892	18,314	19,579
16	20	893.01	Labor	893	26,829	28,936
17	20	902.01	Labor	902	10,008	10,595
18	20	903.01	Labor	903	178,585	186,180
19	20	920.01	Labor	920	248,780	257,617
20	20	932.01	Labor	932	13,735	14,540
21	<b>Total Direct Labor</b>				<b>1,011,931</b>	<b>1,091,381</b>
22						
23						
24	<b><u>TRANSPORTATION EXPENSES</u></b>					
25	20	870.02	Trans	870	10,310	14,837
26	20	874.02	Trans	874	20,402	21,709
27	20	875.02	Trans	875	4,312	4,565
28	20	876.02	Trans	876	5,035	5,330
29	20	877.02	Trans	877	926	981
30	20	878.02	Trans	878	9,554	10,247
31	20	879.02	Trans	879	10,584	11,258
32	20	885.02	Trans	885	2,035	2,149
33	20	886.02	Trans	886	1,439	1,518
34	20	887.02	Trans	887	4,169	4,413
35	20	889.02	Trans	889	5,509	5,833
36	20	890.02	Trans	890	2,411	2,552
37	20	891.02	Trans	891	821	869
38	20	892.02	Trans	892	2,753	2,943
39	20	893.02	Trans	893	4,032	4,349
40	20	902.02	Trans	902	1,504	1,592
41	20	903.02	Trans	903	26,841	27,983
42	20	920.02	Trans	920	37,392	38,720
43	20	932.02	Trans	932	2,064	2,185
44	<b>Total Trans. Exp</b>				<b>152,093</b>	<b>164,033</b>
45						

WP3\_C (CU) Valley Energy Company (PA)

Rate Case with Fully Projected Future Test Year 2023 (CU)

Workpaper 3 to Schedule C (CU)

rFTY22 rFPFTY23

Future O&M

rType22 rAcct22

Years 2022 and 2023

Line	Dept.	Account			Total 2,022	Total 2,023	
46							
47	<b>C&amp;T OVERHEAD</b>						
48	20	870.03	OH	870	17,668	28,389	
49	20	874.03	OH	874	34,965	41,537	
50	20	875.03	OH	875	7,390	8,735	
51	20	876.03	OH	876	8,628	10,199	
52	20	877.03	OH	877	1,587	1,876	
53	20	878.03	OH	878	16,374	19,606	
54	20	879.03	OH	879	18,138	21,540	
55	20	885.03	OH	885	3,487	4,113	
56	20	886.03	OH	886	2,467	2,905	
57	20	887.03	OH	887	7,144	8,445	
58	20	889.03	OH	889	9,442	11,160	
59	20	890.03	OH	890	4,131	4,884	
60	20	891.03	OH	891	1,407	1,664	
61	20	892.03	OH	892	4,717	5,631	
62	20	893.03	OH	893	6,910	8,321	
63	20	902.03	OH	902	2,578	3,047	
64	20	903.03	OH	903	46,000	53,541	
65	20	920.03	OH	920	64,081	74,085	
66	<b>Total C&amp;T OH</b>				<b>257,114</b>	<b>309,678</b>	
67							
68							
69	<b>VE LABOR OVERHEAD</b>						
70	20	870.05	OH	870	72,413	98,672	
71	20	874.05	OH	874	143,303	144,369	
72	20	875.05	OH	875	30,287	30,360	
73	20	876.05	OH	876	35,363	35,448	
74	20	877.05	OH	877	6,506	6,521	
75	20	878.05	OH	878	67,109	68,143	
76	20	879.05	OH	879	74,338	74,866	
77	20	885.05	OH	885	14,293	14,294	
78	20	886.05	OH	886	10,109	10,097	
79	20	887.05	OH	887	29,281	29,351	
80	20	889.05	OH	889	38,696	38,789	
81	20	890.05	OH	890	16,933	16,974	
82	20	891.05	OH	891	5,768	5,782	
83	20	892.05	OH	892	19,334	19,570	
84	20	893.05	OH	893	28,323	28,923	
85	20	902.05	OH	902	10,565	10,590	
86	20	903.05	OH	903	188,531	186,093	
87	20	920.05	OH	920	262,636	257,497	
88	20	932.05	OH	932	0	(1,253)	
89	<b>Total VE Labor OH</b>				<b>1,053,788</b>	<b>1,075,086</b>	
90							

WP3\_C (CU) Valley Energy Company (PA)

Rate Case with Fully Projected Future Test Year 2023 (CU)

Workpaper 3 to Schedule C (CU)

rFTY22 rFPFTY23

Future O&M

rType22 rAcct22

Years 2022 and 2023

Line	Dept.	Account			Total 2,022	Total 2,023
91						
92		<b>DIRECT O&amp;M EXPENSES</b>				
93	20	842.10	Other	842	31,442	32,071
94	20	871.45	Mat	871	5,851	6,111
95	20	874.45	Mat	874	39,944	40,743
96	20	874.50	Other	874	51,835	55,435
97	20	875.45	Mat	875	8,209	8,374
98	20	876.45	Mat	876	5,261	5,771
99	20	877.45	Mat	877	27,513	28,435
100	20	878.45	Mat	878	4,712	4,806
101	20	879.45	Mat	879	2,660	2,713
102	20	880.45	Mat	880	4,256	4,341
103	20	881.45	Mat	881	5,823	7,104
104	20	886.45	Mat	886	1,999	2,039
105	20	887.45	Mat	887	18,225	18,507
106	20	889.45	Mat	889	15,948	16,267
107	20	890.45	Mat	890	11,665	11,898
108	20	891.45	Mat	891	1,782	1,818
109	20	892.45	Mat	892	12,039	12,039
110	20	893.45	Mat	893	15,284	15,589
111	20	902.45	Mat	902	3,542	3,613
112	20	903.25	Other	903	102,212	104,256
113	20	903.45	Mat	903	50,716	51,730
114	20	903.55	Other	903	6,011	6,432
115	20	904.00	Other	904	35,000	35,000
116	20	905.45	Mat	905	23,510	23,980
117	20	909.45	Mat	909	8,993	9,173
118	20	913.45	Mat	913	4,154	4,237
119	20	920.45	Mat	920	293	299
120	20	921.00	Other	921	10,973	11,192
121	20	921.40	Other	921	4,502	5,919

WP3\_C (CU) Valley Energy Company (PA)

Rate Case with Fully Projected Future Test Year 2023 (CU)

Workpaper 3 to Schedule C (CU)

rFTY22 rFPFTY23

Future O&M

rType22 rAcct22

Years 2022 and 2023

Line	Dept.	Account			Total 2,022	Total 2,023
122	20	921.45	Other	921	35,914	47,688
123	20	921.50	Other	921	15,575	15,575
124	20	923.00	Other	923	24,608	25,264
125	20	923.25	Other	923	30,880	33,041
126	20	923.40	Other	923	400	400
127	20	923.45	Other	923	11,785	12,021
128	20	924.00	Other	924	18,348	21,107
129	20	925.00	Other	925	88,408	92,828
130	20	925.10	Other	925	1,183	1,207
131	20	926.45	Other	926	11,618	11,850
132	20	928.00	Other	928	123,189	0
133	20	930.20	Other	930	2,571	2,622
134	20	930.22	Other	930	17,626	17,762
135	20	930.25	Other	930	53,734	55,964
136	20	930.45	Other	930	2,750	2,833
137	20	932.45	Mat	932	5,447	5,556
138	<b>Total Direct Expenses</b>				<b>958,390</b>	<b>875,610</b>
139					<b>3,433,316</b>	<b>3,515,788</b>
140						
141			Other		680,564	590,467
142			Mat		277,826	285,143
143					<u>958,390</u>	<u>875,610</u>

WP4\_C (CU) **Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**  
**Workpaper 4 to Schedule C (CU)**  
**Accumulated Deferred Income Taxes**

Line	Years 2017 through 2023	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
1	Valley PA							
2								
3	Book	13,798,616	14,823,529	15,831,087	16,899,413	17,226,992	18,302,157	19,618,136
4								
5	Federal Tax - MACRS	24,485,114	28,952,001	30,020,317	31,153,658	33,939,419	36,486,095	38,717,080
6								
7	Federal Tax - SL	23,781,445	28,119,997	29,063,411	30,095,592	32,740,763	35,277,257	36,492,535
8								
9	PA Tax	14,833,087	19,786,819	21,310,839	22,777,529	24,175,419	25,911,063	28,242,118
10								
11	Federal Tax Depr Exp - MACRS	1,408,995	1,145,913	1,139,816	1,295,554	3,031,349	2,571,820	2,298,359
12								
13	Federal Tax Depr Exp - SL	1,338,378	1,017,162	1,053,348	1,180,538	2,895,636	2,561,639	1,282,651
14								
15	PA Tax Depr Exp	1,804,121	1,632,758	1,595,520	1,628,903	1,643,478	1,484,706	1,887,016



WP5\_C (CU) **Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (CU)**  
**Workpaper 5 to Schedule C (CU)**  
**Gas Inventory Balances**  
**Years 2014 through 2023**

Line	<u>Volumes dth</u>	<u>Average</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
1	January	303,492	239,316	316,185	324,010	303,966	288,448	262,049	348,294	345,770	303,388
2	February	199,050	137,330	205,138	216,106	205,227	199,441	162,488	235,743	230,927	
3	March	120,378	73,110	87,111	123,140	104,509	90,857	82,198	221,307	180,789	
4	April	162,665	102,115	134,840	161,039	158,026	140,091	133,872	249,101	222,236	
5	May	227,704	164,566	199,779	229,451	219,484	208,626	200,548	315,055	284,125	
6	June	296,268	235,210	272,102	296,747	299,653	270,023	269,114	374,779	352,519	
7	July	367,296	310,689	343,498	369,243	377,771	348,425	343,384	416,525	428,834	
8	August	432,999	380,552	415,982	440,488	447,551	409,464	415,442	469,372	485,143	
9	September	500,984	458,095	480,148	510,136	509,996	490,264	479,213	549,092	530,928	
10	October	538,908	533,294	529,372	533,064	538,540	522,002	540,177	554,292	560,526	
11	November	514,044	517,763	507,262	509,242	500,821	476,879	509,961	553,870	536,555	
12	December	433,672	446,279	436,961	421,771	410,292	394,290	429,939	459,074	470,770	
13	January	303,492									
14											
15	<b>Average volume</b>	<b>338,535</b>	dth								
16	GCR at Present	\$4.17480	per dth								
17	<b>Inventory Value</b>	<b>1,413,315</b>									
18											



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August 16, 2022

Administrative Law Judge Eranda Vero  
Administrative Law Judge Charece Z. Collins  
Pennsylvania Public Utility Commission  
801 Market Street, Suite 4063  
Philadelphia, PA 19107

**VIA E-MAIL**

**RE: Valley Energy, Inc. – Supplement No. 59 to Tariff Gas – Pa. P.U.C. No. 2;  
Docket No. R-2022-3032300**

Your Honors:

Attached please find the following Rebuttal Testimony on behalf of Valley Energy, Inc. ("Valley") in the above-referenced proceeding:

Valley Statement No. 1R: Rebuttal Testimony and Exhibits of Howard S. Gorman  
Valley Statement No. 2R: Rebuttal Testimony and Exhibits of Dylan W. D'Ascendis  
Valley Statement No. 3R: Rebuttal Testimony and Exhibit of Melissa Sullivan  
Valley Statement No. 4R: Rebuttal Testimony and Exhibits of Edward E. Rogers  
Valley Statement No. 5R: Rebuttal Testimony and Exhibits of Jamie Levering  
Valley Statement No. 6R: Rebuttal Testimony and Exhibit of Cody Chapman

As shown by the attached Certificate of Service, all parties to this proceeding are being duly served via email.

Sincerely,

A handwritten signature in black ink, appearing to read 'Adeolu A. Bakare'.

Adeolu A. Bakare  
MCNEES WALLACE & NURICK LLC

c: Rosemary Chiavetta, Secretary (Letter and Certificate of Service only)  
Certificate of Service

**CERTIFICATE OF SERVICE**

I hereby certify that I am this day serving a true copy of the foregoing document upon the participants listed below in accordance with the requirements of Section 1.54 (relating to service by a participant).

**VIA E-MAIL**

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Adeolu A. Bakare

Counsel to Valley Energy, Inc.

Dated this 16th day of August, 2022, in Harrisburg, Pennsylvania.

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket No. R-2022-3032300</b>
	:	
<b>Valley Energy, Inc.</b>	:	

**REBUTTAL TESTIMONY  
AND EXHIBITS  
OF  
HOWARD S. GORMAN**

**ON BEHALF OF  
VALLEY ENERGY, INC.**

**AUGUST 16, 2022**

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission** :  
 :  
 v. : **Docket No. R-2022-3032300**  
 :  
**Valley Energy, Inc.** :

**REBUTTAL TESTIMONY OF HOWARD S. GORMAN  
ON BEHALF OF VALLEY ENERGY, INC.**

**Q. Please state your name, occupation and business address.**

A. My name is Howard Gorman. I am the President of HSG Group, Inc., a consulting firm specializing in utility rate and regulatory matters, located in Great Neck, NY.

**Q. Are you the same Howard Gorman that provided direct testimony on behalf of Valley Energy, Inc. ("Valley" or "Company")?**

A. Yes. Terms defined in my direct testimony have the same meaning in this rebuttal testimony.

**Q. What is the purpose of your testimony today?**

A. The purpose of my testimony is to rebut the testimony of the following witnesses:

- Bureau of Investigation and Enforcement ("I&E") Witness LaTorre (I&E St. 1)
- Office of Consumer Advocate ("OCA") Witness Mugrace (OCA St. 1)
- I&E Witness Sakaya (I&E St. 3)
- OCA Witness Pavlovic (OCA St. 4)
- I&E Witness Keller (I&E St. 2) and OCA Witness DeAngelo (OCA St. 2) regarding their opposition to size and performance adjustments for Returns on Equity

**Q. Are you sponsoring any exhibits today?**

A. Yes, I am sponsoring Exhibit\_\_\_\_(HSG-1R), which includes an index on Schedule A (R). The Company is supporting an increase of \$1,218,962, compared to \$1,250,125 in its original filing and \$1,234,913 in its Corrections and Updates (CU) filing. The change from the CU to this Rebuttal is due reducing the PA Corporate Income Tax rate in FPFTY 2023 from 9.99% to 8.99%, removing CWIP from Rate Base and removing \$5,481 in expenses (\$1,244 Dues and Subscriptions plus \$4,237 Sponsorships and Advertising).

**Q. Has the Company changed the increase that it is requesting?**

A. No, the Company continues to request an increase of just under \$1,000,000, which is well below the \$1,215,059 increase it has supported. The total revenue (including Other revenue) requested remains \$6,520,807. The revenue the Company is requesting would produce a return on rate base of 7.15%.

If the Commission's Final Order results in a revenue requirement increase greater than \$1 million, the Company will continue to limit its rate request to the amount requested herein.

**Q. Have you updated the revenue allocation and rates that Valley is proposing to recover its revenue requirement?**

A. No, these are the same as in the Company's original and CU filings.

I will discuss the scaleback methodology later in this testimony.

**I&E Witness LaTorre**

**Q. What adjustments did Mr. LaTorre propose, and what are your responses?**

A. Mr. LaTorre proposed the following:

## Valley Statement No. 1R

- Remove \$13,410 for higher travel, training and associated meals, representing the increase in account 921.45 between the FTY and the FPFTY. Mr. LaTorre believes the increase is not justified because there are no new hires in the FPFTY. However as explained in the Company's response to OCA-II-36, a new Training and Compliance Coordinator will be hired in August 2022. Training is not provided solely within the year the new employee is hired, but is an ongoing process that involves multiple years. This will lead to higher costs in the following year, the FPFTY. The Company has supported this increase and Mr. LaTorre's adjustment should be rejected.
- Mr. LaTorre noted that the Company's full revenue requirement includes recovery of deferred COVID costs, and once these are full recovered, that amount should be removed from rates. I agree with Mr. LaTorre that recovery should not extend beyond the three-year amortization period; however, because the requested increase is well below the total revenue supported, it is debatable whether the Company is actually recovering these costs at all. The Company will not include any of these costs in a future rate case.
- Mr. LaTorre proposed to reduce the PA Corporate Income Tax rate in FPFTY 2023 from 9.99% to 8.99%. This change is reflected in the Company's Rebuttal filing.
- Mr. LaTorre adjusted Cash Working Capital ("CWC") and Tax Expense to reflect his proposed adjustments. The Company agrees that these items should be adjusted to reflect the final revenue requirement.

### **OCA Witness Mgrace**

**Q. What adjustments to O&M costs did Mr. Mugrace propose, and what are your responses?**

A. Mr. Mugrace proposed several adjustments to O&M costs, totaling \$252,115 (Exhibit DM-4, line 20). These are presented in Table HSG-1 below.

<b>Table HSG-1</b>					
<b>Line</b>	<b>Description</b>	<b>OCA Exhibit</b>	<b>OCA Rationale</b>	<b>OCA Adjustment</b>	<b>Company Response</b>
1	Shared Services	DM-4	Use Company average for HTY, FTY, FPFTY	(18,575)	Reject- Company supported FPFTY \$
2	Labor OH- Payroll / PR Tax- Dist	DM-12		(54,798)	
3	Labor OH- Rents	DM-12		(1,204)	
4	Labor OH- Payroll / PR Tax- Maint	DM-12		(15,250)	
5	Labor OH- Payroll / PR Tax- Cust Acct	DM-13		(7,601)	
6	Labor OH- Payroll / PR Tax- A&G	DM-14		(10,873)	
7	Labor OH- Payroll / PR Tax- Maint Gen F	DM-14		(814)	
8	A&G Office Supplies	DM-14		(16,295)	
9	A&G Outside Services	DM-14		(4,418)	
10	Property Insurance	DM-14		(3,407)	
11	Injuries & Damages	DM-14		(3,780)	
12					
13	Rate Case expense	DM-4	Average past 4 rate cases, 4-year normalization	(31,617)	Reject- Company supported its costs
14	COVID Extraordinary	DM-4	Remove carrying costs	(4,823)	Reject- Company followed Order
15	Employee Recognition	DM-14	Ratepayers should not pay	(11,085)	Reject- Important part of compensation
16					
17	Remove 2% Inflation on Dist	DM-12	Not known and measurable	(18,800)	Reject- Company supported FPFTY \$; duplicates other adjustments
18	Remove 2% Inflation on Maint	DM-12		(7,583)	
19	Remove 2% Inflation on Cust Accting	DM-13		(12,852)	
20	Remove 2% Inflation on A&G	DM-14		(11,982)	
21	Remove Company Uncollectible Adjustme	DM-4	No rationale provided	(6,706)	Reject
22					
23	Dues, Subscriptions	DM-14	Ratepayers should not pay	(5,415)	Accept \$1,244; Reject balance of adjustment (AGA, NACE, BKD, APGA, EAP)
24	<b>OCA Adjustments REJECTED by Company</b>			(247,878)	
25	Sponsorships and Advertising	DM-13	Ratepayers should not pay	(4,237)	Accept
26	<b>Total OCA Adjustments</b>			(252,115)	



## Valley Statement No. 1R

- Various O&M costs, lines 1-1- For these adjustments, Mr. Mugrace rejected the amounts the Company had developed for FPFTY 2023, and substituted an average of the amounts in the HTY, FTY and FPFTY. He supported his adjustments by claiming that costs fluctuate for these items. It is true that some of these costs may fluctuate, but the Company has supported the amounts its needs for the FPFTY in its direct testimony and also its responses to over 100 Data Requests from OCA and others. Mr. Mugrace found no fault with the Company's projected costs, which were developed in great detail, he simply chose to substitute a lower set of costs. His proposed adjustments are unsupported and arbitrary and must be rejected; the Company's costs are well-supported and should be accepted by the Commission. Valley's Witnesses Rogers, Levering and Sullivan will address the costs within those accounts in more detail.
- Rate Case expense, line 13- I will discuss this item immediately below.
- COVID-19 Extraordinary costs, line 14- Mr. Mugrace proposes to remove the Company's claim for carrying costs on the higher Accounts Receivable it had for two years, and on unrecovered expenses. The Company believes that these carrying costs are "incremental expenses incurred above those embedded in rates resulting from the directives contained in" the Commission's various Orders that prohibited the Company from terminating customers for non-payment during the COVID-19 pandemic. *See Public Utility Service Termination Moratorium; COVID-19 Cost Tracking and Creation of Regulatory Asset*, Docket Nos. M-2020-3019244 & M-2020-3019775, Order entered July 15, 2021, p. 4. Therefore the Company rejects Mr. Mugrace's adjustment and believes the Commission should reject it as well.

## Valley Statement No. 1R

- Employee Recognition, line 15- Mr. Mugrace proposes to remove costs for employee recognition. These costs are an important part of employee retention, and should be included in the Company's claim. Mr. Rogers will address this item in more detail.
- Inflation, lines 16-20- Mr. Mugrace proposes to remove inflation because it is not known and measurable. This adjustment clearly duplicates, at least partially, his other proposed adjustments where he averages costs over three years. In addition, the Company has provided support for its claimed inflationary increases in the FPPTY. Mr. Mugrace's proposed adjustment is duplicative and ignores the support the Company has provided; it must be rejected; the Company's costs are well-supported and should be accepted by the Commission.
- Uncollectible Accounts Expense, line 21- This adjustment removes the increase in Uncollectible Accounts expense that the Company believes is necessary. Mr. Mugrace's testimony does not explain why he believes the Company's expense claim is not correct. Mr. Mugrace's adjustment should be rejected, as the Company has supported its expense claim.
- Dues and Subscriptions, line 23- The Company agrees that dues and subscriptions costs for fraternal, social clubs and chamber of commerce organizations should not be included. For the FPTTY, only \$1,244 would be classified as costs attributed to the above organizations. The remaining costs within this expense category, in addition to the AGA and NGA, are dues for fraud hotline (BKD Integra Hotline), certifications for corrosion technician (NACE – National Association of Corrosion Engineers), fees for APGA (Distribution Integrity Management Plan – DIMP), and others. The items are detailed in the Company's response to OCA-II-10. Mr. Mugrace has rejected these

costs, possibly because they are in an account labelled “General Advertising”. As can be seen, the nature of the costs is clearly relevant to the Company’s business, and Mr. Mugrace’s adjustment should be rejected, with only an adjustment of \$1,244 as reflected in Schedule C1 (R).

- Sponsorships and Advertising, line 25- The Company accepts this adjustment to remove costs for sponsorship of civic organizations. The adjustment is reflected in Schedule C1 (R).

**Q. Please discuss Mr. Mugrace’s proposed adjustment to Rate Case expense.**

A. Mr. Mugrace proposed to use the average rate case expense the Company incurred in its last four rate cases, since 2008, with a normalization period of four years. The proposal to use the average actual expense from past rate cases is fundamentally unsound and unfair, and would be a significant departure from precedent in the Commonwealth. Valley properly claimed the projected witness, legal and other costs to develop, file and litigate this current filing, consistent with many years of PUC practice and procedure regarding these costs.

Mr. Mugrace’s proposed adjustment also fails to recognize that costs have increased over the last 14 years, and that only one of these cases was litigated (the Company’s claim reflects a fully litigated case, which is customary in computing the revenue requirement).

In its Interrogatories to OCA, Set II-2, Valley asked OCA to “provide citations to all Pennsylvania Public Utility Commission decisions that have approved Mr. Mugrace’s proposed method of determining rate case expense by averaging rate case expense from prior rate cases”. OCA’s’s response states “Mr. Mugrace is aware of the following case but has not reviewed other cases in the preparation of this interrogatory” and identified PA

PUC v. PECO Energy Company – Gas Division, R-2020-3018929, Order (June 22, 2021). Mr. Mugrace is incorrect, the Order he cited does not address the amount of rate case expense, only the normalization period that is used to develop the annual recovery amount in the new rates set in the proceeding. In fact, it is not even clear that OCA raised the averaging issue in the PECO case; the Order notes only that OCA proposed to reduce rate case expense by \$208,000 which is the difference between normalizing the \$1.6 million rate case expense over three years (PECO's position) and five years (OCA's position). Thus Mr. Mugrace has not cited any Commission precedent for his position.

In addition, Mr. Mugrace also proposed a four-year normalization period for Valley's rate case expense. In Valley's last rate case, the Commission accepted Valley's three-year normalization and denied a proposal for five-year normalization adjustment. In that Order, the Commission stated "[t]his practice of relying on historic filing frequency is not absolute and each case should be decided on the basis of the evidence of historic filing frequency and future expectations." *Valley 2021 Rate Case Order*, p. 53. The Commission accepted Valley's explanation that circumstances allowing Valley to avoid requesting a rate increase from 2010 to 2019 were not likely to recur, and it accepted Valley's proposed three-year normalization period. In fact, Valley filed the instant rate case within 36 months of the prior filing.

Mr. Mugrace's proposed adjustment is unsupported and arbitrary, both as to the amount of rate case expense and the normalization period, and must be rejected. The Company's costs are well-supported and consistent with Commission precedent and should be accepted by the Commission.

**Q. Is Mr. Mugrace's adjustment to the normalization period for the rate case expense (extending from 3 years to 4 years) appropriate?**

A. No. As Mr Rogers explains, Valley anticipates that it will file its next case in 3 years. The Commission should adopt the same reasoning from its 2019 Order and approve the Company's proposed 36-month normalization period. Mr. Mugrace's adjustment should be denied and the Company's three year normalization period should be accepted.

**Q. Did Mr. Mugrace propose any other adjustments?**

A. Yes. Mr. Mugrace proposed the following additional adjustments:

- Rate Base- Mr. Mugrace proposed to remove CWIP from Rate Base. The Company accepts this adjustment and it is reflected on Schedules C1-6 (R) and C1 (R).
- Rate of Return- Mr. Mugrace uses the Rate of Return advocated by OCA Witness Ms. DeAngelo. In determining the full revenue requirement (as opposed to the Company's request, which is lower) the Company continues to use the rate of return supported by D'Ascendis in his direct and rebuttal testimony, 7.97%.
- CWC, PA GRT and Income Tax expense- Rate Base- Mr. Mugrace recomputes these items using his proposed revenue requirement. The Company recomputes these items using the full revenue requirement it is presenting in rebuttal, and also using the proposed revenue, both as presented on Schedule C1 (R).

**I&E Witness Sakaya**

**Q. What are Mr. Sakaya’s recommendations on the Company’s proposed revenue allocation, and your responses?**

A. Mr. Sakaya seems to accept the Company’s revenue allocation proposal. He stated that because the Company did not submit a class Allocated Cost of Service (“ACOS”) study, “there is no justification for presenting a different percentage increase for the classes receiving an increase”. It should be noted that the Company was not required to submit an ACOS, and to prepare one would take considerable time and effort.

He also recommended “scaling back the rates so each class receives the same percentage increase is the most reasonable approach to establish rates if the Commission grants less than the full increase”, and “the scale back include the customer charges”. The Company agrees with Mr. Sakaya on both revenue allocation and customer charges in a scale back.

**OCA Witness Pavlovic**

**Q. What did the OCA propose for revenue allocation, and what is your response?**

A. Mr. Pavlovic proposed that each rate schedule receive an equal percentage increase. In concept, the Company agrees; however, in computing the delivery rates in this proceeding, it also was necessary that the rates for Sales customers be the same as the rates for Transportation customers, when the delivery service the Company provides is the same. This ensures that delivery rates do not encourage or discourage customers from accessing competitive supply. The existing rates have small differences. Therefore, the rates for IS (Interruptible Service- sales) must be the same as for TI (Transportation Interruptible), and the rates for SI (Small Industrial- sales) must be the same as for ST (Transport Firm). This

caused slight variations in the percentage increases for the classes, as seen on Schedule B4 (R). However, the differences in both percentage terms and dollars are very small.

Mr. Pavlovic seems to agree with the idea of each class receiving the same percentage increase, as the Company proposed. However, he recommends the percentage increase for each class be exactly the same. This would require that the rates for IS differ from TI, and the rates for SI to differ from ST. This is not acceptable. Mr. Pavlovic's recommended revenue allocation must be rejected.

**Q. What did Mr. Pavlovic recommend for rate design, and what is your response?**

A. Mr. Pavlovic recommended that there be no increase to the RS customer charge. He supported his claim by stating that the customer charge does not need to be aligned with costs because it is not an actionable price signal, and that in a recent case the Commission found that increasing the customer charge necessarily led to a lower volumetric charge, which was contrary to the goal of conservation. Although Mr. Pavlovic's general observations are correct, the goal of encouraging conservation should be balanced with the other elements in ratemaking, including rates that reflect cost of service and revenue stability for the utility. To balance the goals, the Company proposed a modest increase to the RS customer charge, which I recommend the Commission accept.

Mr. Pavlovic also recommended that a scale back of revenue be accompanied by a scale back of any increase to the customer charge. The Company accepts this recommendation.

**I&E Witness Keller and OCA Witness DeAngelo**

**Q. Please discuss Mr. D'Ascendis' proposed size and performance adjustments to Return on Equity ("ROE").**

A. Mr. D'Ascendis has proposed adjustments to the ROE for both Valley and its affiliated utility Citizens', in their current proceedings. These adjustments were opposed by I&E and OCA witnesses. Mr. D'Ascendis Rebuttal Testimony provides the primary response to I&E and OCA on these adjustments, and my testimony and Mr. Roger's will supplement that. In this response I note that the adjustments were proposed by Mr. D'Ascendis for both Valley and Citizens', and that similar adjustments were authorized by the Commission in prior cases for each utility, to emphasize the Commission's consistent treatment and to urge that it be continued.

In their 2019 rate cases, the Commission authorized ROEs for Valley and for Citizens' equal to one standard deviation above the mean / median for the respective DCF proxy groups. In doing so, the Commission explicitly recognized that smaller companies require additional resources to meet the risks they face, such as loss of customers or sales, variability in costs and plant investment needs. Consistent with the Commission's 2019 Orders, Mr. D'Ascendis recommended size premiums for both Valley and for Citizens' in the current proceedings.

Valley and for Citizens' are still very small utilities, and as Mr. D'Ascendis testified, still require higher returns to provide the resources to handle significant events. In addition,



both utilities still perform very well on the measures of management effectiveness discussed in the Commission's Orders in their last rate cases.

It is critically important that the Commission consistently apply its criteria for authorizing size and performance adjustments. Mr. Rogers and Mr. Kelchner testify that insufficient ROE will affect investment decisions and planning for future financial activities, including the timing of rate cases. As a policy matter, a consistent policy that provides adequate resources is critical to avoiding rate shock, so that a significant event can be managed by the utility. If the utility does not have the resources available, then a significant event, and even the possibility of such event, could require immediate and substantial rate relief and could potentially jeopardize operations, investment and financial planning.

**Q. Does this conclude your rebuttal testimony today?**

A. Yes.

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket No. R-2022--3032300</b>
	:	
<b>Valley Energy, Inc.</b>	:	

**EXHIBITS**  
**OF**  
**HOWARD S. GORMAN**

**ON BEHALF OF**

**Valley Energy, Inc.**

**AUGUST 16, 2022**

Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)  
INDEX TO SCHEDULES

Line	SCHEDULE	DESCRIPTION	PERIOD
1	<a href="#">A (R)</a>	INDEX TO SCHEDULES	
2			
3	<b>RATES AND REVENUE</b>		
4	<a href="#">B (R)</a>	Operating Revenue Under Present Rates and Proposed Rates	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
5	<a href="#">B1 (R)</a>	Summary Of Sales, Customers And Revenue At Present Rates	Historic Year December 31, 2021
6	<a href="#">B1-1 (R)</a>	Billing Units, Rates And Revenue At Present Rates	Historic Year December 31, 2021
7	<a href="#">B1-2 (R)</a>	Bill Analysis- Revenues Under Present Rates	Historic Year December 31, 2021
8	<a href="#">B2 (R)</a>	Summary Of Sales, Customers And Revenue At Present Rates	Future Test Year December 31, 2022
9	<a href="#">B2-1 (R)</a>	Billing Units, Rates And Revenue At Present Rates	Future Test Year December 31, 2022
10	<a href="#">B3 (R)</a>	Number of Customers Served Whose Bills Will be Increased	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
11	<a href="#">B4 (R)</a>	Summary Of Sales, Customers And Revenue At Present and Proposed Rates	Fully Projected Future Test Year December 31, 2023
12	<a href="#">B4-1 (R)</a>	Billing Units, Rates And Revenue At PRESENT Rates	Fully Projected Future Test Year December 31, 2023
13	<a href="#">B4-2 (R)</a>	Billing Units, Rates And Revenue At PROPOSED Rates	Fully Projected Future Test Year December 31, 2023
14			
15	<b>TARIFF RATES</b>		
16	<a href="#">B5 (R)</a>	Summary Of Present And Proposed Tariff Rates	Historic Year December 31, 2021 and Fully Projected Future Test Year December 31, 2023
17	<a href="#">B5-1 (R)</a>	Bill Comparisons (including GCR present rate)	Fully Projected Future Test Year December 31, 2023
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19			
20	<b>NET OPERATING INCOME AND RATES OF RETURN</b>		
21	<a href="#">C1 (R)</a>	Net Operating Income And Rates of Return	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
22	<a href="#">C1-1 (R)</a>	Support Sheet No. 1- Operating Expense and Going-Level Adjustments	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
23	<a href="#">C1-1A (R)</a>	Adjustments and Reclasses Made for Corrections and Updates	
24	<a href="#">C1-2 (R)</a>	Support Sheet No. 2- Summary of Cost of Capital and Fair Rate of Return Based upon a Hypothetical Ratemaking Capital Structure	12/31/2023
25	<a href="#">C1-3 (R)</a>	Support Sheet No. 3- Taxes Other Than Income	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
26	<a href="#">C1-4 (R)</a>	Support Sheet No. 4- Income Tax Calculations	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
27	<a href="#">C1-5 (R)</a>	Support Sheet No. 5- Pension and OPEB	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
28	<a href="#">C1-6 (R)</a>	Support Sheet No. 6- Computation of Rate Base	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
29	<a href="#">C1-7 (R)</a>	Extraordinary Coronavirus Pandemic Costs	
30	<a href="#">C1-8 (R)</a>	Comparison to Prior Rate Case	Prior Rate Case and Fully Projected Future Test Year December 31, 2023
31	<a href="#">C2 (R)</a>	Balance Sheets	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
32	<a href="#">C3 (R)</a>	Original Cost of Utility Plant in Service	Years Ended 12/31/2021, 12/31/2022 and 12/31/2023
33			
34	<b>WORKPAPERS</b>		
35	<a href="#">WP (R)</a>	Workpapers	See separate index

B (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**

**Operating Revenue Under Present Rates and Proposed Rates**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 b[4]**

Line	Operating Revenues	Historic Year December 31, 2021		PRESENT RATES	PRESENT RATES	PROPOSED RATES
		Per Books	Distribution Only	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023	Fully Projected Future Test Year December 31, 2023
1	Residential sales	\$4,523,971	\$2,500,218	\$2,643,225	2,695,871	3,276,012
2	Commercial and Industrial sales	2,014,680	\$832,275	856,824	861,522	1,040,333
3	Transportation	1,886,645	1,886,645	1,925,649	1,939,577	2,180,256
4	Subtotal	8,425,296	5,219,138	5,425,698	5,496,970	6,496,602
5						
6	Forfeited Discounts	14,197	14,197	14,197	14,197	14,197
7	Other operating revenue	4,661	4,661	4,661	4,661	4,661
8	Non-operating revenue	7,659	7,659	5,348	5,348	5,348
9	Total Operating Revenues	\$8,451,812	\$5,245,654	\$5,449,903	\$5,521,175	\$6,520,807

B1 (R)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)**

**Summary Of Sales, Customers And Revenue At Present Rates  
Historic Year December 31, 2021**

Line	Rate Class	Volumes (ccf)	Customers	Revenue - Present Rates		
				Fixed Customer Charge	Variable Distribution-Commodity	Distribution Total
1	<u>Residential Sales Customers</u>					
2	Rate R- Residential	5,598,048	6,307	\$892,291	\$1,607,927	2,500,218
3						
4	<u>Commercial and Industrial Sales Customers</u>					
5	Rate C- Commercial	2,495,606	831	201,595	562,834	764,429
6	Rate IS- Interruptible Service	700,210	3	2,708	50,275	52,983
7	Rate SI- Small Industrial	72,875	4	3,611	11,252	14,863
8		<u>3,268,691</u>	<u>838</u>	<u>207,914</u>	<u>624,361</u>	<u>832,275</u>
9						
10	<u>Transportation Customers</u>					
11	Transport. Firm	2,566,772	12	10,833	396,310	407,143
12	Transport. Firm- Fixed	8,670,950	1	460,887		460,887
13	Transport. Firm- Volumetric	7,164,700	1		337,072	337,072
14	Transport. Firm- DDQ	947,195	56	13,682	213,621	227,303
15	Transport. Interruptible	6,276,177	4	3,611	450,630	454,241
16		<u>25,625,794</u>	<u>74</u>	<u>489,013</u>	<u>1,397,632</u>	<u>1,886,645</u>
17						
18	<b>TOTAL</b>	<u><u>34,492,533</u></u>	<u><u>7,220</u></u>	<u><u>\$1,589,218</u></u>	<u><u>\$3,629,920</u></u>	<u><u>\$5,219,138</u></u>



B1-2 (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**

**Bill Analysis- Revenues Under Present Rates**  
**Historic Year December 31, 2021**

Line	Customer Type	Per Books 12/31/2021 Revenue
1	Residential sales	\$4,523,971
2	Commercial and Industrial sales	2,014,680
3	Transportation	1,886,645
4	<b>Distribution Revenue</b>	<b>8,425,296</b>
5		
6	Forfeited Discounts	14,197
7	Other operating	4,661
8	Patronage Capital	7,659
9	<b>Total Revenue for Rate case</b>	<b>8,451,812</b>
10		
11	GCR under (over)	273,082
12	GCR Prior- Residential	165,548
13	GCR Prior- C&I	96,647
14	GCR Prior- computation	2,742
15	Delivery computation	9,278
16	STAS	(3,095)
17	Unbilled	(36,987)
18	Other Operating revenue	507,215
19		
20	Total Operating revenue	<b>8,959,027</b>
21	Cost recovery	517,200
22	Less: Patronage Capital	(7,659)
23	<b>Total Operating Revenue per Financials</b>	<b>\$9,468,568</b>

B2 (R)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)**

**Summary Of Sales, Customers And Revenue At Present Rates  
Future Test Year December 31, 2022**

Line	Rate Class	Volumes (ccf)	Customers	Revenue - Present Rates		Distribution Total
				Fixed Customer Charge	Variable Distribution-Commodity	
1	<u>Residential Sales Customers</u>					
2	Rate R- Residential	5,987,484	6,527	\$923,440	\$1,719,785	2,643,225
3						
4	<u>Commercial and Industrial Sales Customers</u>					
5	Rate C- Commercial	2,630,805	851	206,385	593,325	799,710
6	Rate IS- Interruptible Service	587,921	3	2,708	42,213	44,921
7	Rate SI- Small Industrial	55,582	4	3,611	8,582	12,193
8		<u>3,274,308</u>	<u>858</u>	<u>212,704</u>	<u>644,120</u>	<u>856,824</u>
9						
10	<u>Transportation Customers</u>					
11	Transport. Firm	2,663,890	13	11,736	411,305	423,041
12	Transport. Firm- Fixed	8,384,920	1	477,333		477,333
13	Transport. Firm- Volumetric	7,541,703	1		358,858	358,858
14	Transport. Firm- DDQ	924,708	56	13,581	208,549	222,131
15	Transport. Interruptible	6,137,556	4	3,611	440,677	444,288
16		<u>25,652,778</u>	<u>75</u>	<u>506,261</u>	<u>1,419,388</u>	<u>1,925,649</u>
17						
18	<b>TOTAL</b>	<u><u>34,914,570</u></u>	<u><u>7,460</u></u>	<u><u>\$1,642,405</u></u>	<u><u>\$3,783,293</u></u>	<u><u>\$5,425,698</u></u>





B3 (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**

**Number of Customers Served Whose Bills Will be Increased**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 b[3]**

Line	Customer Type	Average Number of Customers During the Year		
		12/31/2021	12/31/2022	12/31/2023
1	Residential sales	6,307	6,527	6,657
2	Commercial and Industrial sales	838	858	863
3	Transportation	72	73	73
4	Customers with rates changing	7,218	7,458	7,593
5	Rates not changing	2	2	2
6	Total Customers Served	7,220	7,460	7,595
7				
8				
9				





**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**

**Billing Units, Rates And Revenue At PROPOSED Rates**  
**Fully Projected Future Test Year December 31, 2023**

Line	Description	Rate R- Residential	Rate C- Commercial	Rate IS- Interruptible Service	Rate SI- Small Industrial	Rate ST- Transport Firm	Transport Firm- Contract	Transport. Firm- DDQ	Transport. Interruptible	Total
1	<b>BILLING UNITS</b>									
2	ccf Sales	6,106,738	2,646,262	587,921	55,582	2,663,890	15,926,624	924,708	6,137,556	35,049,281
3										
4	Number of Bills	79,884	10,272	36	48	156	24	672	48	91,140
5	Average Monthly Bills	6,657	856	3	4	13	2	56	4	7,595
6										
7	<b>RATES AND CHARGES</b>									
8	<b>Tariff Rates</b>									
9	Customer Charge	\$12.90	\$21.95	\$82.00	\$82.00	\$82.00	\$0.00	\$21.95	\$82.00	
10							Contract-2			
11	Commodity Block 1	\$0.36771	\$0.28196	\$0.08737	\$0.18833	\$0.18833	\$0.0484	\$0.28196	\$0.08737	
12	Commodity Block 2						\$0.0484			
13	Commodity Block 3						9.2%			
14	Commodity Block 4						Dec ccf %			
15										
16	Demand Block 1									
17	Demand Block 2						Contract-1			
18	Fixed Monthly, Oct-Dec						40,224	10/22-9/23, monthly		
19	Fixed Monthly, Jan-Sep						41,028	10/23-9/24, monthly		
20	<b>COMPUTATION OF REVENUE</b>									
21	Fixed Charge Revenue	1,030,504	225,470	2,952	3,936	12,792	485,100	14,750	3,936	1,779,441
22	Volumetric Revenue	2,245,509	746,140	51,367	10,468	501,690	365,018	260,731	536,238	4,717,161
23	<b>Total Distribution Revenue</b>	<b>\$3,276,012</b>	<b>\$971,610</b>	<b>\$54,319</b>	<b>\$14,404</b>	<b>\$514,483</b>	<b>\$850,118</b>	<b>\$275,481</b>	<b>\$540,174</b>	<b>\$6,496,602</b>
24	Target	3,276,021	977,517	54,588	14,817	514,079	850,118	269,933	539,898	6,496,970
25	<b>BILLING UNITS- DETAIL</b>									
26	Block 1 ccf Sales	6,106,738	2,646,262	587,921	55,582	2,663,890	15,926,624	924,708	6,137,556	35,049,281
27									<i>Check</i>	35,049,281

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**

**Summary Of Present And Proposed Tariff Rates**  
**Historic Year December 31, 2021 and Fully Projected Future Test Year December 31, 2023**

Line	Present Rates (excluding GCR)	GCR Current	Present Rates (including GCR present rate)	Proposed Rates (excluding GCR)	GCR Current	Proposed Rates (including GCR present rate)	Proposed Increase (excluding GCR)	Proposed Increase (including GCR present rate)	
<b>Rate R- Residential</b>									
1									
2	Customer Charge per Bill		\$11.79	\$11.79		\$12.90	\$12.90	9.41%	9.41%
3									
4	<u>Commodity charge per ccf</u>								
5	All usage	\$0.28723	\$0.41748	\$0.70471	\$0.36771	\$0.41748	\$0.78519	28.02%	11.42%
6	<b>Rate C- Commercial</b>								
7	Customer Charge per Bill		\$20.21	\$20.21		\$21.95	\$21.95	8.61%	8.61%
8									
9	<u>Commodity charge per ccf</u>								
10	All usage	\$0.22553	\$0.41748	\$0.64301	\$0.28196	\$0.41748	\$0.69944	25.02%	8.78%
11	<b>Rate I- Large Industrial Firm</b>								
12	Customer Charge per Bill		\$0.00	\$0.00		\$0.00			
13									
14	<u>Commodity charge per ccf</u>								
15	Block 1	\$0.11738	\$0.41748	\$0.53486	\$0.14264	\$0.41748	\$0.56012	21.52%	4.72%
16	Block 2	\$0.07210	\$0.41748	\$0.48958	\$0.08762	\$0.41748	\$0.50510	21.53%	3.17%
17	Block 3	\$0.04723	\$0.41748	\$0.46471	\$0.05739	\$0.41748	\$0.47487	21.51%	2.19%
18									
19	<u>Demand charge per mcf</u>								
20	Block 1	\$1.288650		\$1.28865	\$1.56597		\$1.56597	21.52%	21.52%
21	Block 2	\$0.668730		\$0.66873	\$0.81264		\$0.81264	21.52%	21.52%
22	<b>Rate IS- Interruptible Service</b>								
23	Customer Charge per Bill		\$75.23	\$75.23		\$82.00	\$82.00	9.00%	9.00%
24									
25	<u>Transport charge per ccf</u>								
26	All usage	\$0.07180		\$0.0718	\$0.08737		\$0.0874	21.69%	21.69%

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**

**Summary Of Present And Proposed Tariff Rates**  
**Historic Year December 31, 2021 and Fully Projected Future Test Year December 31, 2023**

Line	Present Rates (excluding GCR)	GCR Current	Present Rates (including GCR present rate)	Proposed Rates (excluding GCR)	GCR Current	Proposed Rates (including GCR present rate)	Proposed Increase (excluding GCR)	Proposed Increase (including GCR present rate)
<b>Rate SI- Small Industrial</b>								
27								
28	Customer Charge per Bill	\$75.23	\$75.23	\$82.00		\$82.00	9.00%	9.00%
29								
30	<u>Demand charge per mcf</u>							
31	All usage	\$0.1544	\$0.4175	\$0.1883	\$0.4175	\$0.6058	21.98%	5.93%
<b>Rate ST- Transport Firm</b>								
32								
33	Customer Charge per Bill	\$75.23	\$75.23	\$82.00		\$82.00	9.00%	
34								
35	<u>Transport charge per ccf</u>							
36	All usage	\$0.1544	\$0.1544	\$0.1883		\$0.1883	21.98%	21.98%
<b>Transport. Firm- DDQ</b>								
37								
38	Customer Charge per Bill	\$20.21	\$20.21	\$21.95		\$21.95	8.61%	8.61%
39								
40	<u>Transport charge per ccf</u>							
41	All usage	\$0.2255	\$0.2255	\$0.2820		\$0.2820	25.02%	25.02%
<b>Transport. Interruptible</b>								
42								
43	Customer Charge per Bill	\$75.23	\$75.23	\$82.00		\$82.00	9.00%	
44								
45	<u>Transport charge per ccf</u>							
46	All usage	\$0.0718	\$0.0718	\$0.0874		\$0.0874	21.69%	21.69%

35-1 (R)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)**

**Bill Comparisons (including GCR present rate)  
Fully Projected Future Test Year December 31, 2023  
Rate R- Residential**

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
1		Minimum	\$11.79		\$12.90		\$1.11	9.41%
2		10	18.84	\$1.88371	20.75	\$2.07519	1.91	10.17%
3		20	25.88	1.29421	28.60	1.43019	2.72	10.51%
4	All Residential, Apr-Sep	36	37.16	1.03221	41.17	1.14352	4.01	10.78%
5		50	47.03	0.94051	52.16	1.04319	5.13	10.92%
6	All Residential, Annual	76	65.35	0.85984	72.57	0.95493	7.23	11.06%
7	All Residential, Oct-Mar	117	94.24	0.80548	104.77	0.89545	10.53	11.17%
8		150	117.50	0.78331	130.68	0.87119	13.18	11.22%
9		200	152.73	0.76366	169.94	0.84969	17.21	11.27%
10		250	187.97	0.75187	209.20	0.83679	21.23	11.29%

**Rate C- Commercial**

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
16		Minimum	\$20.21		\$21.95		\$1.74	8.61%
17		25	36.29	\$1.45141	39.44	\$1.57744	3.15	8.68%
18		50	52.36	1.04721	56.92	1.13844	4.56	8.71%
19		100	84.51	0.84511	91.89	0.91894	7.38	8.74%
20		200	148.81	0.74406	161.84	0.80919	13.03	8.75%
21	All Commercial, Annual	258	186.11	0.72134	202.41	0.78452	16.30	8.76%
22		300	213.11	0.71038	231.78	0.77261	18.67	8.76%
23		400	277.41	0.69354	301.73	0.75432	24.31	8.76%
24		500	341.72	0.68343	371.67	0.74334	29.96	8.77%
25		750	502.47	0.66996	546.53	0.72871	44.06	8.77%
26		1,000	663.22	0.66322	721.39	0.72139	58.17	8.77%



35-1 (R)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)**

**Bill Comparisons (including GCR present rate)  
Fully Projected Future Test Year December 31, 2023**

**Rate SI- Small Industrial**

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Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
		Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
	Minimum	\$75.23		\$82.00		\$6.77	9.00%
	2,000	1,218.99	\$0.60950	1,293.62	\$0.64681	74.63	6.12%
	4,000	2,362.75	0.59069	2,505.24	0.62631	142.49	6.03%
	6,000	3,506.51	0.58442	3,716.86	0.61948	210.35	6.00%
	8,000	4,650.27	0.58128	4,928.48	0.61606	278.21	5.98%
	10,000	5,794.03	0.57940	6,140.10	0.61401	346.07	5.97%
	12,000	6,937.79	0.57815	7,351.72	0.61264	413.93	5.97%
	14,000	8,081.55	0.57725	8,563.34	0.61167	481.79	5.96%
	16,000	9,225.31	0.57658	9,774.96	0.61094	549.65	5.96%
	18,000	10,369.07	0.57606	10,986.58	0.61037	617.51	5.96%
	20,000	11,512.83	0.57564	12,198.20	0.60991	685.37	5.95%

35-2 (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**

**Bill Comparisons (excluding GCR)**  
**Fully Projected Future Test Year December 31, 2023**  
**Rate R- Residential**

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
1		Minimum	\$11.79		\$12.90		\$1.11	9.41%
2		10	14.66	\$1.46623	16.58	\$1.65771	1.91	13.06%
3		20	17.53	0.87673	20.25	1.01271	2.72	15.51%
4	All Residential, Apr-Sep	36	22.13	0.61473	26.14	0.72604	4.01	18.11%
5		50	26.15	0.52303	31.29	0.62571	5.13	19.63%
6	All Residential, Annual	76	33.62	0.44236	40.85	0.53745	7.23	21.49%
7	All Residential, Oct-Mar	117	45.40	0.38800	55.92	0.47797	10.53	23.19%
8		150	54.87	0.36583	68.06	0.45371	13.18	24.02%
9		200	69.24	0.34618	86.44	0.43221	17.21	24.85%
10		250	83.60	0.33439	104.83	0.41931	21.23	25.40%

**Rate C- Commercial**

Line	Average	Sales (ccf)	Present Rates		Proposed Rates		Increase	
			Monthly Bill	Cost per ccf	Monthly Bill	Cost per ccf	\$ per Monthly	%
16		Minimum	\$20.21		\$21.95		\$1.74	8.61%
17		25	25.85	\$1.03393	29.00	\$1.15996	3.15	12.19%
18		50	31.49	0.62973	36.05	0.72096	4.56	14.49%
19		100	42.76	0.42763	50.15	0.50146	7.38	17.26%
20		200	65.32	0.32658	78.34	0.39171	13.03	19.94%
21	All Commercial, Annual	258	78.40	0.30386	94.70	0.36704	16.30	20.79%
22		300	87.87	0.29290	106.54	0.35513	18.67	21.25%
23		400	110.42	0.27606	134.73	0.33684	24.31	22.02%
24		500	132.98	0.26595	162.93	0.32586	29.96	22.53%
25		750	189.36	0.25248	233.42	0.31123	44.06	23.27%
26		1,000	245.74	0.24574	303.91	0.30391	58.17	23.67%



**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**

Line	Description	Historic Year December 31, 2021		Future Test Year December 31, 2022	Present Rates Fully Projected Future Test Year December 31, 2023	Full Revenue Requirement Fully Projected Future Test Year December 31, 2023	Proposed Rates Fully Projected Future Test Year December 31, 2023
		Per Books	Distribution Only	Distribution Only	Distribution Only	Distribution Only	Distribution Only
1	<u>REVENUE</u>						
2	Residential	\$4,523,971	\$2,500,218	\$2,643,225	\$2,695,871		3,276,012
3	Commercial and industrial	2,014,680	832,275	856,824	861,522		1,040,333
4	Transportation	1,886,645	1,886,645	1,925,649	1,939,577		2,180,256
5	Operating revenue	8,425,296	5,219,138	5,425,698	5,496,970	6,715,932	6,496,602
6	Other revenue, net	26,516	26,516	24,205	24,205	24,205	24,205
7	Total Revenue	8,451,812	5,245,654	5,449,903	5,521,175	6,740,137	6,520,807
8	<i>ccf</i>	34,492,533		34,914,570		35,049,281	35,049,281
9	<u>EXPENSES</u>						
10	Purchased gas (in revenue)	3,650,808					
11	Distribution	1,456,979	1,456,979	1,680,980	1,808,705	1,808,705	1,808,705
12	Customer accounting & collection	603,108	603,108	676,444	690,450	698,625	697,156
13	Rate case expense normalization				122,359	122,359	122,359
14	Administrative & general expenses	1,028,273	1,028,273	1,079,960	996,234	996,234	996,234
15	Total Operating expenses	6,739,168	3,088,360	3,437,384	3,617,748	3,625,922	3,624,454
16							
17	Depreciation expense	1,063,704	1,063,704	937,616	1,178,428	1,178,428	1,178,428
18	Taxes other than income	31,548	31,548	32,996	34,169	34,169	34,169
19							
20	Total Expenses	7,834,420	4,183,612	4,407,996	4,830,344	4,838,519	4,837,051
21							
22	Net operating income before income tax	617,392	1,062,042	1,041,907	690,831	1,901,618	1,683,756
23							
24	Income tax expense	(385,379)	(222,867)	(194,770)	(13,253)	327,004	265,780
25							
26	NET UTILITY OPERATING INCOME (LOSS) (A)	\$1,002,771	\$1,284,909	\$1,236,677	\$704,084	\$1,574,615	\$1,417,976
27							
28	RATE BASE (B)	\$18,929,130	\$18,929,130	\$19,760,538	\$19,756,771	\$19,756,771	\$19,756,771
29	RATE OF RETURN ON RATE BASE (C)	5.30%	6.79%	6.26%	3.56%	7.97%	7.18%
30							

C1-1 (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1] - Support Sheet No. 1**  
**Support Sheet No. 1- Operating Expense and Going-Level Adjustments**

Line	Acct	Account Description	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020	Historic Year December 31, 2021	Adjust HTY to FTY	Future Test Year December 31, 2022	Adjust FTY to FPFTY	Fully	LABOR	LABOR
												Projected Future Test Year December 31, 2023	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023
1		<u>Distribution Expenses</u>												
2	842	Fuel	20,229	22,625	32,754	23,989	27,679	26,245	5,197	31,442	629	32,071	0	0
3	870	Labor Supv /Eng.	65,207	80,117	158,043	152,412	143,501	155,095	6,191	161,286	67,183	228,469	68,593	98,718
4	871	Distrib Load Disp	5,017	5,744	0	5,838	9,756	1,063	4,788	5,851	260	6,111	0	0
5	874	Mains & Services	407,629	425,516	449,306	459,476	387,097	398,302	44,840	443,142	21,852	464,994	135,743	144,437
6	875	Meas & Reg- Gen	45,070	59,771	49,259	59,266	76,371	77,321	5,392	82,714	3,511	86,225	28,690	30,374
7	876	Ind / Com Meters, Reg	53,818	53,967	65,404	67,015	74,823	82,052	6,846	88,899	4,317	93,215	33,497	35,464
8	877	Meas & Reg- City gate	54,341	36,856	45,852	59,375	54,772	43,642	(266)	43,376	1,637	45,013	6,162	6,524
9	878	Meters & House Reg	132,975	139,433	144,074	176,107	152,279	135,380	30,203	165,583	9,381	174,965	63,569	68,175
10	879	Cust installations	131,224	106,627	114,336	138,402	143,494	127,575	46,947	174,523	8,737	183,260	70,416	74,901
11	880	Other operating exp	2,555	3,642	3,893	3,958	4,416	4,393	(137)	4,256	85	4,341	0	0
12	881	Rents	2,626	1,045	1,871	3,180	3,917	4,773	1,050	5,823	1,281	7,104	0	0
13		<i>Total Operation</i>	920,691	935,343	1,064,792	1,149,018	1,078,105	1,055,842	151,053	1,206,895	118,873	1,325,767	406,670	458,593
14														
15	885	Super and eng	30,192	25,260	25,312	25,152	26,483	29,829	2,724	32,553	1,425	33,978	13,539	14,301
16	886	Structures & improve	26,214	26,268	37,189	64,471	46,330	21,942	3,608	25,550	1,033	26,583	9,576	10,101
17	887	Mains	86,503	89,888	56,809	69,915	76,018	85,519	6,690	92,209	3,576	95,785	27,736	29,365
18	889	Meas & Reg- Gen	22,205	34,174	27,158	28,849	64,814	79,831	23,324	103,155	4,355	107,510	36,655	38,807
19	890	Meas & Reg- Ind	24,466	18,825	17,371	29,058	48,581	46,434	14,668	61,102	(9,403)	51,699	16,040	16,982
20	891	Meas & Reg- City gate	8,130	6,827	11,207	8,438	14,376	15,270	291	15,560	662	16,222	5,464	5,785
21	892	Services	51,809	79,354	53,701	48,114	29,992	59,534	101	59,635	2,572	62,207	18,314	19,579
22	893	Meters & House Reg	104,484	65,985	56,282	60,147	122,720	62,779	21,542	84,321	4,632	88,954	26,829	28,936
23		<i>Total Maintenance</i>	354,003	346,581	285,029	334,144	429,314	401,137	72,948	474,085	8,852	482,938	154,153	163,856
24		<i>Total Distribution</i>	1,274,694	1,281,924	1,349,821	1,483,162	1,507,419	1,456,979	224,001	1,680,980	127,725	1,808,705	560,823	622,449

C1-1 (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1] - Support Sheet No. 1**  
**Support Sheet No. 1- Operating Expense and Going-Level Adjustments**

Line	Acct	Account Description	Year 2016	Year 2017	Year 2018	Year 2019	Year 2020	Historic Year December 31, 2021	Adjust HTY to FTY	Future Test Year December 31, 2022	Adjust FTY to FPFTY	Fully	LABOR	LABOR
												Projected Future Test Year December 31, 2023	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023
25														
26		<u>Customer Accounting &amp; Collection Expenses:</u>												
27	902	Meter Reading Exp	84,694	105,993	84,847	73,254	40,927	42,948	(13,548)	29,400	1,233	30,633	10,008	10,595
28	903	Cust Rec & Coll Exp	432,803	448,576	467,964	484,462	469,847	544,861	30,526	575,387	16,277	591,664	178,585	186,180
29	904	Uncollect Acct (Dist)	20,749	39,383	54,012	35,221	69,691	(19,622)	54,622	35,000	0	35,000	0	0
30	905	Miscellaneous cust	4,132	15,190	28,364	21,602	22,690	22,877	633	23,510	470	23,980	0	0
31	909	Info & Inst Advert	2,527	1,240	1,276	9,908	9,439	7,633	1,360	8,993	180	9,173	0	0
32	913	Advertising	6,986	4,143	3,828	6,641	2,243	4,409	(255)	4,154	(4,154)	0	0	0
33		<i>Total Cust Acct &amp; Coll</i>	551,891	614,525	640,291	631,088	614,837	603,108	73,336	676,444	14,006	690,450	188,593	196,775
34														
35		<u>Administrative &amp; General Expenses:</u>												
36	920	A&G Salaries	443,785	522,229	442,616	486,687	494,299	557,944	38,819	596,762	14,337	611,099	248,780	257,617
37	921	Office Supp & Exp	27,756	37,612	52,025	56,086	30,312	44,898	22,066	66,964	13,410	80,374	0	0
38	923	Outside Services	69,145	77,054	115,613	140,566	69,740	56,267	11,006	67,273	3,053	70,326	0	0
39	924	Property Insurance	10,930	11,156	11,456	12,350	14,721	16,358	1,990	18,348	2,759	21,107	0	0
40	925	Injuries and damage	60,294	56,695	55,616	79,058	89,148	87,139	2,452	89,591	4,444	94,035	0	0
41	926	Empl Pens & Bene	834	2,916	2,150	9,087	8,015	11,387	231	11,618	232	11,850	0	0
42	928	Reg Comm Exp	41,372	38,446	35,992	33,470	148,136	122,392	797	123,189	(123,189)	0	0	0
43	930	General advertising	49,049	52,295	73,436	70,951	123,762	67,795	8,886	76,681	1,256	77,937	0	0
44	930CV	COVID-related	0	0	0	0	0	25,620	(25,620)	0	0	0	0	0
45	932	Maint Gen plant	10,638	19,479	22,214	32,946	41,292	38,473	(8,939)	29,534	(29)	29,505	13,735	14,540
46		<i>Total A&amp;G</i>	713,803	817,882	811,118	921,201	1,019,425	1,028,273	51,687	1,079,960	(83,727)	996,234	262,515	272,157
47														
48		<b>Total Oper &amp; Maint</b>	<b>2,540,388</b>	<b>2,714,331</b>	<b>2,801,230</b>	<b>3,035,451</b>	<b>3,141,681</b>	<b>3,088,360</b>	<b>349,024</b>	<b>3,437,384</b>	<b>58,005</b>	<b>3,495,389</b>	<b>1,011,931</b>	<b>1,091,381</b>
49														
50		Labor	790,833	827,348	859,534	921,836	994,791	921,705	90,226	1,011,931	79,450	1,091,381		
51		Transportation	114,959	143,350	150,543	176,859	139,265	127,971	24,122	152,093	11,940	164,033		
52		Material	237,057	258,927	247,422	275,112	240,749	212,869	64,957	277,826	3,080	280,906		
53		OH	969,471	1,018,242	1,005,589	1,075,311	1,054,579	1,186,815	124,087	1,310,902	73,862	1,384,764		
54		Other	428,068	466,464	538,142	586,302	695,793	642,059	38,505	680,564	(91,341)	589,223		
55			2,540,388	2,714,331	2,801,230	3,035,420	3,125,177	3,091,419	341,897	3,433,316	76,991	3,510,307		

**Rate Case with Fully Projected Future Test Year 2023 (R)**  
**Adjustments and Reclasses Made for Corrections and Updates**

Line	Ref	Account	Schedule C1-1 Original					Adjustments Made in CU/ Rebuttal					Schedule C1-1 (R)					
			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	2019	2020	2021	2022	2023	
1	RE-2	870	152,412	143,501	155,095	168,984	240,616					(7,698)	(12,147)	152,412	143,501	155,095	161,286	228,469
2	RE-3	874	459,445	387,732	398,302	426,192	448,230	31	(635)			16,950	16,764	459,476	387,097	398,302	443,142	464,994
3		875	59,266	76,371	77,321	78,888	82,408					3,826	3,817	59,266	76,371	77,321	82,714	86,225
4	RE-4	876	67,015	74,823	82,052	87,784	92,212					1,115	1,003	67,015	74,823	82,052	88,899	93,215
5		877	59,375	54,772	43,642	42,694	44,337					682	676	59,375	54,772	43,642	43,376	45,013
6	RE-5	878	176,107	147,886	135,380	161,318	170,977		4,393			4,265	3,988	176,107	152,279	135,380	165,583	174,965
7	RE-6	879	138,402	143,494	127,575	176,136	185,278					(1,613)	(2,018)	138,402	143,494	127,575	174,523	183,260
8		885	25,152	26,483	29,829	33,354	34,857					(801)	(879)	25,152	26,483	29,829	32,553	33,978
9		886	64,471	46,330	21,942	25,590	26,660					(40)	(77)	64,471	46,330	21,942	25,550	26,583
10		887	69,915	76,018	85,519	86,555	90,081					5,654	5,704	69,915	76,018	85,519	92,209	95,785
11	RE-8	889	28,849	64,814	114,865	106,250	110,856			(35,034)	(3,095)	(3,346)		28,849	64,814	79,831	103,155	107,510
12	RE-9	890	29,058	48,581	11,400	51,180	53,290			35,034	9,922	(1,591)		29,058	48,581	46,434	61,102	51,699
13		891	8,438	14,376	15,270	15,242	15,918					318	304	8,438	14,376	15,270	15,560	16,222
14	RE-10	892	48,114	29,992	59,534	57,157	59,762					2,478	2,445	48,114	29,992	59,534	59,635	62,207
15	RE-11	893	60,147	122,720	62,779	81,378	86,118					2,943	2,836	60,147	122,720	62,779	84,321	88,954
16		902	73,254	40,927	42,948	28,197	29,437					1,203	1,196	73,254	40,927	42,948	29,400	30,633
17	RE-12	903	484,462	469,847	544,861	598,896	616,215					(23,509)	(24,551)	484,462	469,847	544,861	575,387	591,664
18	Rebut	913	3,828	6,641	2,243	4,154	4,237						(4,237)	3,828	6,641	2,243	4,154	0
19	RE-13	920	486,687	494,299	557,944	613,182	628,218					(16,420)	(17,119)	486,687	494,299	557,944	596,762	611,099
20	RE-14	921	56,086	30,312	44,898	66,964	80,374							56,086	30,312	44,898	66,964	80,374
21	RE-15	923	140,566	69,740	59,326	67,673	70,726			(3,059)	(400)	(400)		140,566	69,740	56,267	67,273	70,326
22	RE-16	924	12,350	14,721	16,358	18,348	21,107							12,350	14,721	16,358	18,348	21,107
23	RE-17	926	9,087	8,015	11,387	11,618	11,850							9,087	8,015	11,387	11,618	11,850
24	RE-18/ Rebut	930	70,951	111,016	67,795	76,681	79,181		12,746				(1,244)	70,951	123,762	67,795	76,681	77,937
25		932	32,946	41,292	38,473	21,246	21,028					8,288	8,477	32,946	41,292	38,473	29,534	29,505
26	Total							<b>31</b>	<b>16,504</b>	<b>(3,059)</b>	<b>(6,932)</b>	<b>(14,518)</b>						

C1-2 (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**

**Support Sheet No. 2- Summary of Cost of Capital and Fair Rate of Return Based upon a  
Hypothetical Ratemaking Capital Structure  
12/31/2023**

<u>Line</u>	<u>Type of Capital</u>	<u>Ratios (1)</u>	<u>Cost Rate</u>	<u>Weighted Cost Rate</u>
1	Long-Term Debt	50.47%	4.49%	2.27%
2	Common Equity	49.53%	11.50%	5.70%
3	Total	<u>100.00%</u>	11.50%	<u>7.97%</u>
4	TargetROR			<u>7.9700%</u>
5				
6	[1] Recommended hypothetical capital structure ratios as discussed in direct testimony.			



C1-3 (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 3- Taxes Other Than Income**

Line	Description	Historic Year December 31, 2021		Future Test Year December 31, 2022	PRESENT RATES Fully Projected Future Test Year December 31, 2023	PROPOSED RATES Fully Projected Future Test Year December 31, 2023
		Per Books	Distribution Only	Distribution Only	Distribution Only	Distribution Only
1	<u>Taxes other than income:</u>					
2	Pennsylvania Use Tax					
3	Public Utility Realty Tax	28,876	28,876	30,324	31,497	31,497
4	Pennsylvania PUC assessment	2,672	2,672	2,672	2,672	2,672
5		<u>\$31,548</u>	<u>\$31,548</u>	<u>\$32,996</u>	<u>\$34,169</u>	<u>\$34,169</u>
6						
7	Plant assets		37,148,890	39,011,655	40,520,766	40,520,766
8	Tax rate		0.07773%			
9						
10	<b>Rate case expense amortization</b>					
11	Estimated expenses				\$334,500	
12	Amortization period (years)				<u>3</u>	
13					\$111,500	
14	Recovery of COVID extraordinary costs		Schedule C1-7 (R)		<u>10,859</u>	
15	Annual amortization expense				<u>\$122,359</u>	<u>\$122,359</u>

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**

**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 4- Income Tax Calculations**

Line	Description	Historic Year December 31, 2021		Future Test Year December 31, 2022	PRESENT RATES Fully Projected Future Test Year December 31, 2023	FULL REVENUE REQUIREMENT Fully Projected Future Test Year December 31, 2023	PROPOSED RATES Fully Projected Future Test Year December 31, 2023
		Per Books	Distribution Only	Distribution Only	Distribution Only	Distribution Only	Distribution Only
1	Net Operating Income Excluding Income Taxes	\$617,392	\$1,062,042	\$1,041,907	\$690,831	\$1,901,618	\$1,683,756
2							
3	<u>Non-Operating Expenses:</u>						
4	Synchronized interest expense:						
5	Rate base	18,929,130	18,929,130	19,760,538	19,756,771	19,756,771	19,756,771
6	Less: CWIP	0	0	0	0	0	0
7	Rate base for interest computation	18,929,130	18,929,130	19,760,538	19,756,771	19,756,771	19,756,771
8	Weighted Cost of debt	2.270%	2.270%	2.270%	2.270%	2.270%	2.270%
9	Synchronized interest expense	429,691	429,691	448,564	448,479	448,479	448,479
10	Taxable income before depreciation tax adjustments	187,700	632,350	593,343	242,352	1,453,140	1,235,277
11							
12	<u>Pennsylvania depreciation adjustment:</u>						
13	Tax depreciation (using DDB method)	(1,643,478)	(1,643,478)	(1,484,706)	(1,887,016)	(1,887,016)	(1,887,016)
14	Book depreciation	1,063,704	1,063,704	937,616	1,178,428	1,178,428	1,178,428
15	Pennsylvania depreciation adjustment	(579,774)	(579,774)	(547,090)	(708,588)	(708,588)	(708,588)
16	Pennsylvania taxable income	(392,073)	483,931	390,526	(466,236)	744,552	526,689
17	Regulatory Pennsylvania income tax expense	9.99%	48,345	39,014	(41,915)	66,935	47,349
18							
19	<u>Federal depreciation adjustment:</u>	9.99%	9.99%	9.99%	8.99%	8.99%	8.99%
20	Tax depreciation (using SL method)	(2,895,636)	(2,895,636)	(2,561,639)	(1,282,651)	(1,282,651)	(1,282,651)
21	Book depreciation	1,063,704	1,063,704	937,616	1,178,428	1,178,428	1,178,428
22	Federal depreciation adjustment	(1,831,932)	(1,831,932)	(1,624,023)	(104,223)	(104,223)	(104,223)
23							
24	Taxable income before depreciation tax adjustments	187,700	632,350	593,343	242,352	1,453,140	1,235,277
25	Federal depreciation adjustment	(1,831,932)	(1,831,932)	(1,624,023)	(104,223)	(104,223)	(104,223)
26	Pennsylvania income tax expense	39,168	(48,345)	(39,014)	41,915	(66,935)	(47,349)
27	Federal taxable income	(1,605,063)	(1,247,926)	(1,069,694)	180,044	1,281,981	1,083,705
28	Regulatory Federal income tax expense	21.00%	(337,063)	(262,064)	(224,636)	37,809	269,216
29	EDIT Accretion	(9,148)	(9,148)	(9,148)	(9,148)	(9,148)	(9,148)
30	Regulatory Total income tax expense	(385,379)	(222,867)	(194,770)	(13,253)	\$327,004	\$265,780
31							
32	<u>Deferred Federal Income Tax expense (included in above):</u>						
33	Tax depreciation (using SL method)	2,895,636	2,895,636	2,561,639	1,282,651	1,282,651	1,282,651
34	Tax depreciation (using DDB method)	1,643,478	1,643,478	1,484,706	1,887,016	1,887,016	1,887,016
35		(1,252,158)	(1,252,158)	(1,076,933)	604,365	604,365	604,365
36	Federal tax rate	21.00%	21.00%	21.00%	21.00%	21.00%	21.00%
37	Deferred Federal income tax (credit)	(262,953)	(262,953)	(226,156)	\$126,917	\$126,917	\$126,917
38	<b>Combined statutory tax rate</b>	<b>28.89%</b>	28.89%	28.89%	28.10%	28.10%	28.10%



21-6 (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 6- Computation of Rate Base**

Line	Description	Source	12/31/2017	Historic Year December 31, 2021	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023
1	<u>Utility Plant in Service</u>					
2	Assets	Schedule C3		\$ 37,148,890	\$ 39,011,655	\$ 40,520,766
3	Less: Accumulated Depreciation	Schedule C3		(17,226,992)	(18,302,157)	(19,618,136)
4				19,921,899	20,709,498	20,902,631
5	Construction work in progress	Schedule C2		0	0	0
6	Less: Accumulated deferred income taxes	Line 33		(251,718)	(253,856)	(467,154)
7	Less: Excess deferred income taxes (EDIT)	Line 40		(82,329)	(73,182)	(64,034)
8	Less: Customer deposits	Schedule C2		(410,578)	(410,578)	(410,578)
9	Natural gas inventories- avg balance for year	Workpaper 5 to Sch C		1,413,315	1,413,315	1,413,315
10	Unbundled, to be Recovered in GCR	To Schedule C4		(1,413,315)	(1,413,315)	(1,413,315)
11	Accrued OPEB Liability / OPEB asset, net	Line 47		(834,426)	(834,426)	(834,426)
12	Materials & Supplies	Schedule C2		197,784	197,784	197,784
13				18,540,632	19,335,240	19,324,222
14	Cash Working Capital Allowance	Line 26		388,498	425,298	432,549
15	RATE BASE			\$ 18,929,130	\$ 19,760,538	\$ 19,756,771
16						

21-6 (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**  
**Net Operating Income And Rates of Return**  
**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**  
**Answer to 52 Pa. Code 53.52 c[1]**  
**Support Sheet No. 6- Computation of Rate Base**

Line	Description	Source	12/31/2017	Historic Year December 31, 2021	Future Test Year December 31, 2022	Fully Projected Future Test Year December 31, 2023
17	<u>Cash Working Capital Allowance:</u>					
18	Operating Expenses	Schedule C1		\$ 7,834,420	\$ 4,407,996	\$ 4,830,344
19						
20	Deductions:					
21	Purchased Gas	Schedule C1		3,650,808	0	0
22	Depreciation Expense, Uncollectible, TOTI	Schedule C1		1,075,631	1,005,612	1,369,956
23	Total Deductions			<u>4,726,439</u>	<u>1,005,612</u>	<u>1,369,956</u>
24	Cash Operating Expenses			3,107,982	3,402,384	3,460,389
25	Cash Operating Expenses Ratio			1/8	1/8	1/8
26	Cash Working Capital Allowance			<u>\$ 388,498</u>	<u>\$ 425,298</u>	<u>\$ 432,549</u>
27						
28	<u>Regulatory Accumulated deferred income tax:</u>					
29	Accumulated depreciation based on tax expense borne by ratepayers			32,740,763	35,277,257	36,492,535
30	Accumulated depreciation based on taxes paid by company			33,939,419	36,486,095	38,717,080
31	(Excess) depreciation taken by company			(1,198,656)	(1,208,838)	(2,224,545)
32	Federal tax rate			21.00%	21.00%	21.00%
33	Regulatory Accumulated deferred income tax (liability)			<u>\$ (251,718)</u>	<u>\$ (253,856)</u>	<u>\$ (467,154)</u>
34						
35	<u>Excess deferred income tax:(EDIT)</u>					
36	Accumulated depreciation based on tax expense borne by ratepayers		23,781,445	Use actual for 2020		
37	Accumulated depreciation based on taxes paid by company		24,485,114	Use actual for 2020		
38	(Excess) depreciation taken by company		(703,669)			
39	Change in Federal tax rate			13.00%		
40	Excess deferred income tax:(EDIT)			<u>(91,477)</u>	(82,329)	(73,182)
41	Annual Amortization	10		(9,148)	(9,148)	(9,148)
42						
43	<u>Accrued OPEB Liability / OPEB asset, net</u>					
44	Accrued postretirement cost			(674,095)	(674,095)	(674,095)
45	Regulatory asset- OPEB			(354,467)	(354,467)	(354,467)
46	Deferred tax asset related to OPEB			194,137	194,137	194,137
47				<u>(834,426)</u>	<u>(834,426)</u>	<u>(834,426)</u>
48						
49	OPEB Expense (for future rate cases)			17,964	21,825	22,480

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**  
**Extraordinary Coronavirus Pandemic Costs**

Line	Description	Amount		
1	Carrying charge on Excess AR, 2021	7.231%	4,094	
2	Carrying charge on Excess AR, 2022	7.231%	4,390	
3	Extraordinary costs		18,075	
4	Carrying charge on costs		1,441	
5	Total Costs to 12/31/2022		<u>27,999</u>	
6	Carrying rate and Recovery period, years	7.970%	3.0	
7	<b>Annual amount</b>	To Schedule C1-3 (R)	<b>10,859</b>	
9	<b>AR Balances</b>	2022	2020-2021	2019
10	January	427,437	473,053	
11	February		634,171	
12	March		630,723	
13	April		549,524	
14	May		533,738	
15	June		367,012	
16	July		246,396	
17	August		207,367	
18	September		176,208	
19	October		159,553	
20	November		233,317	
21	December		488,388	
22	January		674,954	380,762
23	February		957,443	748,983
24	March		667,328	646,726
25	April		561,512	570,343
26	May		509,913	402,955
27	June		313,304	271,372
28	July		174,802	119,234
29	August		140,215	73,396
30	September		10,311	12,290
31	October		(47,919)	(34,584)
32	November		38,064	158,052
33	December		306,522	346,811
34	Next January		427,437	473,053
35	Average		<u>377,333</u>	<u>320,723</u>
36	<b>Excess AR</b>		<b>56,611</b>	
38	<b>Extraordinary Costs</b>	Total	2021	2020
39	Materials and Other	18,075	2,979	15,097
40		<u>18,075</u>	<u>2,979</u>	<u>15,097</u>

C1-8 (R)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)**

**Comparison to Prior Rate Case  
Prior Rate Case and Fully Projected Future Test Year December 31, 2023**

Line	Description	Fully Projected Future Test Year December 31, 2023	R-2019-3008209, Order	Difference- Needs Higher (Lower) Revenue
1	Revenue	5,521,175	5,528,407	7,232
2	<i>ccf</i>	<i>35,049,281</i>	<i>26,569,046</i>	
3				
4				
5	O&M	3,495,389	2,995,053	500,335
6	Taxes other than income, Rate Case	156,528	124,629	31,899
7	Depreciation	1,178,428	970,394	208,034
8	Income tax	327,004	191,302	135,701
9				
10	Rate Base	\$19,756,771	\$17,159,915	
11	Required Return	7.97%	7.27%	
12	Target Return	1,574,615	1,247,526	327,089
13				1,210,290
14	Uncollectibles	0.675%		8,171
15				
16	Rounding			501
17	Revenue Increase Required at Recommended Return			1,218,962
18	Per Schedule C1			1,218,962
19				

C2 (R)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)**

**Balance Sheets  
Years Ended 12/31/2021, 12/31/2022 and 12/31/2023  
Answer to 52 Pa. Code 53.52 c[2]**

Line	Account Title	Per Books 12/31/2021	Pro Forma 12/31/2022	Pro Forma 12/31/2023
1	<b>Assets and Other Debits</b>			
2	<u>Utility Plant</u>			
12	Gas plant in service for ratemaking	\$37,148,890	\$39,011,655	\$40,520,766
13	Adjustments, net	2,803,614	668,128	551,492
14	Construction work in progress	18,028	18,028	18,028
15	Accumulated depreciation for ratemaking	(17,226,992)	(18,302,157)	(19,618,136)
16	<i>Total utility plant</i>	22,743,541	21,395,654	21,472,150
17				
18	<u>Other Property and Investments:</u>			
19	RS Plan Prepayment	94,000	94,000	94,000
20	Regulatory asset	120,444	120,444	120,444
21	<i>Total other property and investments</i>	214,444	214,444	214,444
22				
23	<u>Current Assets:</u>			
24	Cash	1,052,864	1,052,864	1,052,864
25	Customer accounts receivable	1,749,225	1,749,225	1,749,225
26	Unrecovered Gas costs	469,803		
27	Advances to affiliates	886,606	886,606	886,606
28	Natural gas inventories	1,104,108	1,104,108	1,104,108
29	Materials and supplies	197,784	197,784	197,784
30	Prepayments	417,458	417,458	417,458
31	<i>Total current assets</i>	5,877,848	5,408,045	5,408,045
32				
33	<b>Total Assets and Other Debits</b>	<b>\$28,835,833</b>	<b>\$27,018,143</b>	<b>\$27,094,639</b>
34				



C2 (R)

**Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)**

**Balance Sheets**

**Years Ended 12/31/2021, 12/31/2022 and 12/31/2023**

**Answer to 52 Pa. Code 53.52 c[2]**

Line	Account Title	Per Books 12/31/2021	Pro Forma 12/31/2022	Pro Forma 12/31/2023
35	<b>Liabilities and Other Credits</b>			
36	<u>Proprietary Capital:</u>			
37	Common stock Issued	\$768,293	\$768,293	\$768,293
38	Retained earnings	12,117,554	13,354,231	14,058,315
39	<i>Total proprietary capital</i>	12,885,847	14,122,524	14,826,608
40				
41	<u>Long-Term Debt:</u>			
42	Long Term Debt incl Cap Leases	6,426,643	5,572,106	4,717,569
43	<i>Total long-term debt</i>	6,426,643	5,572,106	4,717,569
44				
45	<u>Current and Accrued Liabilities:</u>			
46	Cash (over) under	2,500,000	300,171	527,120
47	Current maturities of Long Term Debt	854,537	854,537	854,537
48	Accounts payable and accruals	659,118	659,118	659,118
49	Due for purchased gas	1,067,022	1,067,022	1,067,022
50	Customer deposits	410,578	410,578	410,578
51	Over collected gas costs		0	0
52	<i>Total current and accrued liabilities</i>	5,491,255	3,291,426	3,518,375
53				
54	<u>Deferred Credits and Other Liabilities:</u>			
55	Deferred taxes	2,838,100	2,838,100	2,838,100
56	Accrued postretirement cost	759,431	759,431	759,431
57	Regulatory liability	434,556	434,556	434,556
58	<i>Total deferred credits</i>	4,032,087	4,032,087	4,032,087
59				
60	<b>Total Liabilities and Other Credits</b>	<b>\$28,835,832</b>	<b>\$27,018,143</b>	<b>\$27,094,639</b>







Rate Case with Fully Projected Future Test Year 202.

Original Cost of Utility Plant in Service

Years Ended 12/31/2021, 12/31/2022 and 12/31/202

Answer to 52 Pa. Code 53.52 c[3]

Line	Acct No.	Account Title	Accumulated Depreciation			Accumulated Depreciation				
			12/31/2017	Year 2018	Year 2018	12/31/2018	Year 2019	Year 2019	12/31/2019	
			Depr. Rate	Per Books	Depr Exp	Removal	Per Books	Depr Exp	Removals	Balance
1		<i>Distribution Plant.</i>								
2	114	Gas Plant Acquisition Adjustment	3.47%	2,109,977	116,637		2,226,614	116,637		2,343,250
3	366	Trans. Structures and improvements	0.62%	3,909	379		4,288	405		4,692
4	367	Trans. Mains	1.79%	988,738	34,746		1,023,484	34,746		1,058,231
5	369	Trans. Meas / Reg Sta Equip	4.40%	543,234	131,026		674,260	132,600		806,860
6	369A	Customer	4.40%		0		0	0		0
7	375	Structures and improvements	2.63%	74,264	2,352		76,616	3,835		80,451
8	376S	Mains- Steel	3.15%	2,016,306	101,686	(8,144)	2,109,848	110,333	(18,783)	2,201,398
9	376P	Mains- Plastic	2.02%	2,687,923	161,351	(14,077)	2,835,197	167,246	(27,745)	2,974,698
10	378	Meas / Reg Sta Equip	6.72%	755,259	55,696	(961)	809,994	60,379	(7,590)	862,783
11	380S	Services- Steel	3.04%	177,536	16,255	(10,878)	182,913	16,546	(10,798)	188,662
12	380P	Services- Plastic	3.41%	2,686,143	253,255	(30,048)	2,909,350	263,020	(52,653)	3,119,718
13	381	Meters	2.74%	756,603	45,487		802,090	46,747		848,838
14	381AMR	Transponders- Old	2.74%	119,388	24,054		143,442	29,116		172,558
15	381T	Transponders- New	2.74%		0		0	0		0
16	381AMR	Meters-AMR	2.74%		0		0	1,739		1,739
17		Meters-Protection	2.74%		0		0	0		0
18	383	House regulators	3.22%	188,884	9,702		198,586	9,923		208,509
19	385	Indu Meas / Reg Sta Equip	4.11%	605,058	36,064		641,122	37,477		678,599
20	387	Other equipment	3.66%	5,103	365		5,468	365		5,833
21		Total Distribution Plant		13,718,325	989,055	(64,108)	14,643,272	1,031,115	(117,569)	15,556,819
22										
23		<i>General Plant</i>								
24	390	Structures & Improvements	2.43%	531,688	28,361		560,049	34,518		594,567
25		Warehouse Furniture			0		0	0		0
26	391	Office Furniture & Equipment	6.75%	73,244	6,200		79,444	15,630	17,132	112,206
27	391C	Computer equipment	6.75%	427,454	35,245		462,699	35,245		497,944
28	392	Transportation Equipment	12.00%	500,757	106,486		607,243	115,729		722,972
29	393	Stores Equipment	6.67%	10,348	1,995		12,343	1,995		14,338
30	394	Tools, Shop & Garage Equipment	5.00%	564,984	24,179	137	589,300	26,222	10,634	626,156
31	396	Power Operated / Communication	6.67%	91,574	14,000		105,574	17,810	(64,266)	59,118
32		Fully Depreciated			0		0	0		0
33	398	Miscellaneous Equipment	0.00%	(9,781)	0		(9,781)	0		(9,781)
34	301	Intangible plant, organization	0.00%		0		0	0		0
35	304	MGP , Tx-Dx-Gen ROW	0.00%		0		0	0		0
36		Total General Plant		2,190,268	216,465	137	2,406,870	247,149	(36,500)	2,617,519
37										
38		Less: Acquisition, CIAC		(2,109,977)	(116,637)	0	(2,226,614)	(116,637)	0	(2,343,250)
39		Total Plant in Service		\$13,798,616	\$1,088,884	(\$63,971)	\$14,823,529	\$1,161,627	(\$154,069)	\$15,831,087
40		Less: Clearing, Charged to NY			(117,664)			(148,573)		
41					\$971,220			\$1,013,055		

## Rate Case with Fully Projected Future Test Year 202.

## Original Cost of Utility Plant in Service

Years Ended 12/31/2021, 12/31/2022 and 12/31/202

Answer to 52 Pa. Code 53.52 c[3]

Line	Acct No.	Account Title	Accumulated Depreciation			Accumulated Depreciation				
			Year 2020	Year 2020	12/31/2020	Year 2021	Year 2021	12/31/2021		
			Depr Exp	Removals	Balance	Depr Exp	Removals	Balance		
1		<i>Distribution Plant.</i>								
2	114	Gas Plant Acquisition Adjustment	116,637		2,459,887	116,637		2,576,524		
3	366	Trans. Structures and improvements	431		5,124	630	(420)	5,334		
4	367	Trans. Mains	34,746		1,092,977	34,746	(2,443)	1,125,280		
5	369	Trans. Meas / Reg Sta Equip	132,682		939,542	13,077	(738,751)	213,868		
6	369A	Customer	0		0	0	741,614	741,614		
7	375	Structures and improvements	5,297		85,749	5,297		91,046		
8	376S	Mains- Steel	118,861	(12,625)	2,307,634	118,679	(7,751)	2,418,562		
9	376P	Mains- Plastic	180,255	(80,967)	3,073,985	197,401	(59,769)	3,211,618		
10	378	Meas / Reg Sta Equip	69,362	(13,650)	918,495	75,272	(14,106)	979,661		
11	380S	Services- Steel	16,727	(14,930)	190,458	16,685	(10,419)	196,725		
12	380P	Services- Plastic	271,164	(64,662)	3,326,220	282,900	(42,457)	3,566,662		
13	381	Meters	48,637		897,474	49,977		947,451		
14	381AMR	Transponders- Old	29,116		201,674	27,680		229,355		
15	381T	Transponders- New	0		0	0		0		
16	381AMR	Meters-AMR	5,235		6,974	7,085		14,059		
17		Meters-Protection	0		0	245		245		
18	383	House regulators	10,195		218,704	10,326		229,029		
19	385	Indu Meas / Reg Sta Equip	38,125		716,723	38,066		754,790		
20	387	Other equipment	365		6,199	365		6,564		
21		Total Distribution Plant	1,077,835	(186,834)	16,447,820	995,068	(134,502)	17,308,386		
22										
23		<i>General Plant</i>								
24	390	Structures & Improvements	38,350		632,917	47,731		680,648		
25		Warehouse Furniture	0		0	0		0		
26	391	Office Furniture & Equipment	33,402		145,607	48,166		193,773		
27	391C	Computer equipment	35,245	(11,039)	522,150	36,213		558,363		
28	392	Transportation Equipment	125,344		848,316	133,974	(114,818)	867,472		
29	393	Stores Equipment	1,995		16,332	2,086		18,418		
30	394	Tools, Shop & Garage Equipment	29,369	1,481	657,006	30,709		687,714		
31	396	Power Operated / Communication	21,537	7,239	87,894	23,946		111,840		
32		Fully Depreciated	0	11,039	11,039	0	117,258	128,297		
33	398	Miscellaneous Equipment	0		(9,781)	0		(9,781)		
34	301	Intangible plant, organization	0		0	0		0		
35	304	MGP , Tx-Dx-Gen ROW	0		0	0		0		
36		Total General Plant	285,242	8,720	2,911,481	322,824	2,440	3,236,744		
37										
38		Less: Acquisition, CIAC	(116,637)	0	(2,459,887)	(116,637)	(741,614)	(3,318,138)		
39		Total Plant in Service	\$1,246,440	(\$178,114)	\$16,899,413	\$1,201,254	(\$873,676)	\$17,226,992		
40		Less: Clearing, Charged to NY	(142,769)			(137,550)				
41			\$1,103,671			\$1,063,704				

## Rate Case with Fully Projected Future Test Year 202.

## Original Cost of Utility Plant in Service

Years Ended 12/31/2021, 12/31/2022 and 12/31/202

Answer to 52 Pa. Code 53.52 c[3]

Line	Acct No.	Account Title	Accumulated Depreciation			Accumulated Depreciation			
			Year 2022	Year 2022	12/31/2022	Year 2023	Year 2023	12/31/2023	
			Depr Exp	Removals	Balance	Depr Exp	Removals	Balance	
1		<i>Distribution Plant.</i>							
2	114	Gas Plant Acquisition Adjustment	116,637		2,693,161	116,637			2,809,797
3	366	Trans. Structures and improvements	1,178		6,512	1,639			8,151
4	367	Trans. Mains	34,350		1,159,630	34,350			1,193,979
5	369	Trans. Meas / Reg Sta Equip	14,138		228,006	15,199			243,205
6	369A	Customer	121,460		863,074	121,460			984,535
7	375	Structures and improvements	5,297		96,343	5,297			101,640
8	376S	Mains- Steel	118,604		2,537,166	119,197			2,656,363
9	376P	Mains- Plastic	207,194		3,418,811	211,145			3,629,956
10	378	Meas / Reg Sta Equip	82,352		1,062,013	101,894			1,163,907
11	380S	Services- Steel	16,724		213,449	16,835			230,284
12	380P	Services- Plastic	297,247		3,863,910	312,719			4,176,628
13	381	Meters	50,802		998,253	51,895			1,050,148
14	381AMR	Transponders- Old	27,680		257,035	27,680			284,715
15	381T	Transponders- New	217		217	433			650
16	381AMR	Meters-AMR	7,178		21,237	7,178			28,415
17		Meters-Protection	490		735	490			1,224
18	383	House regulators	10,413		239,442	10,529			249,971
19	385	Indu Meas / Reg Sta Equip	39,560		794,350	41,271			835,622
20	387	Other equipment	365		6,929	365			7,294
21		Total Distribution Plant	1,151,886		18,460,272	1,196,213			19,656,485
22									
23		<i>General Plant</i>							
24	390	Structures & Improvements	59,787		740,434	63,511			803,946
25		Warehouse Furniture	0		0	0			0
26	391	Office Furniture & Equipment	59,093		252,866	70,683			323,548
27	391C	Computer equipment	(117,258)		441,105	0			441,105
28	392	Transportation Equipment	142,706		1,010,178	161,486			1,171,663
29	393	Stores Equipment	2,176		20,594	2,176			22,771
30	394	Tools, Shop & Garage Equipment	(9,273)		678,441	35,310			713,751
31	396	Power Operated / Communication	24,146		135,986	24,696			160,683
32		Fully Depreciated	0		128,297	0			128,297
33	398	Miscellaneous Equipment	0		(9,781)	0			(9,781)
34	301	Intangible plant, organization	0		0	0			0
35	304	MGP , Tx-Dx-Gen ROW	0		0	0			0
36		Total General Plant	161,377		3,398,120	357,862			3,755,982
37									
38		Less: Acquisition, CIAC	(238,097)	0	(3,556,235)	(238,097)	0		(3,794,332)
39		Total Plant in Service	\$1,075,166		\$18,302,157	\$1,315,978			\$19,618,136
40		Less: Clearing, Charged to NY	(\$137,550)			(\$137,550)			
41			\$937,616			\$1,178,428			

WP (R)

**Valley Energy Company (PA)**  
**Rate Case with Fully Projected Future Test Year 2023 (R)**  
**INDEX TO WORKPAPERS**

<u>Line</u>	<u>SCHEDULE</u>	<u>DESCRIPTION</u>	<u>PERIOD</u>
1	Index To Workpapers		
2			
3			
4			
5	<a href="#">Workpaper 3 to Schedule C (R)</a>	Future O&M	Years 2022 and 2023
6			
7			
8			

NOTE: Only Workpaper 3 to Schedule C changed from (CU) Corrections and Updates.



WP3\_C (R) Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)

Workpaper 3 to Schedule C (R)

rFTY22 rFPFTY23

Future O&M  
Years 2022 and 2023

rType22

rAcct22

Line	Dept.	Account			Total 2,022	Total 2,023
1	<b><u>PAYROLL - DIRECT LABOR</u></b>					
2	20	870.01	Labor	870	68,593	98,718
3	20	874.01	Labor	874	135,743	144,437
4	20	875.01	Labor	875	28,690	30,374
5	20	876.01	Labor	876	33,497	35,464
6	20	877.01	Labor	877	6,162	6,524
7	20	878.01	Labor	878	63,569	68,175
8	20	879.01	Labor	879	70,416	74,901
9	20	885.01	Labor	885	13,539	14,301
10	20	886.01	Labor	886	9,576	10,101
11	20	887.01	Labor	887	27,736	29,365
12	20	889.01	Labor	889	36,655	38,807
13	20	890.01	Labor	890	16,040	16,982
14	20	891.01	Labor	891	5,464	5,785
15	20	892.01	Labor	892	18,314	19,579
16	20	893.01	Labor	893	26,829	28,936
17	20	902.01	Labor	902	10,008	10,595
18	20	903.01	Labor	903	178,585	186,180
19	20	920.01	Labor	920	248,780	257,617
20	20	932.01	Labor	932	13,735	14,540
21	<b>Total Direct Labor</b>				<b>1,011,931</b>	<b>1,091,381</b>
22						
23						
24	<b><u>TRANSPORTATION EXPENSES</u></b>					
25	20	870.02	Trans	870	10,310	14,837
26	20	874.02	Trans	874	20,402	21,709
27	20	875.02	Trans	875	4,312	4,565
28	20	876.02	Trans	876	5,035	5,330
29	20	877.02	Trans	877	926	981
30	20	878.02	Trans	878	9,554	10,247
31	20	879.02	Trans	879	10,584	11,258
32	20	885.02	Trans	885	2,035	2,149
33	20	886.02	Trans	886	1,439	1,518
34	20	887.02	Trans	887	4,169	4,413
35	20	889.02	Trans	889	5,509	5,833
36	20	890.02	Trans	890	2,411	2,552
37	20	891.02	Trans	891	821	869
38	20	892.02	Trans	892	2,753	2,943
39	20	893.02	Trans	893	4,032	4,349
40	20	902.02	Trans	902	1,504	1,592
41	20	903.02	Trans	903	26,841	27,983
42	20	920.02	Trans	920	37,392	38,720
43	20	932.02	Trans	932	2,064	2,185
44	<b>Total Trans. Exp</b>				<b>152,093</b>	<b>164,033</b>
45						

WP3\_C (R) Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)

Workpaper 3 to Schedule C (R)

rFTY22 rFPFTY23

Future O&M  
Years 2022 and 2023

rType22

rAcct22

Line	Dept.	Account			Total 2,022	Total 2,023	
46							
47	<b>C&amp;T OVERHEAD</b>						
48	20	870.03	OH	870	17,668	28,389	
49	20	874.03	OH	874	34,965	41,537	
50	20	875.03	OH	875	7,390	8,735	
51	20	876.03	OH	876	8,628	10,199	
52	20	877.03	OH	877	1,587	1,876	
53	20	878.03	OH	878	16,374	19,606	
54	20	879.03	OH	879	18,138	21,540	
55	20	885.03	OH	885	3,487	4,113	
56	20	886.03	OH	886	2,467	2,905	
57	20	887.03	OH	887	7,144	8,445	
58	20	889.03	OH	889	9,442	11,160	
59	20	890.03	OH	890	4,131	4,884	
60	20	891.03	OH	891	1,407	1,664	
61	20	892.03	OH	892	4,717	5,631	
62	20	893.03	OH	893	6,910	8,321	
63	20	902.03	OH	902	2,578	3,047	
64	20	903.03	OH	903	46,000	53,541	
65	20	920.03	OH	920	64,081	74,085	
66	<b>Total C&amp;T OH</b>				<b>257,114</b>	<b>309,678</b>	
67							
68							
69	<b>VE LABOR OVERHEAD</b>						
70	20	870.05	OH	870	72,413	98,672	
71	20	874.05	OH	874	143,303	144,369	
72	20	875.05	OH	875	30,287	30,360	
73	20	876.05	OH	876	35,363	35,448	
74	20	877.05	OH	877	6,506	6,521	
75	20	878.05	OH	878	67,109	68,143	
76	20	879.05	OH	879	74,338	74,866	
77	20	885.05	OH	885	14,293	14,294	
78	20	886.05	OH	886	10,109	10,097	
79	20	887.05	OH	887	29,281	29,351	
80	20	889.05	OH	889	38,696	38,789	
81	20	890.05	OH	890	16,933	16,974	
82	20	891.05	OH	891	5,768	5,782	
83	20	892.05	OH	892	19,334	19,570	
84	20	893.05	OH	893	28,323	28,923	
85	20	902.05	OH	902	10,565	10,590	
86	20	903.05	OH	903	188,531	186,093	
87	20	920.05	OH	920	262,636	257,497	
88	20	932.05	OH	932	0	(1,253)	
89	<b>Total VE Labor OH</b>				<b>1,053,788</b>	<b>1,075,086</b>	
90							

WP3\_C (R) Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)

Workpaper 3 to Schedule C (R)

rFTY22 rFPFTY23

Future O&M  
Years 2022 and 2023

rType22

rAcct22

Line	Dept.	Account			Total 2,022	Total 2,023
91						
92		<b>DIRECT O&amp;M EXPENSES</b>				
93	20	842.10	Other	842	31,442	32,071
94	20	871.45	Mat	871	5,851	6,111
95	20	874.45	Mat	874	39,944	40,743
96	20	874.50	Other	874	51,835	55,435
97	20	875.45	Mat	875	8,209	8,374
98	20	876.45	Mat	876	5,261	5,771
99	20	877.45	Mat	877	27,513	28,435
100	20	878.45	Mat	878	4,712	4,806
101	20	879.45	Mat	879	2,660	2,713
102	20	880.45	Mat	880	4,256	4,341
103	20	881.45	Mat	881	5,823	7,104
104	20	886.45	Mat	886	1,999	2,039
105	20	887.45	Mat	887	18,225	18,507
106	20	889.45	Mat	889	15,948	16,267
107	20	890.45	Mat	890	11,665	11,898
108	20	891.45	Mat	891	1,782	1,818
109	20	892.45	Mat	892	12,039	12,039
110	20	893.45	Mat	893	15,284	15,589
111	20	902.45	Mat	902	3,542	3,613
112	20	903.25	Other	903	102,212	104,256
113	20	903.45	Mat	903	50,716	51,730
114	20	903.55	Other	903	6,011	6,432
115	20	904.00	Other	904	35,000	35,000
116	20	905.45	Mat	905	23,510	23,980
117	20	909.45	Mat	909	8,993	9,173
118	20	913.45	Mat	913	4,154	0
119	20	920.45	Mat	920	293	299
120	20	921.00	Other	921	10,973	11,192
121	20	921.40	Other	921	4,502	5,919

WP3\_C (R) Valley Energy Company (PA)  
Rate Case with Fully Projected Future Test Year 2023 (R)

Workpaper 3 to Schedule C (R)

rFTY22 rFPFTY23

Future O&M

rType22 rAcct22

Years 2022 and 2023

Line	Dept.	Account			Total 2,022	Total 2,023
122	20	921.45	Other	921	35,914	47,688
123	20	921.50	Other	921	15,575	15,575
124	20	923.00	Other	923	24,608	25,264
125	20	923.25	Other	923	30,880	33,041
126	20	923.40	Other	923	400	400
127	20	923.45	Other	923	11,785	12,021
128	20	924.00	Other	924	18,348	21,107
129	20	925.00	Other	925	88,408	92,828
130	20	925.10	Other	925	1,183	1,207
131	20	926.45	Other	926	11,618	11,850
132	20	928.00	Other	928	123,189	0
133	20	930.20	Other	930	2,571	2,622
134	20	930.22	Other	930	17,626	16,518
135	20	930.25	Other	930	53,734	55,964
136	20	930.45	Other	930	2,750	2,833
137	20	932.45	Mat	932	5,447	5,556
138	<b>Total Direct Expenses</b>				<b>958,390</b>	<b>870,129</b>
139					<b>3,433,316</b>	<b>3,510,307</b>
140						
141			Other		680,564	589,223
142			Mat		277,826	280,906
143					<u>958,390</u>	<u>870,129</u>

**BEFORE THE**  
**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket Nos. R-2022-3032369</b>
	:	<b>R-2022-3032300</b>
<b>Citizens' Electric Company of Lewisburg, PA</b>	:	
<b>and Valley Energy Company</b>	:	

**REBUTTAL TESTIMONY**  
**AND EXHIBIT**  
**OF**  
**DYLAN W. D'ASCENDIS, CRRA, CVA**

**ON BEHALF OF**  
**CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA**  
**AND**  
**VALLEY ENERGY, INC.**  
**AUGUST 16, 2022**

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**I. INTRODUCTION, PURPOSE AND SUMMARY**

**Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

A. My name is Dylan W. D'Ascendis. My business address is 3000 Atrium Way, Suite 200, Mount Laurel, NJ 08054.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

A. I am a Partner at ScottMadden, Inc.

**Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

A. I am submitting this rebuttal testimony (referred to throughout as my "Rebuttal Testimony") before the Pennsylvania Public Utility Commission ("PA PUC" or the "Commission") on behalf of Valley Energy, Inc. ("Valley") and Citizens' Electric Company of Lewisburg, PA ("Citizens"), collectively (the "Companies").

**Q. ARE YOU THE SAME DYLAN W. D'ASCENDIS WHO PROVIDED DIRECT TESTIMONY IN THIS PROCEEDING?**

A. Yes, I am.

**Q. WHAT IS THE PURPOSE OF THIS REBUTTAL TESTIMONY?**

A. The purpose of my Rebuttal Testimony is to address certain aspects of the direct testimonies of Mr. Christopher Keller and Mr. Anthony Spadaccio, witnesses for the PA PUC's Bureau of Investigation and Enforcement ("I&E") (collectively, the "I&E ROE Witnesses") and Ms. Morgan N. DeAngelo, witness for the Pennsylvania Office of Consumer Advocate ("OCA") (collectively referred to as the "Opposing Witnesses") as they pertain to the Companies' allowed cost of capital, which the Companies should have the opportunity to earn on their authorized jurisdictional rate base.

**Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.**

A. As shown in my Direct Testimony filed on April 29, 2022, using market data as of March 18, 2022, I calculated a range of reasonable ROEs attributable to Valley between 10.85%

and 12.85%, and to Citizens' between 10.90% and 12.90%. Given that data, and shortcomings with the Opposing Witnesses' evidence, I maintain my initial recommendations of 11.50% for the Companies.

In view of current markets and the results of my ROE models, recommended ROEs of 9.70% and 9.50% (I&E and OCA, respectively) for Valley, and 8.98% and 8.82% (I&E and OCA, respectively) for Citizens', are insufficient.

**Q. DO YOU HAVE GENERAL COMMENTS REGARDING THE OPPOSING WITNESSES' RECOMMENDED ROES?**

A. Yes, I do. The Opposing Witnesses' recommended ROEs are insufficient, primarily because of their exclusive reliance on the discounted cash flow ("DCF") model results for their recommendations, and for failing to account for size and performance factor adjustments.

**Q. HAVE YOU PREPARED AN EXHIBIT WHICH SUPPORTS YOUR REBUTTAL TESTIMONY?**

A. Yes. It has been designated as Exhibit\_\_(DWD-1R), which consists of Schedules DWD-1R through DWD-7R.

**Q. HOW IS THE REMAINDER OF YOUR REBUTTAL TESTIMONY ORGANIZED?**

A. The remainder of my Rebuttal Testimony is organized as follows:

- Section II – Contains my response to the I&E ROE Witnesses;
- Section III – Contains my response to Ms. DeAngelo; and
- Section IV – Summarizes my conclusions and recommendations.



**Q. PLEASE SUMMARIZE THE KEY ISSUES AND RECOMMENDATIONS OFFERED BY THE OPPOSING WITNESSES THAT YOU ADDRESS IN YOUR REBUTTAL TESTIMONY.**

A. My Rebuttal Testimony responds to substantive recommendations offered by the Opposing Witnesses in their direct testimonies. I will address the following issues common to the Opposing Witnesses' direct testimonies:

- Their undue weighting of DCF model results in their ROE recommendations;
- Their applications of the Capital Asset Pricing Model ("CAPM");
- Their failure to reflect the greater risk of the Companies due to their smaller relative sizes to their respective proxy groups; and
- Their failure to account for performance factor adjustments.

Specific to the I&E ROE Witnesses' direct testimonies, in addition to the above, I respond to their unfounded critiques of my Direct Testimony.

**II. RESPONSE TO I&E ROE WITNESSES KELLER AND SPADACCIO**

**Q. PLEASE SUMMARIZE THE I&E ROE WITNESSES' RECOMMENDATIONS.**

A. Mr. Keller accepts the proposed debt cost rate of 4.49% for Valley.<sup>1</sup> Mr. Spadaccio accepts the proposed debt cost rate of 4.09% for Citizens'.<sup>2</sup> Mr. Keller and Mr. Spadaccio also both accept the proposed capital structure consisting of 50.47% debt and 49.53% equity.<sup>3</sup>

Regarding the cost of common equity for Valley, Mr. Keller recommends a common equity cost rate of 9.70%, based on his DCF model. Regarding the cost of

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<sup>1</sup> Keller Direct Testimony, at 13.

<sup>2</sup> Spadaccio Direct Testimony at 14.

<sup>3</sup> Keller Direct Testimony, at 12; Spadaccio Direct Testimony at 14.

common equity for Citizens', Mr. Spadaccio recommends a common equity cost rate of 8.98%, also based on his DCF model.

**Q. WHAT CONCERNS DO YOU HAVE WITH THE I&E ROE WITNESSES' CONCLUSIONS AND RESULTS?**

A. I have concerns with: (1) their exclusive reliance on the results of their DCF models for their recommendations; (2) their use and application of the CAPM; (3) their failure to reflect the Companies' smaller size compared to their proxy groups; and (4) their failure to reflect a performance factor adjustment.

**A. EXCLUSIVE RELIANCE ON DCF MODEL RESULTS**

**Q. DO YOU HAVE A GENERAL COMMENT ON THE I&E ROE WITNESSES' INDICATED ROE BEFORE ADJUSTMENT?**

A. Yes, I do. Mr. Keller's indicated ROE of 9.70% for Valley and Mr. Spadaccio's indicated ROE of 8.98% for Citizens' are inadequate because they place exclusive weight on their DCF model results.

**Q. WHAT WOULD BE THE I&E ROE WITNESSES' INDICATED ROE IF THEY AVERAGED THEIR DCF MODELS AND CAPM RESULTS?**

A. In regard to Valley, averaging Mr. Keller's DCF result of 9.70% with his CAPM result of 13.53% results in an indicated ROE of 11.62%, which is above my recommended ROE of 11.50%. In regard to Citizens', averaging Mr. Spadaccio's DCF result of 8.98% with his CAPM result of 12.89% results in an indicated ROE of 10.94%, which is comparable, but slightly below my recommended ROE of 11.50%.

**Q. DO THE I&E ROE WITNESSES STATE REASONS WHY THEY EXCLUSIVELY RELY ON THEIR DCF MODEL RESULTS?**

A. Yes, they do. The I&E witnesses rely on the same reasoning for why they exclusively rely on their DCF model results. Despite conceding that four ROE models are commonly considered to estimate the ROE (the DCF, the CAPM, the Risk Premium Model (“RPM”), and the Comparable Earnings Model (“CEM”)),<sup>4</sup> they do not rely on the other models for various reasons.

Regarding the CAPM, Mr. Keller opines that the CAPM is far less responsive to changes in the industry. The I&E Witnesses also both argue that: (1) the indicated ROE is only company-specific because of the use of the Beta coefficient (“beta”); (2) the model is historical in nature because beta is calculated using historical returns; and (3) empirical analysis by Fama and French show that the relationship between predicted return and actual return is poor.<sup>5</sup>

The I&E ROE Witnesses both exclude the RPM from their analysis because they claim that it is a simplified version of the CAPM, and subject to similar faults, in addition to not reflecting company-specific risks through the use of beta.<sup>6</sup>

Finally, the I&E ROE Witnesses both omit a CEM analysis because the choice of comparable companies is highly subjective and they do not believe that historical accounting returns are representative of future accounting returns.<sup>7</sup>

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<sup>4</sup> Keller Direct Testimony, at 14; Spadaccio Direct Testimony, at 15.

<sup>5</sup> Keller Direct Testimony, at 17-20; Spadaccio Direct Testimony, at 19-21.

<sup>6</sup> Keller Direct Testimony, at 20; Spadaccio Direct Testimony, at 21.

<sup>7</sup> Keller Direct Testimony, at 20; Spadaccio Direct Testimony, at 21-22.

**Q. DO YOU AGREE WITH THE I&E ROE WITNESSES' REASONS FOR OMITTING THE CAPM, RPM, AND CEM FROM THEIR ANALYSIS?**

A. No, I do not.

**Q. PLEASE RESPOND TO MR. KELLER'S COMMENTS REGARDING THE CAPM'S RESPONSIVENESS TO CHANGES IN THE INDUSTRY.**

A. Regarding Mr. Keller's claim that the CAPM is far less responsive to changes in the industry, I disagree and so does the Commission. In a recent Order concerning Aqua Pennsylvania, Inc., ("Aqua") the Commission stated the following about the CAPM's ability to reflect changing market conditions better than the DCF:

We are persuaded by the arguments of Aqua that the ALJ erred by concluding I&E used its DCF and CAPM results to determine Aqua's ROE. In this regard, we note that although I&E did use its CAPM as a comparison to its DCF result, it made no CAPM based adjustment to its final ROE recommendation. I&E M.B. at 47. As Aqua points out, *infra*, the U.S. economy is currently in a period of high inflation. To help control rising inflation, the Federal Open Market Committee has signaled that it is ending its policies designed to maintain low interest rates. Aqua Exc. at 9. *Because the DCF model does not directly account for interest rates, consequently, it is slow to respond to interest rate changes. However, I&E's CAPM model uses forecasted yields on ten-year Treasury bonds, and accordingly, its methodology captures forward looking changes in interest rates. (emphasis added)*<sup>8</sup>

Clearly the Commission recognizes the importance of the CAPM and its ability to account for market changes such as those occurring currently.

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<sup>8</sup> Pa. PUC v. Aqua Pennsylvania, Inc., Docket Nos. R-2021-3027385 & R-2021-3027386, pp. 154-155 (Order entered May 16, 2022).

**Q. DO YOU AGREE WITH THE I&E ROE WITNESSES' CLAIM THAT A FAULT OF THE CAPM IS THAT ITS INPUTS ARE EASILY MANIPULATED?**

A. No, I do not. All ROE models are only as good as their inputs, and all ROE models can be easily manipulated by changing those inputs. For example, the DCF model has a number of inputs and variations of inputs that can drastically alter results as shown on Table 1:

**Table 1: Various Inputs to DCF Models**

<b>Input</b>	<b>Variations of Inputs</b>
Cash Flow Stream	Constant-Growth, Blended Growth, Multi-Stage Growth
Dividend Yield	Spot Dividend Yield, average dividend yield
Adjusted Dividend Yield	No adjustment, ½ g adjustment, full g adjustment, projected dividend
Growth Rates	Historical v. Projected v. Sustainable
Growth Measure	EPS, DPS, Book Value Per Share
Sources of Growth Rates	Value Line, Zacks, Yahoo, MorningStar, etc.

**Q. DO YOU AGREE THAT BETAS USED IN THE CAPM ANALYSIS ARE HISTORICAL IN NATURE?**

A. I do not agree that the adjusted betas used in my and the Opposing Witnesses' CAPM analyses are historical in nature. While I agree that unadjusted or "raw" betas are historical in nature, the Blume adjustment recognizes that over time betas will regress to the market mean, or 1.0. This makes the betas used in my and the Opposing Witnesses' CAPM analyses expectational in nature.

**Q. PLEASE EXPAND ON THE EXPECTATIONAL NATURE OF ADJUSTED BETAS.**

A. Betas are measured using an Ordinary Least Squares ("OLS") regression, in which the dependent variable is the return of the subject security, and the independent variable is the return on the market as measured by a given index (*Value Line*, for example, uses the New

York Stock Exchange Index). Beta is represented by the slope term of the regression estimates. Intuitively, beta measures the change in the subject company's returns relative to the change in the market return.

The resulting beta is considered "raw" or unadjusted. Unadjusted betas are historical in nature, as they use historical market data. Blume studied the stability of beta over time and found that "[n]o economic variable including the beta coefficient is constant over time."<sup>9</sup> Consistent with that finding, Blume observed a tendency of raw betas to change gradually over time. Blume further stated:

...there is obviously some tendency for the estimated values of the risk parameter [beta] to change gradually over time. This tendency is most pronounced in the lowest risk portfolios, for which the estimated risk in the second period is invariably higher than that estimated in the first period. There is some tendency for the high risk portfolios to have lower estimated risk coefficients in the second period than in those estimated in the first. Therefore, the estimated values of the risk coefficients in one period are biased assessments of the future values, and furthermore the values of the risk coefficients as measured by the estimates of  $\beta_1$  tend to regress towards the means with this tendency stronger for the lower risk portfolios than the higher risk portfolios. (emphasis added)<sup>10</sup>

Blume proposed a correction for this tendency, also known as "regression bias", which is inherent in the calculation of all betas. He stated:

In so far as the rate of regression towards the mean is stationary over time, one can in principle correct for this tendency in forming one's assessments.

\* \* \*

For individual securities as well as portfolios of two or more securities, the assessments adjusted for the historical rate of regression are more accurate than the unadjusted or naïve assessments. Thus, an improvement in the accuracy of one's assessments of risk can be obtained by adjusting for the historical rate of regression even though the rate of regression over time is not strictly stationary.<sup>11</sup>

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<sup>9</sup> Marshal E. Blume, "On the Assessment of Risk", *The Journal of Finance*, Vol. XXVI, No. 1, March 1971.

<sup>10</sup> Marshal E. Blume, "On the Assessment of Risk", *The Journal of Finance*, Vol. XXVI, No. 1, March 1971.

<sup>11</sup> Marshal E. Blume, "On the Assessment of Risk", *The Journal of Finance*, Vol. XXVI, No. 1, March 1971.

Based on Blume's results, the typical adjustment is calculated based upon an approximate of the following formula:

$$\beta_{adjusted} = 0.35 + .67x\beta_{raw (unadjusted)}$$

This adjustment transforms the historical unadjusted beta into an expectational value, consistent with the expectational nature of the cost of capital.

As noted by Morin:

Several authors have investigated the regression tendency of beta and generally reached similar conclusions [as Blume]. High-beta portfolios have tended to decline over time toward unity, while low-beta portfolios have tended to increase over time toward unity...He demonstrated that the Value Line adjustment procedure anticipated differences between past and future betas.<sup>12</sup>

Morin further notes:

A comprehensive study of beta measurement methodology by Kryzanowski and Jalilvand (1983) concludes that raw unadjusted beta (OLS beta) is one of the poorest beta predictors, and is outperformed by the Blume-style Bayesian beta approach. Gombola and Kahl (1990) examine the time-series properties of utility betas and find strong support for the application of adjustment procedures such as the Value Line and Bloomberg procedures.

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Because of this observed regressive tendency, a company's raw unadjusted beta is not the appropriate measure of market risk to use. Current stock prices reflect expected risk, that is, expected beta, rather than historical risk or historical beta. Historical betas, whether raw or adjusted, are only surrogates for expected beta. The best of the two surrogates is adjusted beta.<sup>13</sup>

Morin also provides economic and statistical justification for using adjusted betas to estimate the cost of equity for utilities. Relative to economic justification, he states:

Adjusted betas compensate for the tendency of regulated utilities to be extra interest-sensitive relative to industrials.<sup>(footnote omitted)</sup> In the same way that bondholders get compensated for inflation through an inflation premium in the interest rate, utility shareholders receive compensation for inflation

<sup>12</sup> Roger A. Morin, Modern Regulatory Finance, Public Utilities Reports, Inc., 2022, at 81. ("Morin")

<sup>13</sup> Morin, at 81-82.

through an inflation premium in the allowed rate of return. Thus, utility company returns are sensitive to fluctuations in interest rates. Conventional betas do not capture this extra sensitivity to interest rates. This is because the market index typically used in estimating betas is a stock-only index, such as the S&P 500. A focus on stocks alone distorts the betas of regulated companies. The true risk of regulated utilities relative to other companies is understated because when interest rates change, the stocks of regulated companies react in the same way as bonds do. A nominal interest rate on the face value of a bond offers the same pattern of future cash flows as a nominal return applied on a book value rate base. Empirical studies of utility returns confirm that betas are higher when calculated in a way that captures interest rate sensitivity. *The use of adjusted betas compensates for the interest sensitivity of regulated companies. (italics added for emphasis)*<sup>14</sup>

Relative to statistical justification, Morin states:

There is a statistical justification for the use of adjusted betas as well. High-estimated betas will tend to have positive error (overestimated) and low-estimated betas will tend to have negative error (underestimated). Therefore, it is necessary to squash the estimated betas in toward 1.00. One way to accomplish this is by measuring the extent to which estimated betas tend to regress toward the mean over time. As a result of this beta drift, several commercial beta producers adjust their forecasted betas toward 1.00 in an effort to improve their forecasts. This adjustment, which is commonly performed by investment services such as Value Line, and Bloomberg, uses the formula:

$$\beta_{adjusted} = 1.0 + a(\beta_{raw} - 1.0) \quad (4 - 3)$$

where “a” is an estimate of the extent to which estimated betas regress toward the mean based on past data. Value Line and Bloomberg betas are adjusted for their long-term tendency to regress toward 1.0 by giving approximately 66% weight to the measured beta and approximately 34% weight to the prior value of 1.0 for each stock, that is,  $a = 0.66$  in the above equation:

$$\begin{aligned} \beta_{adjusted} &= 1.0 + 0.66(\beta_{raw} - 1.0) \\ &= 0.33 + 0.66\beta_{raw} \quad (4-4)^{15} \end{aligned}$$

Given the evidence presented above, adjusted betas are expectational in nature, and not historical.

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<sup>14</sup> Morin, at 82.

<sup>15</sup> Morin, at 82-83.



**Q. DO YOU AGREE WITH FAMA AND FRENCH'S RESEARCH ON THE CAPM AS IT PERTAINS TO THE EMPIRICAL FINDING THAT THE SECURITY MARKET LINE IS NOT AS STEEP AS IT IS PREDICTED BY BETA?**

A. I agree with the empirical findings of Fama and French regarding the difference between projected returns as estimated by the CAPM and actual returns. As will be discussed below, that is the reason why the Empirical CAPM ("ECAPM") should be used in conjunction with the traditional CAPM in ROE analyses. In view of the above, the I&E ROE Witnesses' concerns regarding the CAPM should be dismissed by the Commission.

**Q. IS YOUR RPM ANALYSIS A SIMPLIFIED VERSION OF THE CAPM AND NOT COMPANY-SPECIFIC?**

A. No, it is not. The Predictive Risk Premium Model ("PRPM") used in my RPM analysis measures the risk-return relationship directly using the same company-specific market prices used to derive company-specific betas. The authors state:

The purpose of this paper is to present, test empirically and apply a recently developed general consumption-based asset pricing model that estimates the risk-return relationship directly from asset pricing data and, when estimated with recently developed time-series methods, produces a prediction of the equity risk premium that is driven by its predicted volatility.<sup>16</sup>

In addition, my traditional RPM analysis does apply beta to the indicated equity risk premium to create a proxy group-specific equity risk premium.<sup>17</sup> In view of the above, my RPM analysis should be considered by the Commission in approving an ROE for the Companies.

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<sup>16</sup> Pauline M. Ahern, Frank J. Hanley, and Richard A. Michelfelder, "A New Approach for Estimating the Equity Risk Premium for Public Utilities", *The Journal of Regulatory Economics*, December 2011, 40:261-278.

<sup>17</sup> D'Ascendis Direct Testimony, at 32-33.

**Q. IS YOUR CEM ANALYSIS CONSISTENT WITH THE I&E ROE WITNESSES' DESCRIPTION?**

A. No, it is not. As will be discussed in detail below, the selection criteria for my Non-Price Regulated Proxy Group is not subjective in nature, as it uses unadjusted betas (objective value) as a proxy for market risk and the standard error of the regression (another objective value) as a proxy for diversifiable risk. Additionally, I apply the DCF, CAPM, and RPM to my Non-Price Regulated Proxy Group, which is an apples-to-apples comparison of the investor-required return for non-regulated companies similar in total risk, which makes the I&E ROE Witnesses' second concern regarding the CEM moot.

**Q. THE I&E ROE WITNESSES CURIOUSLY DO NOT REVEAL ANY OF THE CONCERNS REGARDING THE DCF MODEL IN THEIR DIRECT TESTIMONIES. WHY IS PRIMARY RELIANCE ON THE DCF MODEL GENERALLY PROBLEMATIC?**

A. Traditional rate base / rate of return regulation, where a market-based common equity cost rate is applied to a book value rate base, presumes that the market-to-book ("M/B") ratios are at unity or 1.00. However, that is rarely the case. Morin states:

The third and perhaps most important reason for caution and skepticism is that application of the DCF model produces estimates of common equity cost that are consistent with investors' expected return only when stock price and book value are reasonably similar, that is, when the M/B is close to unity. As shown below, application of the standard DCF model to utility stocks understates the investor's expected return when the M/B ratio of a given stock exceeds unity. This was particularly relevant in the capital market environment of the early 2020s when utility stocks are trading at M/B ratios well above unity and have been for nearly two decades. The converse is also true, that is, the DCF model overstates the investor's return when the stock's M/B ratio is less than unity. The reason for the distortion is that the DCF market return is applied to a book value rate base by the

regulator, that is, a utility's earnings are limited to earnings on a book value rate base<sup>18</sup>.

As Morin explains, DCF models assume an M/B ratio of 1.0 and therefore under- or over-states investors' required return when market value exceeds or is less than book value, respectively. It does so because equity investors evaluate and receive their returns on the market value of a utility's common equity, whereas regulators authorize returns on the book value of common equity. This means that the market-based DCF will produce the total annual dollar return expected by investors, only when market and book values of common equity are equal, a very rare and unlikely situation.

**Q. WHY DO MARKET AND BOOK VALUES DIVERGE?**

A. Market values can diverge from book values for a myriad of reasons including, but not limited to, earnings per share ("EPS") and dividends per share ("DPS") expectations, merger / acquisition expectations, interest rates, etc. As noted by Phillips:

Many question the assumption that market price should equal book value, believing that 'the earnings of utilities should be sufficiently high to achieve market-to-book ratios which are consistent with those prevailing for stocks of unregulated companies.'<sup>19</sup>

In addition, Bonbright states:

In the first place, commissions cannot forecast, except within wide limits, the effect their rate orders will have on the market prices of the stocks of the companies they regulate. In the second place, *whatever the initial market prices may be, they are sure to change not only with the changing prospects for earnings, but with the changing outlook of an inherently volatile stock market.* In short, market prices are beyond the control, though not beyond the influence of rate regulation. Moreover, even if a commission did possess the power of control, any attempt to exercise it ... would result in harmful, uneconomic shifts in public utility rate levels. (italics added)<sup>20</sup>

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<sup>18</sup> Morin, at 481-482.

<sup>19</sup> Charles F. Phillips, The Regulation of Public Utilities, Public Utilities Reports, Inc., 1993, at 395.

<sup>20</sup> James C. Bonbright, Albert L. Danielsen and David R. Kamerschen, Principles of Public Utility Rates (Public Utilities Reports, Inc., 1988), at 334.

**Q. CAN THE UNDER- OR OVER-STATEMENT OF INVESTORS' REQUIRED RETURN BY THE DCF MODEL BE DEMONSTRATED MATHEMATICALLY?**

A. Yes. Schedule DWD-1R, page 1 demonstrates how Mr. Keller's, Mr. Spadaccio's and Ms. DeAngelo's market-based DCF cost rates, when applied to a book value substantially below market value, will understate investors' required return on market value. As shown, there is no realistic opportunity to earn the expected market-based rate of return on book value. Using Mr. Keller's DCF cost rate, for example, in Column [A], investors expect a 9.70% return on an average market price of \$78.80 for Mr. Keller's proxy group. Column [B] shows that when Mr. Keller's 9.70% return rate is applied to a book value of \$39.62,<sup>21</sup> the total annual return opportunity is \$3.84. After subtracting dividends of \$2.46, the investor only has the opportunity for \$1.38 in market appreciation, or 1.76%. The magnitude of the understatement of investors' required return on market value using Mr. Keller's 9.70% cost rate is 4.82%, which is calculated by subtracting the market appreciation based on book value of 1.76% from Mr. Keller's expected growth rate of 6.58%. Also as shown on Schedule DWD-1R, Mr. Spadaccio's DCF results understate the investor required returns by 4.94%, and Ms. DeAngelo's by 4.53% and 4.50% for her gas and electric proxy groups, respectively.

**Q. HOW DO M/B RATIOS OF THE OPPOSING WITNESSES PROXY GROUPS COMPARE TO THE TEN-YEAR AVERAGE?**

A. The M/B ratios of the Opposing Witnesses' proxy groups are currently close to their ten-year averages. As shown in Charts 1 and 2 below, with the exception of more recent periods, since 2016, the M/B ratios of the Combined Gas and Electric Proxy Groups have

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<sup>21</sup> Representing a market-to-book ratio of 198.89%.

generally been in-line or above the ten-year average M/B ratios of approximately 1.99 and 1.92 times, respectively, and significantly above 1.0 times.

**Chart 1: M/B Ratios of the Opposing Witness' Combined Gas Proxy Group Compared With Ten-Year Average<sup>22</sup>**



**Chart 2: M/B Ratios of the Opposing Witness' Combined Electric Proxy Group Compared With Ten-Year Average<sup>23</sup>**



<sup>22</sup> Source: S&P Capital IQ.

<sup>23</sup> Source: S&P Capital IQ.

**Q. IS THERE ANOTHER WAY TO QUANTIFY THE INACCURACY OF THE DCF MODEL WHEN M/B RATIOS ARE NOT AT UNITY?**

A. Yes. One can quantify the inaccuracy of the DCF model when M/B ratios are not at unity by estimating the implied DCF model results (based on a market-value capital structure) to reflect a book-value capital structure. This can be measured by first calculating the market value of each proxy company's capital structure, which consists of the market value of the company's common equity (shares outstanding multiplied by price), and the fair value of the company's long-term debt and preferred stock. All of these measures, except for price, are available in each company's SEC Form 10-K.

Second, one must de-leverage the implied cost of common equity based on the DCF. This is derived using the Modigliani / Miller equation<sup>24</sup> as illustrated in Schedule DWD-2R and shown below:

$$k_u = k_e - (((k_u - i)(1 - t)) D/E) - (k_u - d) P/E$$

where:

- $k_u$  = Unlevered (i.e., 100% equity) cost of common equity;
- $k_e$  = Market determined cost of common equity;
- $i$  = Cost of debt;
- $t$  = Income tax rate;
- $D$  = Debt ratio;
- $E$  = Equity ratio;
- $d$  = Cost of preferred stock; and
- $P$  = Preferred equity ratio.

For example, using data specific to Mr. Keller's proxy group, the equation becomes:

$$k_u = 9.70\% - (((k_u - 3.58\%)(1 - 21\%)) 41.32\% / 56.95\%) - (k_u - 6.01\%) 1.73\% / 56.95\%$$

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<sup>24</sup> The Modigliani / Miller theorem is an influential element of economic theory and forms the basis for modern theory on capital structure. See, F. Modigliani and M. Miller, "The Cost of Capital, Corporation Finance and the Theory of Investment", *The American Economic Review*, Vol. 48, No. 3, (June 1958), at 261-297.

Solving for  $k_u$  results in an unlevered cost of common equity of 7.44%. Next, one must re-lever those costs of common equity by relating them to each proxy group's average book capital structure as shown below:

$$k_e = k_u + (((k_u - i)(1 - t)) D/E) + (k_u - d) P/E$$

Once again, using data specific to Mr. Keller's proxy group, the equation becomes:

$$k_e = 7.44\% + (((7.44\% - 3.58\%)(1 - 21\%))52.39\%/45.30\%) + (7.44\% - 6.01\%)2.31\%/45.30\%$$

Solving for  $k_e$  results in an 11.05% indicated cost of common equity relative to the book capital structure of the proxy group, which is an increase of 1.35% over Mr. Keller's indicated DCF result of 9.70%.<sup>25</sup>

The leverage-adjusted DCF results are still not applicable to the Companies, as they do not reflect the higher risk that the Companies face relative to the proxy groups, given the Companies smaller sizes, and nor do they include performance factor adjustments.

**Q. HAS THIS COMMISSION RECOGNIZED THIS TENDENCY OF THE DCF MODEL TO MIS-SPECIFY INVESTORS' REQUIRED RETURN WHEN M/B RATIOS ARE NOT AT UNITY?**

A. Yes. This Commission recognized this tendency in its order of August 26, 2005 in *The City of Lancaster – Sewer Fund, Docket Nos. R-00049862, et al.*, when it adopted the Administrative Law Judge's market-to-book adjustment of 65 basis points (0.65%) because such an adjustment was "consistent with our recent orders in PAWC, Aqua, and PPL" and "as in PPL, we find that adjustment is necessary because the DCF method produces the investor required return based on the current market price, not the return on

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<sup>25</sup> On pages 2, 3, and 4 of Schedule DWD-2R, using the Modigliani/Miller equation relative to Mr. Spadaccio's and Ms. DeAngelo's proxy groups result in indicated DCF results of 10.68% (Spadaccio), 10.84% (DeAngelo Gas) and 10.25% (DeAngelo Electric) compared with their recommendations of 8.98%, 9.50%, and 8.82%, respectively.

the book value capitalization. With the M/B adjustment, the equity return allowance is 10.75 percent.” (emphasis added)

In 2007, the PA PUC again affirmed the tendency of the DCF model to mis-specify investors’ required return in its Order of February 8, 2007 in *PPL Gas Utilities Corporation*, Docket No. R-00061398, et al., when it stated:

The ALJ stated that the OTS and the OCA are correct that the Commission favors the DCF method to determine the cost of equity. However, the ALJ concluded, based on recent precedent, that the Commission consistently has adopted a leverage adjustment to compensate for the difference between market prices and book value (used in ratemaking). (See, *Aqua Pennsylvania*, 204, 234 (2004); *Pa. PUC v. PPL Electric Utilities Corp.*, Docket No. R-00049255, at 70-71 (2004); *Pa. PUC v. Pennsylvania American Water Co.*, 2002 Pa. PUC LEXIS 1; *Pa. PUC v. Phila. Suburban Water Co.*, 219 PUR4TH 272 (2002); *Pa. PUC v. Pennsylvania American Water Co.*, 231 PUR4TH 277 (2004)). According to the ALJ, these cases are persuasive that a leverage adjustment should be employed with the DCF analysis. (R.D. at 62-63).

**Q. ARE YOU ADVOCATING A SPECIFIC ADJUSTMENT TO THE DCF RESULTS TO CORRECT FOR ITS MIS-SPECIFICATION OF THE INVESTOR-REQUIRED RETURN?**

A. No. The purpose of this discussion is to demonstrate that, like all cost of common equity models, the DCF has its limitations and that the use of multiple cost of common equity models in conjunction with informed expert judgment provides a more accurate and reliable picture of the investor-required ROE than does a narrow evaluation of the results of one model.



**Q. WHAT IS YOUR RECOMMENDED APPROACH TO DETERMINING THE ROE?**

A. As discussed in my Direct Testimony,<sup>26</sup> the use of multiple models adds reliability to the estimation of the common equity cost rate, with the prudence of using multiple cost of common equity models supported in both the financial literature and regulatory precedent.

**Q. ARE THERE EXAMPLES FROM THE FINANCIAL LITERATURE WHICH SUPPORT THE USE OF MULTIPLE COST OF COMMON EQUITY MODELS IN DETERMINING THE INVESTOR-REQUIRED RETURN?**

A. Yes. In one example, Morin states:

Each methodology requires the exercise of considerable judgment on the reasonableness of the assumptions underlying the methodology and on the reasonableness of the proxies used to validate a theory. The inability of the DCF model to account for changes in relative market valuation, discussed below, is a vivid example of the potential shortcomings of the DCF model when applied to a given company. Similarly, the inability of the CAPM to account for variables that affect security returns other than beta tarnishes its use.

**No one individual method provides the necessary level of precision for determining a fair return, but each method provides useful evidence to facilitate the exercise of an informed judgment.** Reliance on any single method or preset formula is inappropriate when dealing with investor expectations because of possible measurement difficulties and vagaries in individual companies' market data. (emphasis added)

\* \* \*

There is ample academic support in the financial literature for the need to rely upon several financial models in arriving at a recommended common equity cost rate. Professor Eugene Brigham, a widely respected scholar and finance academician, asserts<sup>(footnote omitted)</sup>:

*Three methods typically are used: (1) the Capital Asset Pricing Model (CAPM), (2) the discounted cash flow (DCF) method, and (3) the bond-yield-plus-risk-premium approach. These methods are not mutually exclusive – no method*

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<sup>26</sup> D'Ascendis Direct Testimony, at 20.

*dominates the others, and all are subject to error when used in practice. Therefore, when faced with the task of estimating a company's cost of equity, we generally use all three methods and then choose among them on the basis of our confidence in the data used for each in the specific case at hand. (italics in original) (emphasis added)*

Another prominent finance scholar, Professor Stewart Myers, in an early pioneering article on regulatory finance, stated<sup>(footnote omitted)</sup>:

*Use more than one model when you can. Because estimating the opportunity cost of capital is difficult, **only a fool throws away useful information.** That means you should not use any one model or measure mechanically and exclusively. Beta is helpful as one tool in a kit, to be used in parallel with DCF models or other techniques for interpreting capital market data. (italics in original) (emphasis added)*

\* \* \*

Reliance on multiple tests recognizes that no single methodology produces a precise definitive estimate of the cost of equity. As stated in Bonbright, Danielsen, and Kamerschen (1988), '*no single or group test or technique is conclusive.*' (italics in original)

\* \* \*

**While it is certainly appropriate to use the DCF methodology to estimate the cost of equity, there is no proof that the DCF produces a more accurate estimate of the cost of equity than other methodologies.** Sole reliance on the DCF model ignores the capital market evidence and financial theory formalized in the CAPM and other risk premium methods. **The DCF model is one of many tools to be employed in conjunction with other methods to estimate the cost of equity.** It is not a superior methodology that supplants other financial theory and market evidence. The broad usage of the DCF methodology in regulatory proceedings in contrast to its virtual disappearance in academic textbooks does not make it superior to other methods. The same is true of the Risk Premium and CAPM methodologies. (emphasis added)<sup>27</sup>

Finally, Brigham and Gapenski note:

In practical work, *it is often best to use all three methods – CAPM, bond yield plus risk premium, and DCF – and then apply judgment when the methods produce different results. People experienced in estimating equity*

<sup>27</sup>

Morin, at 476-479.

capital costs recognize that both careful analysis and some very fine judgments are required. It would be nice to pretend that these judgments are unnecessary and to specify an easy, precise way of determining the exact cost of equity capital. Unfortunately, this is not possible. Finance is in large part a matter of judgment, and we simply must face this fact. (italics in original)<sup>28</sup>

In the academic literature cited above, three methods are consistently mentioned: the DCF, CAPM, and the RPM, all of which I used in my analyses.

**Q. ARE THERE SPECIFIC EXAMPLES WHERE THE PA PUC HAS CONSIDERED MULTIPLE COST OF COMMON EQUITY MODELS?**

A. Yes. In Docket No. R-2013-2360798, concerning Columbia Water Company (“Columbia”), where I was Columbia’s ROE witness, the Commission stated:

Based on our review of the testimony, data, and cost models presented, we believe that the evidence in this case supports an ROE finding in the reasonable range of 9.25% to 10.25% using the DCF method as the foundation. The equity-heavy capital structure of Columba indicates that a slightly lower ROE is appropriate. However, the small size of the Company, its management effectiveness, and the results of other ROE models other than the DCF are all reasons to set a higher ROE. Therefore, within our indicated range of reasonableness, we conclude that an ROE of 9.75% is appropriate for our ratemaking determinations herein.

Also, in Docket No. R-2014-2402324 concerning Emporium Water Company (“Emporium”), where I was Emporium’s ROE witness, the Commission stated the following:

The ALJ recommended that the Commission adopt the Company’s proposed return on common equity of 11.05%.<sup>Footnote Omitted</sup> R.D. at 11. The ALJ explained that the Company’s position allows it to pay its debt service, which includes principal payments and interest, and provides a modest return on equity (\$34,000). The ALJ states that I&E’s and the OCA’s positions fail to meet the standards set by the *Hope* and *Bluefield* by not even allowing the Company to pay their debt service, which may lead to

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<sup>28</sup> Eugene F. Brigham and Louis C. Gapenski, Financial Management – Theory and Practice, 4th Ed. (The Dryden Press, 1985) at 256.

possible default on the loans and the bankruptcy of the Company. R.D. at 35.

\* \* \*

As discussed, *supra*, the OCA recommends a return of 9.10% as the midpoint of its DCF and CE analyses; I&E recommends a return of 8.89% based on its DCF analyses; and the Company proposes a return of 10.3%, which utilizes its DCF, RP, and CAPM analyses to which the Company adds a size risk adjustment of 75 basis points. Based on our review of the testimony, data, and cost models presented, and considering our adoption of a 60% / 40% hypothetical capital structure, we believe that the range of returns provided in evidence supports an ROE finding of 10.0% for our ratemaking determinations herein.

Lastly, in Docket Nos. R-2021-3027385 and R-2021-3027386 concerning Aqua, the Commission stated:

Therefore, our methodology for determining Aqua's ROE shall utilize both I&E's DCF and CAPM methodologies. As noted above, the Commission recognizes the importance of informed judgment and information provided by other ROE models. In the *2012 PPL Order*, the Commission considered PPL's CAPM and RP methods, tempered by informed judgment, instead of DCF-only results. We conclude that methodologies other than the DCF can be used as a check upon the reasonableness of the DCF derived ROE calculation. Historically, we have relied primarily upon the DCF methodology in arriving at ROE determinations and have utilized the results of the CAPM as a check upon the reasonableness of the DCF derived equity return. As such, where evidence based on other methods suggests that the DCF-only results may understate the utility's ROE, we will consider those other methods, to some degree, in determining the appropriate range of reasonableness for our equity return determination. In light of the above, we shall determine an appropriate ROE for Aqua using informed judgement based on I&E's DCF and CAPM methodologies.<sup>29</sup>

In the Commission Orders cited above, there is clear language that the Commission considers multiple models in its determination of ROE. It is also my interpretation of these Orders that the Commission correctly observes capital market conditions and their effect on the model results in determining an ROE for utility companies. This, in addition to the

<sup>29</sup>

*Pa. PUC v. Aqua Pennsylvania, Inc.*, Docket Nos. R-2021-3027385 & R-2021-3027386, pp. 154-155 (Order entered May 16, 2022).

academic literature cited above, shows that the Opposing Witnesses' reasoning behind relying solely on the DCF for their recommended ROE is misplaced.

**B. APPLICATION OF THE CAPM**

**Q. PLEASE BRIEFLY SUMMARIZE THE I&E ROE WITNESSES' CAPM METHODOLOGY AND RESULTS.**

A. The I&E ROE Witnesses use the average *Value Line Investors Service* ("Value Line") beta of their proxy groups, a projected 10-year Treasury yield for their risk-free rate, and an average of two expectational market returns to arrive at their CAPM results of 13.53% and 12.89% for Valley and Citizens', respectively.<sup>30</sup>

**Q. DO YOU HAVE ANY CONCERNS WITH THE I&E ROE WITNESSES' APPLICATION OF THE CAPM?**

A. Yes, I do. While I agree with the I&E ROE Witnesses' use of *Value Line* betas, projected interest rates, and projections of market returns, I have concerns regarding their selection of a risk-free rate and their failure to conduct an ECAPM.

**Q. IS THE USE OF 10-YEAR TREASURY BONDS AS A RISK-FREE RATE APPROPRIATE FOR COST OF CAPITAL PURPOSES?**

A. No, it is not. As discussed below, the tenor of the risk-free rate used in the CAPM should match the life (or duration) of the underlying investment. As noted by Morningstar:

The traditional thinking regarding the time horizon of the chosen Treasury security is that it should match the time horizon of whatever is being valued. When valuing a business that is being treated as a going concern, the appropriate Treasury yield should be that of a long-term Treasury bond. Note that the horizon is a function of the investment, not the investor. If an investor plans to hold stock in a company for only five years, the yield on a five-year Treasury note would not be appropriate since the company will continue to exist beyond those five years.<sup>31</sup>

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<sup>30</sup> Keller Direct Testimony, at 29-30; Spadaccio Direct Testimony, at 31-32.

<sup>31</sup> Morningstar, Inc., 2013 Ibbotson Stocks, Bonds, Bills and Inflation Valuation Yearbook, at 44.

Morin also confirms this when he states:

[b]ecause common stock is a long-term investment and because the cash flows to investors in the form of dividends last indefinitely, the yield on very long-term government bonds, namely, the yield on 30-year Treasury bonds, is the best measure of the risk-free rate for use in the CAPM <sup>(footnote omitted)</sup>... The expected common stock return is based on long-term cash flows, regardless of an individual's holding time period.<sup>32</sup>

Pratt and Grabowski recommend a similar approach to selecting the risk-free rate:

“In theory, when determining the risk-free rate and the matching ERP you should be matching the risk-free security and the ERP with the period in which the investment cash flows are expected.”<sup>33</sup> As a practical matter, equity securities represent a perpetual claim on cash flows; 30-year Treasury bonds are the longest-maturity securities available to match that perpetual claim. The I&E ROE Witnesses' use of a medium-term Treasury bond does not match the life of the assets being valued. The use of a 30-year Treasury bond is the more appropriate risk-free rate.

**Q. THE I&E ROE WITNESSES CLAIM THAT LONG-TERM GOVERNMENT BONDS ARE SUBJECT TO THE MATURITY RISK.<sup>34</sup> PLEASE COMMENT.**

They are mistaken. If a long-term Treasury note is held to maturity, there is no risk (the investor will get the stated coupon rate and principal at the end). Since the cost of equity is a long-term concept, the investment horizon of an individual investor is irrelevant.

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<sup>32</sup> Morin, at 169.

<sup>33</sup> Shannon Pratt and Roger Grabowski, Cost of Capital: Applications and Examples, 3rd Ed. (Hoboken, NJ: John Wiley & Sons, Inc., 2008), at 92. “ERP” is the Equity Risk Premium.

<sup>34</sup> Keller Direct Testimony, at 28; Spadaccio Direct Testimony, at 30.

**Q. PLEASE DISCUSS THE I&E ROE WITNESSES' PROJECTED RISK-FREE RATE.**

A. Mr. Keller, Mr. Spadaccio and I use the same publication for our forecasted interest rate data, *Blue Chip Financial Forecasts* (“*Blue Chip*”). The I&E ROE Witnesses incorporate forecasts from the third quarter of 2022 out to the period 2023-2027, although forecasts are published by *Blue Chip* to the period 2028-2032. Not incorporating the longest projection available is inconsistent with the application of the DCF model in which there is an assumption that the projected “g” is constant into perpetuity, creating a mismatch. It is also inconsistent with the Efficient Market Hypothesis (“EMH”) on which the DCF is based.

**Q. WHAT IS THE EMH?**

A. According to Fama,<sup>35</sup> a market in which prices always “fully reflect” available information is called “efficient.” There are three forms of the EMH, namely:

- (1) The “weak” form asserts that all past market prices and data are fully reflected in securities prices. In other words, technical analysis cannot enable an investor to “outperform the market.”
- (2) The “semi-strong” form asserts that all publicly available information is fully reflected in securities prices. In other words, fundamental analysis cannot enable an investor to “outperform the market.”
- (3) The “strong” form asserts that all information, both public and private, is fully reflected in securities prices. In other words, even insider information cannot enable an investor to “outperform the market.”

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<sup>35</sup> Eugene F. Fama. "Efficient Capital Markets: A Review of Theory and Empirical Work", *The Journal of Finance*, Vol. 25, No. 2. (May 1970), pp. 383-417.

The “semi-strong” form is generally considered the most realistic because the illegal use of insider information can enable an investor to “beat the market” and earn excessive returns, thereby disproving the “strong” form. The semi-strong form of the EMH assumes that all information (including long-term forecasts of interest rates) are available to the investor, which means the 2028-2032 forecasted interest rate would be considered by investors when making investment decisions and, therefore, should be included in the I&E ROE Witnesses’ CAPM analysis.

**Q. THE I&E ROE WITNESSES DID NOT PERFORM AN ECAPM ANALYSIS. PLEASE COMMENT.**

A. As discussed in my Direct Testimony,<sup>36</sup> although numerous tests of the CAPM have confirmed its validity, it has been determined that the empirical Security Market Line (“SML”) described by the traditional CAPM is not as steeply sloped as the predicted SML. Tests of the CAPM have measured the extent to which security returns and betas are related as predicted by the CAPM, thus confirming its validity. As such, the I&E ROE Witnesses should have used the ECAPM in their CAPM analysis.

**Q. IS THERE ANY ADDITIONAL EVIDENCE TO SUPPORT THE USE OF THE ECAPM?**

A. Yes, there is. Dianna R. Harrington summarizes studies on the predicted results of the CAPM versus the actual returns in her text Modern Portfolio Theory & the Capital Asset Pricing Model:

So far we have learned some very interesting things about the CAPM and reality. Some of the earliest work tested realized data (history) against data generated by simulated portfolios. Early studies by Douglas (1969) and Lintner (Douglas [1969]) showed discrepancies between what was expected on the basis of the CAPM and the actual relationships that were apparent in

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<sup>36</sup> D’Ascendis Direct Testimony, at 39-41.



the capital markets. Theoretically, the minimal rate of return from the portfolios (the intercept) and the actual risk-free rate for the period should have been equal. They were not.

\* \* \*

Another study, now more famous than Lintner's was done by Black, Jensen, and Scholes (1972). Lintner had used what is called a cross-sectional method (looking at a number of stock returns during one time period), whereas Black, Jensen, and Scholes used a time-series method (using returns for a number of stocks over several time periods). To make their test, Black, Jensen, and Scholes assumed that what had happened in the past was a good proxy for the investor expectations (a frequent assumption in CAPM tests). Using historical data, they generated estimates using what we call the market model:

$$R_{jt} = \alpha_j + \beta_j (R_{mt}) + \varepsilon_j$$

Where:

R = total returns

$\beta$  = the slope of the line (the incremental return for risk)

$\alpha$  = the intercept or a constant (expected to be 0 over time and across all firms)

$\varepsilon$  = an error term (expected to be random, without information)

m = the market proxy

j = the firm or portfolio

t = the time period

Instead of using single stocks, they formed portfolios in an effort to wash out one source of error; because betas of single firms are quite unstable. On the basis of the CAPM, they expected to find

1. That the intercept was equal to the risk-free rate (their proxy was the Treasury bill rate)
2. That the capital market line had a positive slope and that riskier (higher beta) securities provided higher return

Instead they found

1. That the intercept was different from the risk-free rate
2. That high-risk securities earned less and low-risk securities earned more than predicted by the model

3. That the intercept seemed to depend on the beta of any asset: high-beta stocks had a different intercept than low-beta stocks

\* \* \*

Fama and MacBeth (1974) criticized the Black, Jensen, and Scholes study (hereafter called BJS). In a reformation of the study, they supported the first of the BJS findings. They found that the intercept exceeded the risk-free proxy, but did not find the evidence to support the other BJS conclusions.<sup>37</sup>

Harrington discusses Black's potential solution to this phenomenon:

Black's replacement for the risk-free asset was a portfolio that had no covariability with the market portfolio. Because the relevant risk in the CAPM is systematic risk, a risk-free asset would be the one with no volatility relative to the market – that is, a portfolio with a beta of zero. All investor-perceived levels of risk could be obtained from various linear combinations of Black's zero-beta portfolio and the market portfolio... Since  $R_z$  (the rate of return of the zero-beta asset) and  $R_m$  are uncorrelated (as  $R_f$  and  $R_m$  were assumed to be in the simple CAPM), the investor can choose from various combinations of  $R_z$  and  $R_m$ . On segment  $R_mY$ ,  $R_z$  is sold short and proceeds are invested in  $R_m$ . On segment  $R_zR_m$ , portions of the zero-beta portfolio are purchased. At  $R_m$ , the investor is fully invested in the market portfolio. The equilibrium CAPM was rewritten by Black as follows:

$$E(R_i) = (1 - \beta_i) E(R_z) + \beta_i E(R_m)$$

*Where:*

$E$  indicates expected,

$E(R_z)$  is less than  $E(R_m)$ , and

$R_z$  holdings over the whole market must be in equilibrium. That is, the number of short sellers and lenders of securities must be equal.

Black's adaptation is intriguing. The result of using this model is a capital market line that has a less steep slope and a higher intercept than those of the simple CAPM. If Black's model is more correct in its description of investor behavior in the marketplace, then the use of the simple model would produce equity return predictions that would be too low for stocks

<sup>37</sup>

Dianna R. Harrington, Modern Portfolio Theory & the Capital Asset Pricing Model – A User's Guide, Prentice-Hall, Inc. 1983, at 43-45.

with betas greater than one and too high for stocks with betas of less than one.<sup>38</sup>

**Q. DOES MR. KELLER HAVE CONCERNS REGARDING THE ECAPM?**

A. Yes, he does. Specifically, Mr. Keller claims that the ECAPM “does not correct the problems with the CAPM”<sup>39</sup> without providing evidence to that effect. Conversely, I have provided substantial evidence that the ECAPM is a necessary adjustment to the CAPM in my Direct Testimony and above. Mr. Keller’s concerns should be given no weight by the Commission.

**Q. WHAT WOULD THE I&E ROE WITNESSES’ CAPM RESULTS INDICATE IF CORRECTED TO REFLECT A FULLY FORECASTED 30-YEAR TREASURY BOND YIELD AND THE USE OF THE ECAPM?**

A. As shown in Schedule DWD-3R, page 4, using a fully projected 30-year Treasury bond yield and employing the ECAPM would result in indicated ROEs of 13.86% and 13.17% for Mr. Keller and Mr. Spadaccio’s proxy groups, respectively.

**C. FAILURE TO REFLECT VALLEY AND CITIZENS’ GREATER RELATIVE RISK DUE TO THEIR SMALL SIZE**

**Q. DO THE I&E ROE WITNESSES MAKE A SPECIFIC ADJUSTMENT TO REFLECT THE SMALLER SIZE OF THE COMPANIES RELATIVE TO THEIR PROXY GROUPS?**

A. No. As discussed in my Direct Testimony,<sup>40</sup> relative company size is a significant element of business risk for which investors expect to be compensated through greater returns. Smaller companies are simply less able to cope with significant events which affect sales,

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<sup>38</sup> Dianna R. Harrington, Modern Portfolio Theory & the Capital Asset Pricing Model – A User’s Guide, Prentice-Hall, Inc. 1983, at 31-32.

<sup>39</sup> Keller Direct Testimony, at 34.

<sup>40</sup> D’Ascendis Direct Testimony, at 51-53.

revenues and earnings. For example, smaller companies face more exposure to business cycles and economic conditions, both nationally and locally. Additionally, the loss of revenues from a few large customers would have a far greater effect on a small company than on a larger company with a more diverse customer base. Finally, smaller companies are generally less diverse in their operations and have less financial flexibility. Consistent with the financial principle of risk and return in my Direct Testimony,<sup>41</sup> such increased risk due to small size must be taken into account in the allowed rate of return on common equity.

**Q. DO THE I&E ROE WITNESSES RELY ON STUDIES THAT SUPPORT THE SMALL SIZE PREMIUM?**

A. Yes. In the Fama and French article cited by the I&E ROE Witnesses in their direct testimony, the authors propose that their three-factor model include the “Small Minus Big” factor, which indicates that small capitalization firms are more risky than large capitalization firms,<sup>42</sup> confirming that size is a risk factor which must be taken into account in estimating the cost of common equity.

**Q. THE I&E ROE WITNESSES SAY THAT YOUR SIZE ADJUSTMENT IS NOT SPECIFIC TO UTILITIES BECAUSE THE STUDY YOU CITE USES DATA FROM THE NEW YORK STOCK EXCHANGE, AMERICAN STOCK**

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<sup>41</sup> D'Ascendis Direct Testimony, at 13.

<sup>42</sup> Eugene F. Fama and Kenneth R. French, "The Capital Asset Pricing Model: Theory and Evidence", *Journal of Economic Perspectives*, Vol. 18, No. 3, Summer 2004, at 39.

**EXCHANGE AND NATIONAL ASSOCIATION OF SECURITY DEALERS  
AUTOMATED QUOTATION SYSTEM. IS THIS A VALID CRITICISM?**

A. No. While the study does use data from these exchanges, all publicly traded utility companies are traded on one of these exchanges, including the proxy group companies. This means that utilities are, indeed, part of the size study I use to derive my size adjustment.

**Q. THE I&E ROE WITNESSES CITE A STUDY BY DR. ANNIE WONG FOR THE PROPOSITION THAT THERE IS NO SIZE PREMIUM FOR UTILITIES. DOES THIS STUDY ESTABLISH THAT CONTENTION?**

A. No. Dr. Wong's study is flawed because she attempts to relate a change in size to beta, which accounts for only a small percentage of diversifiable company-specific risk. However, size is company-specific and therefore diversifiable.

**Q. IS THERE ALSO A PUBLISHED RESPONSE TO DR. WONG'S ARTICLE?**

A. Yes, there is. In response to Professor Wong's article, *The Quarterly Review of Economics and Finance* published an article in 2003, authored by Thomas M. Zepp, which commented on the Wong article cited by Mr. Keller. Relative to Dr. Wong's results, Dr. Zepp concluded in the Abstract on page 1 of his article: "Her weak results, however, do not rule out the possibility of a small firm effect for utilities."<sup>43</sup> Dr. Zepp also noted on page 582 that: "Two other studies discussed here support a conclusion that smaller water utility stocks are more risky than larger ones. To the extent that water utilities are representative of all utilities, there is support for smaller utilities being more risky than larger ones."<sup>44</sup>

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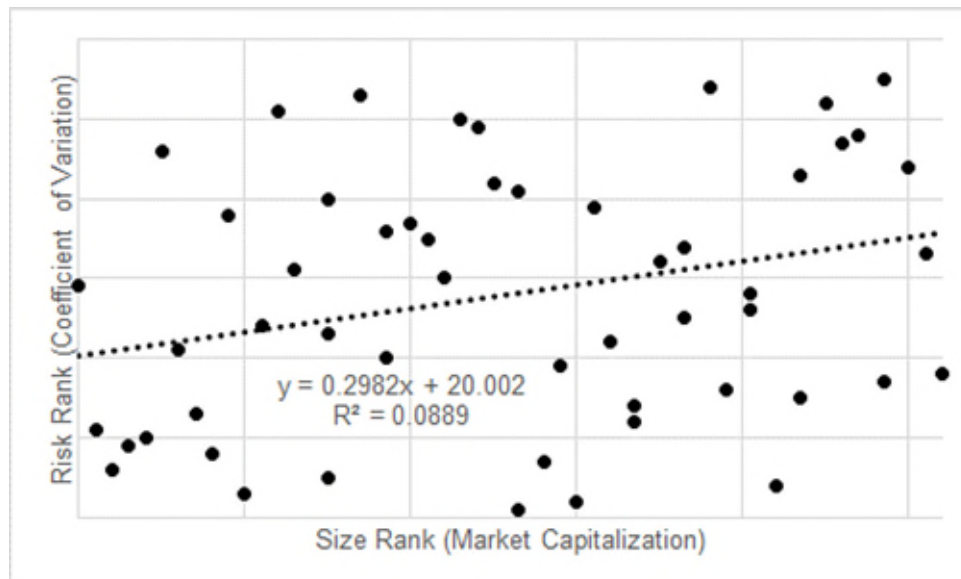
<sup>43</sup> Thomas M. Zepp, "Utility Stocks and the Size Effect --- Revisited", *The Quarterly Review of Economics and Finance*, 43 (2003), at 578-582.

<sup>44</sup> Thomas M. Zepp, "Utility Stocks and the Size Effect --- Revisited", *The Quarterly Review of Economics and Finance*, 43 (2003), at 578-583.

**Q. HAVE YOU PERFORMED STUDIES LINKING SIZE AND RISK FOR UTILITY COMPANIES?**

A. Yes, I have performed two studies that link size and risk for utility companies. My first study included the universe of electric, gas, and water companies included in *Value Line Standard* and *Small and Mid-Cap Editions*. From each of the utilities' *Value Line Ratings & Reports*, I calculated the 10-year coefficient of variation<sup>45</sup> ("CoV") of net profit (a measure of risk) and current market capitalization (a measure of size) for each company. After ranking the companies by size (largest to smallest) and risk (least risky to most risky), I made a scatter plot of the data, as shown on Chart 3, below:

**Chart 3: Relationship Between Size and Risk for the *Value Line* Universe of Utility Companies<sup>46</sup>**



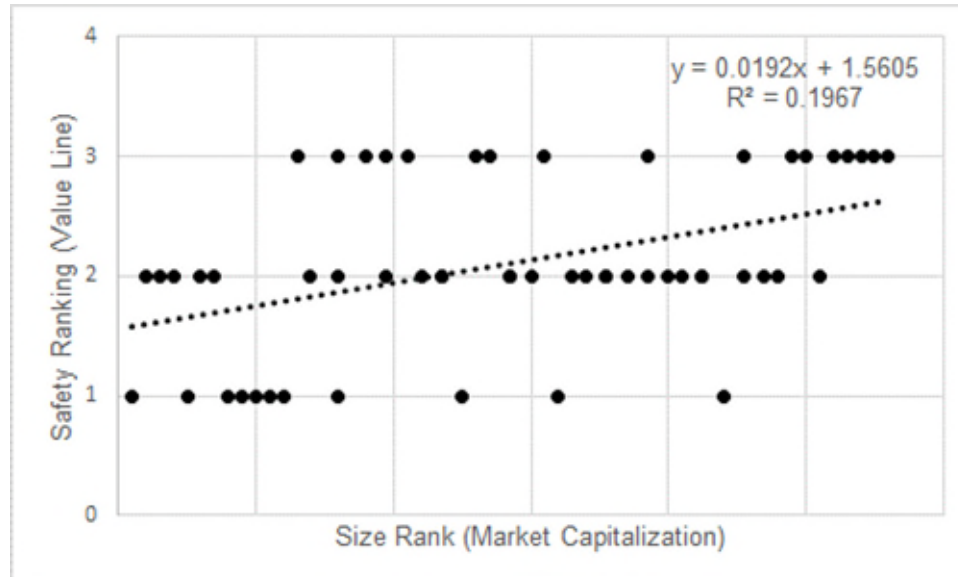
As shown in Chart 3 above, as company size decreases (increasing size rank), the CoV increases, linking size and risk for utilities, which is significant at 95.0% confidence level.

<sup>45</sup> The coefficient of variation is used by investors and economists to determine volatility.

<sup>46</sup> Source: *Value Line*

The second study used the same universe of companies, but instead of using the CoV of net profit, I used the *Value Line* Safety Ranking, which is another measure of total risk.<sup>47</sup> After ranking the companies by size and Safety Ranking, I made a scatterplot of those data, as shown on Chart 4, below:

**Chart 4: Relationship Between Size and Safety Ranking for the *Value Line* Universe of Utility Companies<sup>48</sup>**



Similar to the first study, as company size decreases, Safety Ranking degrades, indicating a link between size and risk for utilities. This study is also significant at the 95% confidence level. The I&E ROE Witnesses assertions that size and risk are not linked for utility companies should be dismissed by the Commission.

<sup>47</sup> *Value Line* also ranks stocks for Safety by analyzing the total risk of a stock compared to the approximately 1,700 stocks in the *Value Line* universe. Each of the stocks tracked in the *Value Line Investment Survey* is ranked in relationship to each other, from 1 (the highest rank) to 5 (the lowest rank). Safety is a quality rank, not a performance rank, and stocks ranked 1 and 2 are most suitable for conservative investors; those ranked 4 and 5 will be more volatile. Volatility means prices can move dramatically and often unpredictably, either down or up. The major influences on a stock's Safety rank are the company's financial strength, as measured by balance sheet and financial ratios, and the stability of its price over the past five years.

<sup>48</sup> Source: *Value Line*.

**Q. MR. KELLER POINTS TO THE COMMISSION'S DECISION IN DOCKET NO. 2019-3008212 IN NOTING THAT THE COMMISSION DID NOT MAKE AN EXPLICIT SIZE ADJUSTMENT. PLEASE COMMENT.**

A. While the Commission did not make an explicit size adjustment in that proceeding, it did acknowledge that size is a factor in assessing a company's ability to attract capital (i.e., the cost required by investors).<sup>49</sup> Specifically, the Commission adjusted the DCF result by one standard deviation of the mean and median to account for size. Applying that same approach in my Direct Testimony resulted in size premiums of 0.93% and 1.00% for Valley and Citizens',<sup>50</sup> consistent with my recommended size premiums for Valley and Citizens', respectively. Given that, in addition to the other evidence presented above, it is clear that size should be considered in setting the return for Valley and Citizens'.

**D. PERFORMANCE FACTOR ADJUSTMENT**

**Q. THE OPPOSING WITNESSES HAVE NOT CONSIDERED A PERFORMANCE FACTOR ADJUSTMENT FOR THE COMPANIES' COST OF COMMON EQUITY. PLEASE COMMENT.**

A. As discussed in my Direct Testimony,<sup>51</sup> the Companies should each be awarded a five-basis point upward adjustment to their indicated ROE based on Code 66 Pa.C.S. § 523 regarding performance factor. Mr. Keller (Valley) and Mr. Spadaccio (Citizens') testified regarding the management efficiency of the Companies. No witness from I&E or the OCA has refuted the efficiency of each Company's management, yet both refuted the adjustment, since the Companies were simply doing "what is expected". Simply put, Code 66 Pa.C.S.

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<sup>49</sup> D'Ascendis Direct Testimony, at 55-56.

<sup>50</sup> D'Ascendis Direct Testimony, at 55-56.

<sup>51</sup> D'Ascendis Direct Testimony, at 56-57.



§ 523 is in existence to incentivize companies to “do their job” at a high level. The Companies in this case fulfill the requirement of the statute and should receive the benefit of doing so.

**E. RESPONSE TO THE I&E ROE WITNESSES' CRITICISMS OF COMPANY TESTIMONY**

**Q. DO THE I&E ROE WITNESSES HAVE CRITIQUES OF THE ANALYSES MADE IN YOUR DIRECT TESTIMONY?**

A. Yes. The I&E ROE Witnesses have the following critiques of my analyses in my Direct Testimony: (1) that I have given weight to models other than the DCF in my determination of the ROE for the Companies; (2) that the PRPM is relatively new and not commonly used and cannot be performed without expense; (3) that my selection and use of a Non-Price Regulated Proxy Group similar in total risk to my Utility Proxy Group is “speculative and subjective”;<sup>52</sup> (4) that the size adjustment I use is not applicable to utility companies; and (5) that exemplary management performance is not a basis for awarding a higher ROE.

As I addressed critiques (1), (4), and (5) in my response to the I&E ROE Witnesses' analyses, I will not address them again here. I will address the remaining critiques in turn.

**Q. THE I&E ROE WITNESSES SAY THAT THE PRPM WAS PUBLISHED IN 2011.<sup>53</sup> DOES THAT MEAN THAT THE METHODOLOGY BEHIND THE PRPM WAS ALSO PUBLISHED IN 2011?**

A. No. As discussed in my Direct Testimony,<sup>54</sup> the PRPM is based on the research of Robert F. Engle, dating back to the early 1980s. Dr. Engle discovered that the volatility of market prices, returns and risk premiums clusters over time, making prices, returns and risk

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<sup>52</sup> Keller Direct Testimony, at 36; Spadaccio Direct Testimony, at 38.

<sup>53</sup> Keller Direct Testimony, at 34; Spadaccio Direct Testimony, at 36.

<sup>54</sup> D'Ascendis Direct Testimony, at 24-25.

premiums highly predictable. In 2003, he shared the Nobel Prize in Economics for this work, characterized as “methods of analyzing economic time series with time-varying volatility (“ARCH”).<sup>55</sup> Dr. Engle<sup>56</sup> noted that relative to volatility, “the standard tools have become the ARCH / GARCH<sup>57</sup> models.” Hence, the methodology is not new.

In addition, the GARCH methodology has been well tested by academia, since Engle’s, *et al.* research was originally published in 1982, 40 years ago. I use the well-established GARCH methodology to estimate the PRPM model using a standard commercial and relatively inexpensive statistical package, Eviews,<sup>®</sup> to develop a means by which to estimate a predicted equity risk premium, and when added to a bond yield, results in a cost of common equity.

The PRPM is also in the public domain, having been published six times in academically peer-reviewed journals: Journal of Economics and Business (June 2011 and April 2015),<sup>58</sup> The Journal of Regulatory Economics (December 2011),<sup>59</sup> The Electricity Journal (May 2013 and March 2020),<sup>60</sup> and Energy Policy (April 2019).<sup>61</sup> Notably, none of these articles have been rebutted in the academic literature.

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<sup>55</sup> www.nobelprize.org.

<sup>56</sup> Robert Engle, “GARCH 101: The Use of ARCH / GARCH Models in Applied Econometrics”, *Journal of Economic Perspectives*, Volume 15, No. 4, Fall 2001, p. 157-168.

<sup>57</sup> Autoregressive Conditional Heteroskedasticity / Generalized Autoregressive Conditional Heteroskedasticity.

<sup>58</sup> Eugene A. Pilotte and Richard A. Michelfelder, “Treasury Bond Risk and Return, the Implications for the Hedging of Consumption and Lessons for Asset Pricing”, *Journal of Economics and Business*, June 2011, 582-604; and Richard A. Michelfelder, “Empirical Analysis of the Generalized Consumption Asset Pricing Model: Estimating the Cost of Capital”, *Journal of Economics and Business*, April 2015, 37-50.

<sup>59</sup> Pauline M. Ahern, Frank J. Hanley, and Richard A. Michelfelder, “New Approach to Estimating the Equity Risk Premium for Public Utilities”, *The Journal of Regulatory Economics*, December 2011, at 40:261-278.

<sup>60</sup> Richard A. Michelfelder, Pauline M. Ahern, Dylan W. D’Ascendis, and Frank J. Hanley, “Comparative Evaluation of the Predictive Risk Premium Model, the Discounted Cash Flow Model and the Capital Asset Pricing Model for Estimating the Cost of Common Equity”, *The Electricity Journal*, April 2013, at 84-89; and Richard A. Michelfelder, Pauline M. Ahern, and Dylan W. D’Ascendis, “Decoupling, Risk Impacts and the Cost of Capital”, *The Electricity Journal*, January 2020.

<sup>61</sup> Richard A. Michelfelder, Pauline M. Ahern, and Dylan W. D’Ascendis, “Decoupling Impact and Public Utility Conservation Investment”, *Energy Policy*, April 2019, 311-319.

Finally, the PRPM was presented to a number of utility industry/regulatory/academic groups including the following: The Edison Electric Institute Cost of Capital Working Group; The NARUC Staff Subcommittee on Accounting and Finance; The National Association of Electric Companies Finance/Accounting/Taxation and Rates and Regulations Committees; the NARUC Electric Committee; The Wall Street Utility Group; the Indiana Utility Regulatory Commission Cost of Capital Task Force; the Financial Research Institute of the University of Missouri Hot Topic Hotline Webinar; and the Center for Research and Regulated Industries Annual Eastern Conference on two occasions.

**Q. HAS THE PRPM BEEN IMPLICITLY ACCEPTED BY OTHER REGULATORY COMMISSIONS?**

A. Yes. In Docket No. 2017-292-WS, the Public Service Commission of South Carolina (“PSC SC”) accepted Carolina Water Services’ entire requested ROE, which included the PRPM. The relevant portion states:

The Commission finds Mr. D’Ascendis’ arguments persuasive. He provided more indicia of market returns, by using more analytical methods and proxy group calculations. Mr. D’Ascendis’ use of analysts’ estimates for his DCF analysis is supported by consensus, as is his use of the arithmetic mean. The Commission also finds that Mr. D’Ascendis’ non-price regulated proxy group more accurately reflects the total risk faced [by] price regulated utilities and CWS. Furthermore, there is no dispute that CWS is significantly smaller than its proxy group counterparts, and, therefore, it may present a higher risk. An appropriate ROE for CWS is 10.45% to 10.95%. The Company used an ROE of 10.5% in computing its Application, a return on the low end of Mr. D’Ascendis’ range, and the Commission finds that ROE is supported by the evidence.<sup>62</sup>

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<sup>62</sup> PSC SC Docket No. 2017-292-WS - Order No. 2018-345, at 14. (May 17, 2018)

In addition, in Docket No. W-354, Subs 363, 364 and 365, the State of North Carolina Utilities Commission (“NCUC”) approved my RPM and CAPM analyses, which used PRPM analyses as presented in this proceeding. The relevant portion of the order states:

In doing so the Commission finds that the DCF (8.81%), Risk Premium (10.00%) and CAPM (9.29%) model results provided by witness D’Ascendis, as updated to use current rates in D’Ascendis Late-Filed Exhibit No. 1, as well as the risk premium (9.57%) analysis of witness Hinton, are credible, probative, and are entitled to substantial weight as set forth below.<sup>63</sup>

**Q. THE I&E ROE WITNESSES POSIT THAT YOU USE PROPRIETARY SOFTWARE TO CONDUCT YOUR PRPM.<sup>64</sup> IS THAT TRUE?**

A. No. The GARCH methodology is available in various statistical packages such as EViews<sup>®</sup>, SAS, RATS, S-Plus and JMulti, which are not cost-prohibitive and provide instructions for using the various statistical methodologies in their software. I provided all parties in these proceedings the backup data to run their own GARCH models. While the software I used in this proceeding costs approximately \$1,500 for a single user commercial license,<sup>65</sup> JMulti is a free downloadable software with GARCH estimation applications.

**Q. THE I&E ROE WITNESSES STATE THAT THE SELECTION AND USE OF NON-PRICE REGULATED GROUPS COMPARABLE IN TOTAL RISK TO THE UTILITY PROXY GROUPS IS SPECULATIVE AND SUBJECTIVE.<sup>66</sup> PLEASE RESPOND.**

A. As discussed briefly above, the selection criteria for my Non-Price Regulated Proxy Group were based on ranges of two measures of risk: (1) the unadjusted beta of the Utility Proxy

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<sup>63</sup> NCUC Docket No. W-354, Sub 363, 364, 365, *Order Granting Partial Rate Increase and Requiring Customer Notice*, at PDF 72 (March 31, 2020).

<sup>64</sup> Keller Direct Testimony, at 32; Spadaccio Direct Testimony, at 35.

<sup>65</sup> <http://www.eviews.com/general/prices/prices.html>

<sup>66</sup> Keller Direct Testimony, at 36; Spadaccio Direct Testimony, at 38.

Group, which measures systematic, or market risk; and (2) the standard error of the regression, which gave rise to those betas, measuring non-systematic or diversifiable risk. Systematic plus non-systematic risk is one definition of total risk.<sup>67</sup> This is agreed upon by Mr. Keller and Mr. Spadaccio, who state in their testimony: “two types of risk are associated with a stock: (1) firm-specific risk (unsystematic risk); and (2) market risk (systematic risk), which is measured by a firm’s beta.”<sup>68</sup>

Each company I selected for my Non-Price Regulated Proxy Group was required to have an unadjusted beta (a measure of systematic risk) and a standard error of the regression (a measure of unsystematic risk) within the ranges generated by my proxy group, as explained in pages 45 and 46 of my Direct Testimony and on Schedule DWD-6.

Business and financial risks may vary between companies and proxy groups, but if the collective average betas and standard errors of the regression of the group are similar, then the total, or aggregate, non-diversifiable market risks and diversifiable risks are similar, as noted in “Comparable Earnings: New Life for an Old Precept” provided in Schedule DWD-4R. Thus, because the non-price regulated companies are selected based on analyses of market data, they are comparable in total risk (even though individual risks may vary) to my Utility Proxy Group. This is demonstrated clearly on page 273 of Jack C. Francis’ Investments: Analysis and Management (page 3 of Schedule DWD-5R), which shows that total risk can be “partitioned into its systematic and unsystematic components.” Essentially, companies that have similar betas and standard errors of regression have similar total investment risk.

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<sup>67</sup> Business risk plus financial risk is a second definition of total risk.

<sup>68</sup> Keller Direct Testimony, at 16; Spadaccio Direct Testimony, at 15.

**Q. THE I&E ROE WITNESSES CRITICIZE THE USE OF YOUR NON-PRICE REGULATED PROXY GROUPS BECAUSE THE RESULTS OF THE MODELS APPLIED TO THE GROUPS ARE NOT SIMILAR TO THE RESULTS OF THE SAME MODELS APPLIED TO YOUR UTILITY PROXY GROUPS.<sup>69</sup> PLEASE RESPOND.**

A. The role of regulation when setting rates for a utility company is to simulate a competitive market and the returns that the regulator approves should be commensurate with the rates of return earned by firms with comparable risk. That being said, the ranges of the indicated ROEs produced by the common equity models applied to the Utility Proxy Group and Non-Price Regulated Proxy Group in my ROE update do mostly overlap as shown below:

**Table 2: Comparison of Model Results Applied to The D'Ascendis Gas and Non-Price Regulated Proxy Groups**

	<b>DCF</b>	<b>RPM</b>	<b>CAPM</b>
D'Ascendis Gas Proxy Group	7.83% - 10.50%	8.12% - 14.84%	11.09% - 12.38%
Non-Regulated Group Comparable to Gas Group	5.08% - 18.81%	12.12%	9.63% - 12.81%

**Table 3: Comparison of Model Results Applied to The D'Ascendis Electric and Non-Price Regulated Proxy Groups**

	<b>DCF</b>	<b>RPM</b>	<b>CAPM</b>
D'Ascendis Electric Proxy Group	7.05% - 10.26%	7.79% - 13.59%	11.18% - 13.76%
Non-Regulated Group Comparable to Electric Group	5.08% - 20.17%	12.73%	10.06% - 13.42%

Given the indicated ranges of results of cost of common equity models applied to the Utility Proxy Groups and Non-Price Regulated Proxy Groups, the objective of the comparable earnings model, and the adherence to the regulatory compact, the results of market models

<sup>69</sup> Keller Direct Testimony, at 37; Spadaccio Direct Testimony, at 39.

applied to the Non-Price Regulated Proxy Groups comparable in total risk to my Utility Proxy Groups should be accepted by the Commission.

**Q. THE I&E ROE WITNESSES BOTH NOTE THEY ARE UNAWARE OF ANY AUTHORIZED ROES IN THE LAST TWO YEARS ABOVE YOUR REQUESTED ROE OF 11.50%.<sup>70</sup> PLEASE COMMENT.**

A. While authorized ROEs may be reasonable benchmarks of acceptable ROEs in static economic conditions, they can mis-specify the investor-required return in a dynamic economic environment, such as this one. The reason why historical authorized returns mis-specify the investor-required return in changing markets is because authorized ROEs are a lagging indicator of investor-required returns; i.e., authorized ROEs are based on market data presented in an evidentiary record, which spans a period before the decision, lasting over a year in some cases. Because markets are constantly changing, historical authorized returns do not completely reflect the investor required return because the economic conditions in the past are not representative of economic conditions now. That is, what investors require in the future may not correlate to what they required and/or received in the past. We must remember that projecting the investor required ROE is a forward-looking concept. Because this is the case, the I&E ROE Witnesses' observations regarding historically allowed ROEs are of little value.

**III. RESPONSE TO OCA WITNESS DEANGELO**

**Q. PLEASE SUMMARIZE MS. DEANGELO'S RECOMMENDATIONS.**

A. Ms. DeAngelo accepts the proposed debt cost rate of 4.49% for Valley and 4.09% for Citizens'.<sup>71</sup> Ms. DeAngelo also accepts the proposed capital structure consisting of 50.47%

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<sup>70</sup> Keller Direct Testimony, at 46; Spadaccio Direct Testimony, at 47.

<sup>71</sup> DeAngelo Direct Testimony, at 4-5.

debt and 49.53% equity.<sup>72</sup> Regarding the cost of common equity for Valley, Ms. DeAngelo recommends a common equity cost rate of 9.50%, based on her DCF model result of 9.50%. Regarding the cost of common equity for Citizens', Ms. DeAngelo recommends a common equity cost rate of 8.82%, based on her DCF model result of 8.82%.

**Q. DO YOU HAVE CONCERNS WITH MS. DEANGELO'S CONCLUSIONS AND RESULTS?**

A. Yes, I do. I am concerned with the following: (1) her exclusive reliance on her DCF model results to arrive at her unadjusted ROE; (2) her application of the CAPM; (3) her failure to consider the Companies' small size relative to the proxy groups; and (4) her failure to consider a performance factor adjustment based on exemplary performance. Because I discuss (1) and (4) in response to the I&E ROE Witnesses, I will not repeat that discussion here.

**A. APPLICATION OF THE CAPM**

**Q. PLEASE SUMMARIZE MS. DEANGELO'S APPLICATION OF THE CAPM.**

A. Ms. DeAngelo used a three-month average yield on a 30-year Treasury bond as her risk-free rate, betas from *Value Line*, and an expected risk premium from Schwab as her market risk premium to calculate indicated CAPM cost rates of 8.54% (Valley) and 8.66% (Citizens'). Ms. DeAngelo did not apply the ECAPM in her analysis.<sup>73</sup>

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<sup>72</sup> DeAngelo Direct Testimony, at 4-5.

<sup>73</sup> DeAngelo Direct Testimony, at 9-11.



**Q. DO YOU HAVE ANY GENERAL COMMENTS REGARDING MS. DEANGELO'S APPLICATION OF THE CAPM AND HER INDICATED RESULTS?**

A. Yes, I do. Notwithstanding her decision not to apply an ECAPM, I also take issue with (1) the use of a current, instead of an expectational risk-free rate; and (2) the use of a market risk premium from Schwab.

**Q. WHY SHOULD ONE USE PROJECTED MEASURES WHEN DETERMINING THE COST OF COMMON EQUITY?**

A. One should use projected measures when measuring the cost of common equity because it, as well as ratemaking, is expectational in that it reflects investors' expectations of future capital markets, including an expectation of interest rate levels, as well as future risks. Ratemaking is prospective in that the rates set in this proceeding will be in effect for a period in the future. Even though Ms. DeAngelo exclusively relies on projected growth rates in her DCF analyses,<sup>74</sup> she fails to apply that logic to selecting an appropriate interest rate in her CAPM.

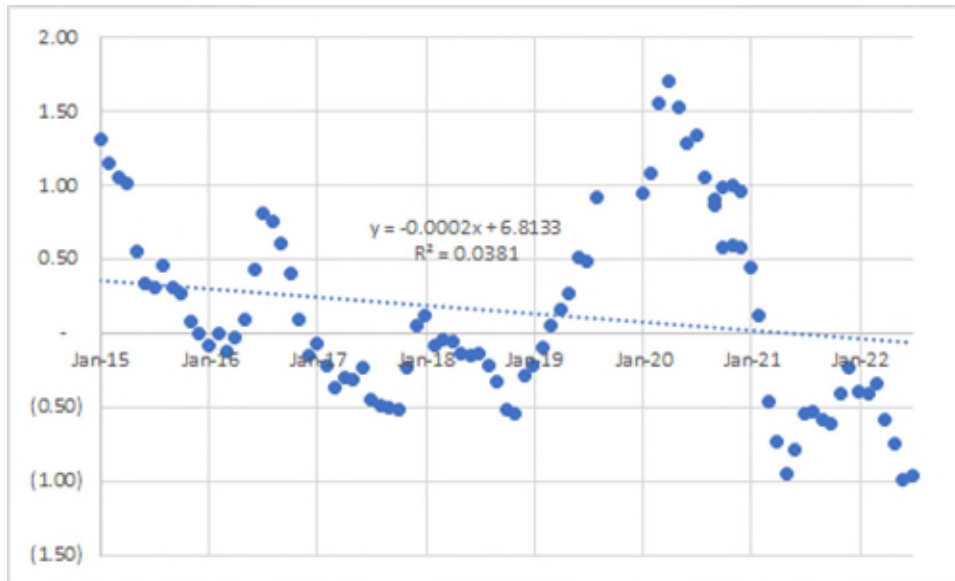
**Q. ARE CURRENT INTEREST RATES PROVEN TO BE A BETTER PREDICTOR OF FUTURE INTEREST RATES?**

A. No, they are not. In Chart 5 (below) I compare actual monthly yields to the three-month yield average from 12 months prior. This chart demonstrates that current Treasury yields have not been accurate predictors of future yields. Those results make intuitive sense. With the recent market turbulence, Treasury yields have varied significantly. As interest rates decreased, historical Treasury yields over-projected current yields, and vice versa.

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<sup>74</sup> DeAngelo Direct Testimony, at 6.

**Chart 5: Forecast Error of Three-Month Average Treasury Yields<sup>75</sup>**



**Q. PLEASE COMMENT ON THE MARKET RISK PREMIUM ESTIMATES FROM SCHWAB AND VANGUARD PRESENTED BY MS. DEANGELO.**

A. First, the use of expected returns from investment houses is not appropriate for cost of capital purposes, and second, the recommendations from Schwab and Vanguard contain several noticeable disclosures that should have given Ms. DeAngelo cause for concern.

**Q. WHY IS THE USE OF EXPECTED RETURNS FROM INVESTMENT HOUSE NOT APPROPRIATE?**

A. Expected returns from pension funds or investment houses are not the same as the return on common equity (otherwise known as required returns). Expected returns from pension funds or investment houses are expecting what the particular utility's earned return will be, not what investors require that return to be. Because utilities do not earn their authorized returns, investor expected returns are less than investor-required returns. For example, a benefit plan asset manager will match the expected returns available from various asset

<sup>75</sup> Source: Federal Reserve Schedule H.15.

classes to the expected liabilities that must be funded. An investor seeking to maximize their risk-adjusted return will only invest in a security if the **expected return** is equal to or greater than the **required return**. Because expected returns may or may not equal required returns, we should not assume pension funding assumptions (that is, expected returns) may be viewed as a measure of investors' required returns.

Benefit plan managers develop asset allocation and investment decisions based on expected risks and returns for various asset classes, and are subject to the investment objective or expected timing and nature of the liabilities being funded by those investments. In the U.S., they must consider: (1) the diversification of the portfolio; (2) the liquidity and current return of the portfolio relative to the expected cash flow requirements under the plan; (3) the portfolio's projected return relative to the plan's funding objective; and (4) the return expected on alternative investments with similar risks.<sup>76</sup> Pension asset managers, therefore, are concerned with investing funds at an expected return to meet expected liabilities.

**Q. IS THE USE OF EXPECTED RETURNS FROM INVESTMENT HOUSES OR PENSION FUNDS FOR COST OF CAPITAL PURPOSES TAUGHT IN THE FINANCIAL LITERATURE?**

A. No. To determine whether the use of broad market expected returns for the purposes of pension asset management also is an approach recommended by finance texts, I reviewed articles published in financial journals, as well as additional texts that speak to the methods used by analysts to estimate the cost of equity. An article published in Financial Analysts Journal surveyed financial analysts to determine the analytical techniques that are used in

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<sup>76</sup> 29 CFR 2509.908-1, *Interpretive Bulletin Relating to Investing in Economically Targeted Investments*, October 17, 2008.

practice.<sup>77</sup> Regarding stock price valuation and cost of capital estimation, the author asked respondents to comment only on the DCF, CAPM, and Economic Value-Added models. Nowhere in that article did the author consider asking whether surveys of expected returns or pension fund assumptions are relevant to the determination of the ROE, the subject of this proceeding.

**Q. WHAT DISCLOSURES DO SCHWAB AND VANGUARD MENTION IN REGARD TO ITS EXPECTED MARKET RETURNS?**

A. Most importantly, Schwab notes the following:

The information provided here is for general informational purposes only and should not be considered an individualized recommendation or personalized investment advice. Data here are obtained from what are considered reliable sources; its accuracy, completeness or reliability, however, cannot be guaranteed.

All expressions of opinion are subject to change without notice in reaction to shifting market or other conditions. Data contained herein from third-party providers is obtained from what are considered reliable sources. However, its accuracy, completeness or reliability cannot be guaranteed.<sup>78</sup>

Vanguard notes in describing its approach:

The model generates a large set of simulated outcomes for each asset class over several time horizons. Forecasts are obtained by computing measures of central tendency in these simulations. **Results produced by the tool will vary with each use and over time.** (emphasis added)<sup>79</sup>

Given the disclosures noted above, any weight placed on the recommendations from Schwab and Vanguard should be considered ill-advised and disregarded by the Commission.

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<sup>77</sup> Stanley B. Block, "A Study of Financial Analysts: Practice and Theory", *Financial Analysts Journal*, July/August, 1999.

<sup>78</sup> <https://www.schwab.com/learn/story/schwabs-long-term-capital-market-expectations>.

<sup>79</sup> <https://advisors.vanguard.com/insights/article/series/vanguardeconomicandmarketoutlook#next-steps>

**Q. PLEASE BRIEFLY SUMMARIZE MS. DEANGELO'S ESTIMATED MRP USING DATA FROM DUFF & PHELPS.**

A. Ms. DeAngelo calculates a MRP estimate of 5.54% using the geometric mean of yearly returns on the S&P 500 and 30-year Treasury bonds based on data from Duff & Phelps for the period 1977-2021.

**Q. DO YOU HAVE ANY ISSUES WITH MS. DEANGELO'S APPROACH USING DATA FROM DUFF & PHELPS?**

A. Yes, I do. First, the use of geometric returns is not appropriate for cost of capital purposes. Second, I take issue with Ms. DeAngelo's arbitrary use of the 1977-2021 timeframe.

**Q. WHY IS THE GEOMETRIC MEAN NOT APPROPRIATE FOR COST OF CAPITAL PURPOSES?**

A. Only arithmetic mean return rates, ERPs, and yields are appropriate for cost of capital purposes because ex-post (historical) total returns and ERPs differ in size and direction over time, indicating volatility, i.e., variance or risk. The arithmetic mean captures the prospect for variance in returns and ERPs, providing the valuable insight needed by investors in estimating risk in the future when making a current investment. Absent such valuable insight into the potential variance of returns, investors cannot meaningfully evaluate prospective risk. The geometric mean of ex-post ERPs provides no insight into the potential variance of future returns, because the geometric mean relates the change over many time periods to a constant rate of change, rather than the year-to-year fluctuations, or variance, critical to risk analysis. Therefore, the geometric mean is of little to no value to investors seeking to measure risk. Moreover, from a statistical perspective, since stock returns and ERPs are randomly generated, the arithmetic mean is expectational and consistent with the prospective nature of the cost of capital and ratemaking noted above.

The financial literature is quite clear that risk is measured by the variability of expected returns, i.e., the probability distribution of returns.<sup>80</sup> Kroll 2022 SBBI® Yearbook Stocks, Bonds, Bills, and Inflation (“SBBI – 2022”)<sup>81</sup> explains in detail why the arithmetic mean is the correct mean to use when estimating the cost of capital.

In addition, Weston and Brigham provide the standard financial textbook definition of the riskiness of an asset when they state:

The riskiness of an asset is defined in terms of the likely variability of future returns from the asset. (emphasis added)<sup>82</sup>

Furthermore, Morin states:

The geometric mean answers the question of what constant return you would have had to achieve in each year to have your investment growth match the return achieved by the stock market. The arithmetic mean answers the question of what growth rate is the best estimate of the future amount of money that will be produced by continually reinvesting in the stock market. It is the rate of return which, compounded over multiple periods, gives the mean of the probability distribution of ending wealth. (emphasis added)<sup>83</sup>

In addition, Brealey and Myers note:

The proper uses of arithmetic and compound rates of return from past investments are often misunderstood... Thus the arithmetic average of the returns correctly measures the opportunity cost of capital for investments... Moral: If the cost of capital is estimated from historical returns or risk premiums, use arithmetic averages, not compound annual rates of return. (italics in original)<sup>84</sup>

As previously discussed, investors gain insight into relative riskiness by analyzing expected future variability. This is accomplished using the arithmetic mean of a random

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<sup>80</sup> Eugene F. Brigham, Fundamentals of Financial Management, (The Dryden Press, 1989), at 639.

<sup>81</sup> SBBI – 2022, at 201.

<sup>82</sup> J. Fred Weston and Eugene F. Brigham, Essentials of Managerial Finance, 3rd Edition (The Dryden Press, 1974), at 272.

<sup>83</sup> Morin, at 151.

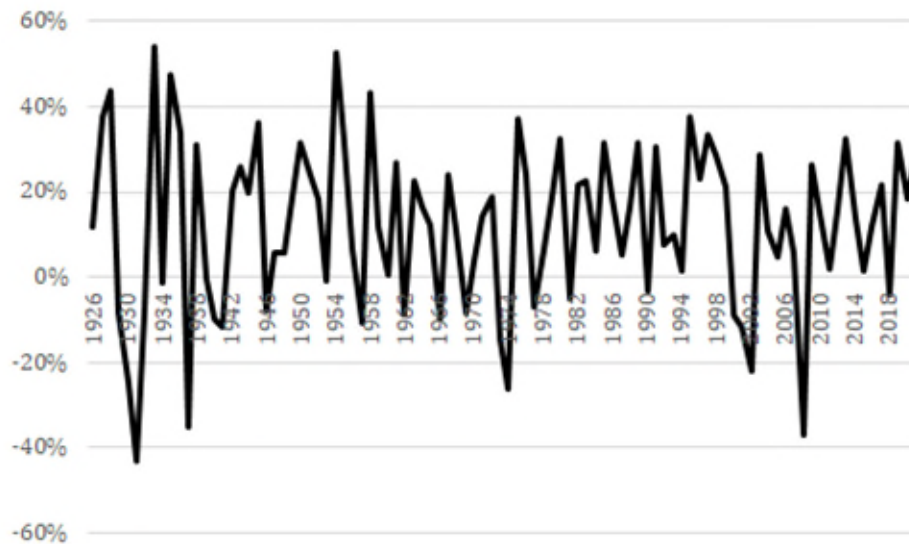
<sup>84</sup> Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance, 5th Ed. (McGraw-Hill Publications, Inc., 1996), at 146 – 147.

distribution of returns/premiums. Only the arithmetic mean considers all the returns/premiums over a period of time, hence, providing meaningful insight into the variance and standard deviation of those returns/premiums.

**Q. CAN IT BE DEMONSTRATED THAT THE ARITHMETIC MEAN TAKES INTO ACCOUNT ALL OF THE RETURNS AND, THEREFORE, IS THE ONLY APPROPRIATE MEAN TO USE WHEN ESTIMATING THE COST OF CAPITAL?**

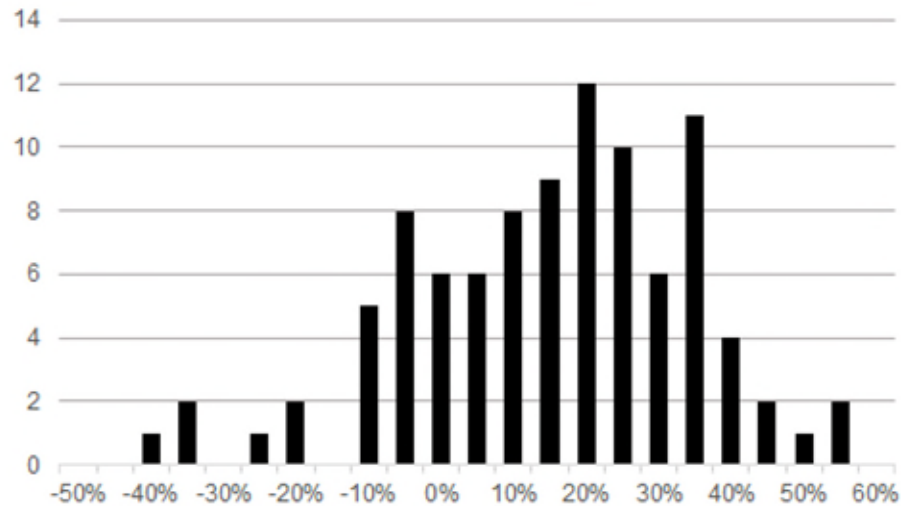
A. Yes. Pages 1 and 2 of Schedule DWD-6R graphically demonstrate this. Page 1 charts the SBBI-2022 returns on large company stocks for each and every year from 1926 through 2021. It is clear from looking at the year-to-year variation of these returns that stock market returns and, hence, MRPs vary (see Chart 6, below)

**Chart 6: U.S. Large Company Stock Returns 1926-2021<sup>85</sup>**



The distribution of each of those returns for the period from 1926 through 2021 is shown on page 2 of Schedule DWD-6R and Chart 7, below.

<sup>85</sup> SBBI-2022 at Appendix A-1.

**Chart 7: Frequency Distribution of Observed Market Returns, 1926 - 2021<sup>86</sup>**

There is a clear bell-shaped pattern to the probability distribution of returns, an indication that they are randomly generated and not serially correlated. The arithmetic mean of this distribution of returns considers each and every return in the distribution. In doing so, the arithmetic mean takes into account the standard deviation or likely variance which may be experienced in the future when estimating the rate of return based on such historical returns.

In contrast, the geometric mean considers only two of the returns, the initial and terminal years, which, in this case, are 1926 and 2021. Based on only those two years, a constant rate of return is calculated by the geometric average. That constant return is graphically represented by a flat line, showing no year-to-year variation, for the entire 1926 to 2021 time period. This is obviously unrealistic, based on the histogram shown in Chart 7 above. In view of the foregoing, Ms. DeAngelo should have exclusively relied on the



long-term arithmetic average return on the market, dating back to 1926, not 1977, in calculating her historical risk premium using SBBI-2022 data.

**Q. WHY IS IT INAPPROPRIATE TO ONLY USE DATA DATING BACK TO 1977?**

A. Using a subset of data inherently presents several issues. As noted by Kroll:

The estimate of the equity risk premium depends on the length of the data series studied. A proper estimate of the equity risk premium requires a data series long enough to give a reliable average without being unduly influenced by very good and very poor short-term returns. When calculated using a long data series, the historical equity risk premium is relatively stable. Furthermore, because an average of the realized equity risk premium, is quite volatile when calculated using a short history, using a long series makes it less likely that the analyst can justify any number he or she wants.

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Without an appreciation of the 1920s and 1930s, no one would believe that such events could happen. The 95-year period starting with 1926 represents what can happen: It includes high and low returns, volatile and quiet markets, war and peace, inflation and deflation, and prosperity and depression. Restricting attention to a shorter historical period underestimates the amount of change that could occur in a long future period. Finally, because historical event-types (not specific events) tend to repeat themselves, long-run capital market return studies can reveal a great deal about the future. Investors probably expect unusual events to occur from time to time, and their return expectations reflect this.<sup>87</sup>

Given the academic literature above, no valid conclusion of the MRP can be drawn from the 1977-2021 period.

**Q. HAVE YOU CORRECTED MS. DEANGELO'S CAPM TO INCLUDE PROJECTED INTEREST RATES AND A RELIABLE MRP ESTIMATE, AND APPLIED THE ECAPM?**

A. Yes, I have. Using the projected interest rate from *Blue Chip* for the six quarters ending with the fourth quarter 2023 and the periods 2024-2028 (3.74%), the historical MRP from

<sup>87</sup>

Kroll 2022, SBBI® Yearbook Stocks, Bonds, Bills, and Inflation, at 201 - 202.

Kroll (7.40%)<sup>88</sup>, and the betas provided in Schedules MND-7, MND-8, results in average CAPM estimates of 10.06% for Valley and 10.28% for Citizens', as shown on Schedule DWD-7R, page 5. While I do not consider the use of a single estimate of the MRP to be practical or acceptable, the results noted above illustrate the extent to which Ms. DeAngelo's CAPM analysis as presented was mis-stating the ROEs for the Companies.

**B. FAILURE TO REFLECT THE COMPANIES' GREATER RELATIVE RISK DUE TO THEIR SMALL SIZE**

**Q. DID MS. DEANGELO ADDRESS THE ISSUE OF A SIZE PREMIUM IN HER TESTIMONY?**

A. Yes. Ms. DeAngelo does not include a size premium in her recommendation, but she does point to a study by Banz, which notes that since 1983, small-capitalization stocks have underperformed large-capitalization stocks.<sup>89</sup>

**Q. PLEASE RESPOND.**

A. The issue with Ms. DeAngelo's position is that the size premium measures the increased risk associated with a company's smaller size; Ms. DeAngelo is only focused on returns. As I discussed in my Direct Testimony, smaller companies face increased business risk as they are less equipped to cope with significant events that affect sales, revenues, and earnings, as the loss of a few larger customers will have a greater effect on a smaller company than a larger company.<sup>90</sup>

This is further evident when we consider that increasing capital costs (i.e., risk) for one set of securities will put downward pressure on those securities as investors transition

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<sup>88</sup> SBBI-2022, at 145. Represents Arithmetic Mean Total Return on Large-Cap Stocks (12.30%) minus the Arithmetic Mean Income-Only Return on Long-Term Government Bonds (4.90%);  $12.30\% - 4.90\% = 7.40\%$ .

<sup>89</sup> DeAngelo Direct Testimony, at 12.

<sup>90</sup> D'Ascendis Direct Testimony, at 51.

to securities with lower risk. Under this premise, the underperformance is directly tied to the increase in risk. As such, Ms. DeAngelo's premise that smaller companies' underperformance indicates a reduction of risk is in fact the opposite – underperformance indicates an increasing level of risk.

**Q. DO THE DISCLOSURES BY SCHWAB DISCUSS THE RISKS RELATIVE TO SMALL-CAPITALIZATION STOCKS?**

A. Yes, they do. Specifically, Schwab notes, "Small-cap stocks (or securities or investments) are subject to greater volatility than those in other asset categories."<sup>91</sup>

**IV. CONCLUSION**

**Q. WHAT IS YOUR RECOMMENDED ROE FOR VALLEY AND FOR CITIZENS'?**

A. Given the discussion above and the results from the analyses, I recommend that ROEs of 11.50% for Valley and 11.50% for Citizens' are appropriate at this time.

**Q. IN YOUR OPINION, IS YOUR PROPOSED ROE OF 11.50% FAIR AND REASONABLE FOR VALLEY AND ITS CUSTOMERS?**

A. Yes, it is.

**Q. IN YOUR OPINION, IS YOUR PROPOSED ROE OF 11.50% FAIR AND REASONABLE FOR CITIZENS' AND ITS CUSTOMERS?**

A. Yes, it is.

**Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

A. Yes, it does.

---

<sup>91</sup> <https://www.schwab.com/learn/story/schwabs-long-term-capital-market-expectations>.

**BEFORE THE**

**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket Nos. R-2022-3032369</b>
	:	<b>R-2022-3032300</b>
<b>Citizens' Electric Company of Lewisburg, PA</b>	:	
<b>and Valley Energy Company</b>	:	

**EXHIBITS**

**OF**

**DYLAN W. D'ASCENDIS, CRRA, CVA**

**ON BEHALF OF**

**CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA**  
**AND**  
**VALLEY ENERGY, INC.**

**AUGUST 16, 2022**

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
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Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Demonstration of the Inadequacy of  
a DCF Return Rate Related to Book Value  
When Market Value is Greater than Book Value

		[A]	[B]
<u>Line No.</u>		Based on Mr. Keller's Proxy Group	
		Market Value	Book Value
1.	Per Share	\$ 78.80 (1)	\$ 39.62 (2)
2.	DCF Cost Rate (3)	9.70%	9.70%
3.	Return in Dollars (4)	\$ 7.644	\$ 3.843
4.	Dividends (5)	\$ 2.459	\$ 2.459
5.	Growth in Dollars (6)	\$ 5.185	\$ 1.384
6.	Return on Market Value (7)	9.70%	4.88%
7.	Rate of Growth on Market Value (8)	6.58%	1.76%

Notes:

- (1) Average of market prices for Mr. Keller's proxy group
- (2) Average book value calculated by dividing total common equity at year-end 2021 by common shares outstanding at year-end 2021 for each proxy group company.
- (3) Recommended DCF cost rate for Mr. Keller.
- (4) Line 1 \* Line 2.
- (5) Dividends are based on Mr. Keller's reported dividend yields.
- (6) Line 3 - Line 4.
- (7) Line 3 / Line 1.
- (8) Line 5 / Line 1.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Demonstration of the Inadequacy of  
a DCF Return Rate Related to Book Value  
When Market Value is Greater than Book Value

Line No.	[A]	[B]
	Based on Mr. Spadaccio's Proxy Group	
	Market Value	Book Value
1. Per Share	\$ 87.35 (1)	\$ 39.25 (2)
2. DCF Cost Rate (3)	8.98%	8.98%
3. Return in Dollars (4)	\$ 7.844	\$ 3.525
4. Dividends (5)	\$ 2.865	\$ 2.865
5. Growth in Dollars (6)	\$ 4.979	\$ 0.660
6. Return on Market Value (7)	8.98%	4.04%
7. Rate of Growth on Market Value (8)	5.70%	0.76%

Notes:

- (1) Average of market prices for Mr. Spadaccio's proxy group
- (2) Average book value calculated by dividing total common equity at year-end 2021 by common shares outstanding at year-end 2021 for each proxy group company.
- (3) Recommended DCF cost rate for Mr. Spadaccio.
- (4) Line 1 \* Line 2.
- (5) Dividends are based on Mr. Spadaccio's reported dividend yields.
- (6) Line 3 - Line 4.
- (7) Line 3 / Line 1.
- (8) Line 5 / Line 1.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Demonstration of the Inadequacy of  
a DCF Return Rate Related to Book Value  
When Market Value is Greater than Book Value

<u>Line No.</u>		[A]	[B]
		Based on Ms. DeAngelo's Gas Proxy Group	
		<u>Market Value</u>	<u>Book Value</u>
1.	Per Share	\$ 67.05 (1)	\$ 35.11 (2)
2.	DCF Cost Rate (3)	9.50%	9.50%
3.	Return in Dollars (4)	\$ 6.370	\$ 3.336
4.	Dividends (5)	\$ 2.119	\$ 2.119
5.	Growth in Dollars (6)	\$ 4.251	\$ 1.217
6.	Return on Market Value (7)	9.50%	4.98%
7.	Rate of Growth on Market Value (8)	6.34%	1.81%

Notes:

- (1) Average of market prices for Ms. DeAngelo's proxy group
- (2) Average book value calculated by dividing total common equity at year-end 2021 by common shares outstanding at year-end 2021 for each proxy group company.
- (3) Recommended DCF cost rate for Ms. DeAngelo for Valley Energy Inc.
- (4) Line 1 \* Line 2.
- (5) Dividends are based on Ms. DeAngelo's reported dividend yields.
- (6) Line 3 - Line 4.
- (7) Line 3 / Line 1.
- (8) Line 5 / Line 1.



Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Demonstration of the Inadequacy of  
a DCF Return Rate Related to Book Value  
When Market Value is Greater than Book Value

<u>Line No.</u>		[A]	[B]
		Based on Ms. DeAngelo's Electric Proxy Group	
		<u>Market Value</u>	<u>Book Value</u>
1.	Per Share	\$ 79.00 (1)	\$ 38.73 (2)
2.	DCF Cost Rate (3)	8.82%	8.82%
3.	Return in Dollars (4)	\$ 6.968	\$ 3.416
4.	Dividends (5)	\$ 2.662	\$ 2.662
5.	Growth in Dollars (6)	\$ 4.306	\$ 0.754
6.	Return on Market Value (7)	8.82%	4.32%
7.	Rate of Growth on Market Value (8)	5.45%	0.95%

Notes:

- (1) Average of market prices for Ms. DeAngelo's proxy group
- (2) Average book value calculated by dividing total common equity at year-end 2021 by common shares outstanding at year-end 2021 for each proxy group company.
- (3) Recommended DCF cost rate for Ms. DeAngelo for Citizens' Electric Company of Lewisburg, PA.
- (4) Line 1 \* Line 2.
- (5) Dividends are based on Ms. DeAngelo's reported dividend yields.
- (6) Line 3 - Line 4.
- (7) Line 3 / Line 1.
- (8) Line 5 / Line 1.

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Calculation of Indicated DCF Applied to Book Value Capital Structure  
of Mr. Keller's Proxy Group

Un-lever Indicated Market Capital Structure DCF

Ku	=	Ke	-	((	Ku	-	i	)	1	-	t	)	D	/	E	)	-	(	Ku	-	d	)	P	/	E
Ku	=	9.70%	-	((	Ku	-	3.58%	)	1	-	21%	)	41.32%	/	56.95%	)	-	(	Ku	-	6.01%	)	1.73%	/	56.95%
Ku	=	9.70%	-	((	Ku	-	3.58%	)	79.00%	)	)	72.55%	)	-	(	Ku	-	6.01%	)	3.04%	)				
Ku	=	9.70%	-	((	79.00%	*	Ku	-	2.8244%	)	)	72.55%	)	-	(	3.04%	*	Ku	-	0.18%	)				
Ku	=	9.70%	-	(	57.32%	*	Ku	-	2.05%	)	)	-3.04%	*	Ku	+	0.18%									
Ku	=	9.70%	-	(	-57.32%	*	Ku	+	2.05%	)	)	-3.04%	*	Ku	+	0.18%									
Ku	=	11.93%	-	(	-60.36%	*	Ku			)															
160.36%	*	Ku	=		11.93%																				
		Ku	=		<b>7.44%</b>																				

Re-lever to Indicated Book Value Capital Structure DCF

Ke	=	Ku	+	((	Ku	-	i	)	1	-	t	)	D	/	E	)	+	(	Ku	-	d	)	P	/	E
Ke	=	7.44%	+	((	7.44%	-	3.58%	)	1	-	21%	)	52.39%	/	45.30%	)	+	(	7.44%	-	6.01%	)	2.31%	/	45.30%
Ke	=	7.44%	+	((	3.87%	)	79%	)	115.65%	)	+	(	1.43%	)	5.09%										
Ke	=	7.44%	+	((	3.05%	)	115.65%	)	+	(	0.07%	)													
Ke	=	7.44%	+	(	3.53%	)	+	0.07%																	
		Ke	=		<b>11.05%</b>																				

Where:

- Ku = Un-levered (i.e., 100% equity) cost of common equity
- Ke = Market determined cost of common equity
- i = Cost of debt
- t = Income tax rate
- D = Debt ratio
- E = Equity ratio
- d = Cost of preferred stock
- P = Preferred equity ratio

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Calculation of Indicated DCF Applied to Book Value Capital Structure  
of Mr. Spadaccio's Proxy Group

Un-lever Indicated Market Capital Structure DCF

Ku	=	Ke	-	((	Ku	-	i	)	1	-	t	)	D	/	E	)	-	(	Ku	-	d	)	P	/	E
Ku	=	8.98%	-	((	Ku	-	3.85%	)	1	-	21%	)	42.64%	/	56.99%	)	-	(	Ku	-	4.61%	)	0.37%	/	56.99%
Ku	=	8.98%	-	((	Ku	-	3.85%	)	79.00%	)	)	74.82%	)	-	(	Ku	-	4.61%	)	0.65%					
Ku	=	8.98%	-	((	79.00%	*	Ku	-	3.0443%	)	)	74.82%	)	-	(	0.65%	*	Ku	-	0.03%	)				
Ku	=	8.98%	-	(	59.11%	*	Ku	-	2.28%	)	)	-0.65%	*	Ku	+	0.03%									
Ku	=	8.98%	-	(	-59.11%	*	Ku	+	2.28%	)	)	-0.65%	*	Ku	+	0.03%									
Ku	=	11.29%			-59.76%	*	Ku																		
159.76%	*	Ku	=		11.29%																				
		Ku	=		<b>7.07%</b>																				

Re-lever to Indicated Book Value Capital Structure DCF

Ke	=	Ku	+	((	Ku	-	i	)	1	-	t	)	D	/	E	)	+	(	Ku	-	d	)	P	/	E
Ke	=	7.07%	+	((	7.07%	-	3.85%	)	1	-	21%	)	58.19%	/	41.24%	)	+	(	7.07%	-	4.61%	)	0.57%	/	41.24%
Ke	=	7.07%	+	((	3.21%	)	79%	)	141.10%	)	+	(	2.45%	)	1.38%										
Ke	=	7.07%	+	((	2.54%	)	141.10%	)	+	(	0.03%	)													
Ke	=	7.07%	+	(	3.58%	)	+	0.03%																	
		Ke	=		<b>10.68%</b>																				

Where:

- Ku = Un-levered (i.e., 100% equity) cost of common equity
- Ke = Market determined cost of common equity
- i = Cost of debt
- t = Income tax rate
- D = Debt ratio
- E = Equity ratio
- d = Cost of preferred stock
- P = Preferred equity ratio

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
Calculation of Indicated DCF Applied to Book Value Capital Structure  
of Ms. DeAngelo's Gas Proxy Group

Un-lever Indicated Market Capital Structure DCF

Ku	=	Ke	-	((	Ku	-	i	)	1	-	t	)	D	/	E	)	-	(	Ku	-	d	)	P	/	E
Ku	=	9.50%	-	((	Ku	-	3.58%	)	1	-	21%	)	44.30%	/	53.97%	)	-	(	Ku	-	6.01%	)	1.73%	/	53.97%
Ku	=	9.50%	-	((	Ku	-	3.58%	)	79.00%	)	82.08%	)	-	(	Ku	-	6.01%	)	3.21%						
Ku	=	9.50%	-	((	79.00%	*	Ku	-	2.8286%	)	82.08%	)	-	(	3.21%	*	Ku	-	0.19%	)					
Ku	=	9.50%	-	(	64.85%	*	Ku	-	2.32%	)	-3.21%	*	Ku	+	0.19%										
Ku	=	9.50%	-	(	-64.85%	*	Ku	+	2.32%	)	-3.21%	*	Ku	+	0.19%										
Ku	=	12.01%			-68.05%	*	Ku																		
168.05%	*	Ku	=		12.01%																				
		Ku	=		<b>7.15%</b>																				

Re-lever to Indicated Book Value Capital Structure DCF

Ke	=	Ku	+	((	Ku	-	i	)	1	-	t	)	D	/	E	)	+	(	Ku	-	d	)	P	/	E
Ke	=	7.15%	+	((	7.15%	-	3.58%	)	1	-	21%	)	54.97%	/	42.73%	)	+	(	7.15%	-	6.01%	)	2.31%	/	42.73%
Ke	=	7.15%	+	((	3.57%	)	79%	)	128.66%	)	+	(	1.14%	)	5.40%										
Ke	=	7.15%	+	((	2.82%	)	128.66%	)	+	(	0.06%	)													
Ke	=	7.15%	+	(	3.63%	)	+	0.06%																	
		Ke	=		<b>10.84%</b>																				

Where:

- Ku = Un-levered (i.e., 100% equity) cost of common equity
- Ke = Market determined cost of common equity
- i = Cost of debt
- t = Income tax rate
- D = Debt ratio
- E = Equity ratio
- d = Cost of preferred stock
- P = Preferred equity ratio

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
 Calculation of Indicated DCF Applied to Book Value Capital Structure  
 of Ms. DeAngelo's Electric Proxy Group

Un-lever Indicated Market Capital Structure DCF

$$\begin{aligned}
 Ku &= Ke - ((( Ku - i ) 1 - t ) D / E ) - ( Ku - d ) P / E \\
 Ku &= 8.82\% - ((( Ku - 3.75\% ) 1 - 21\% ) 42.52\% / 57.04\% ) - ( Ku - 5.13\% ) 0.44\% / 57.04\% \\
 Ku &= 8.82\% - ((( Ku - 3.75\% ) 79.00\% ) 74.54\% ) - ( Ku - 5.13\% ) 0.77\% \\
 Ku &= 8.82\% - ( ( 79.00\% * Ku - 2.9588\% ) 74.54\% ) - ( 0.77\% * Ku - 0.04\% ) \\
 Ku &= 8.82\% - ( 58.89\% * Ku - 2.21\% ) -0.77\% * Ku + 0.04\% \\
 Ku &= 8.82\% -58.89\% * Ku + 2.21\% -0.77\% * Ku + 0.04\% \\
 Ku &= 11.07\% -59.66\% * Ku \\
 159.66\% * Ku &= 11.07\% \\
 Ku &= 6.93\%
 \end{aligned}$$

Re-lever to Indicated Book Value Capital Structure DCF

$$\begin{aligned}
 Ke &= Ku + ((( Ku - i ) 1 - t ) D / E ) + ( Ku - d ) P / E \\
 Ke &= 6.93\% + ((( Ku - 3.75\% ) 1 - 21\% ) 56.38\% / 43.01\% ) + ( 6.93\% - 5.13\% ) 0.61\% / 43.01\% \\
 Ke &= 6.93\% + ((( Ku - 3.19\% ) 79\% ) 131.09\% ) + ( 1.80\% ) 1.42\% \\
 Ke &= 6.93\% + ( ( 2.52\% ) 131.09\% ) + ( 0.03\% ) \\
 Ke &= 6.93\% + ( 3.30\% ) + 0.03\% \\
 Ke &= 10.25\%
 \end{aligned}$$

Where:

- Ku = Un-levered (i.e., 100% equity) cost of common equity
- Ke = Market determined cost of common equity
- i = Cost of debt
- t = Income tax rate
- D = Debt ratio
- E = Equity ratio
- d = Cost of preferred stock
- P = Preferred equity ratio

Valley Energy, Inc. / Citizens' Electric  
Company of Lewisburg, PA  
I&E Corrected CAPM

<b>Risk-Free Rate</b>	
<b><u>Treasury note 30-yr Note</u></b>	<b><u>Yield</u></b>
3Q 2022	3.10
4Q 2022	3.20
1Q 2023	3.40
2Q 2023	3.50
3Q 2023	3.50
2023-2027	3.40
2028-2032	3.80
<b>Average</b>	<b><u><u>3.41</u></u></b>

**Source:**

Blue Chip

December 1, 2021 and April 29, 2022

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
I&E Corrected CAPM

**Required Rate of Return on Market as a Whole Forecasted (Keller)**

---

	<u>Dividend</u> <u>Yield</u>	+	<u>Growth</u> <u>Rate</u>	=	<u>Expected</u> <u>Market</u> <u>Return</u>
<b>Value Line Estimate</b>	2.10%		14.19%	(a)	16.29%
<b>S&amp;P 500</b>	1.63%	(b)	13.70%		15.33%
<b>Average Expected Market Return</b>				=	<u>15.81%</u>

(a)  $((1+70\%)^{.25}) - 1$  Value Line forecast for the 3 to 5 year index appreciation is 70%

(b) S&P 500 multiplied by half the growth rate

(b)  $1.53\% * ((1+13.70\%/2)) = 1.63\%$

**Sources:**

S&P 500 Growth Rate (Morningstar)	5/19/2022	13.70%
S&P 500 Dividend Yield (Barrons)	5/13/2022	1.53%
Value Line Dividend Yield	5/20/2022	2.10%
Value Line Appreciation Yield	5/20/2022	70%

**Required Rate of Return on Market as a Whole Forecasted (Spadaccio)**

---

	<u>Dividend</u> <u>Yield</u>	+	<u>Growth</u> <u>Rate</u>	=	<u>Expected</u> <u>Market</u> <u>Return</u>
<b>Value Line Estimate</b>	2.00%		12.47%	(a)	14.47%
<b>S&amp;P 500</b>	1.59%	(b)	13.70%		15.29%
<b>Average Expected Market Return</b>				=	<u>14.88%</u>

(a) Value Line forecast for the 3 to 5 year index appreciation is 60%  $((1+60\%)^{.25}) - 1$

(b) S&P 500 dividend yield multiplied by half the S&P 500 growth rate

$1.49\% * ((1+13.70\%/2)) = 1.59\%$

**Sources:**

S&P 500 Growth Rate (Morningstar)	5/10/2022	13.70%
S&P 500 Dividend Yield (Barrons)	5/6/2022	1.49%
Value Line Dividend Yield	5/13/2022	2.00%
Value Line Appreciation Yield	5/13/2022	60.00%

Valley Energy, Inc. / Citizens' Electric Company of  
Lewisburg, PA  
I&E Corrected CAPM

<u>Company (Keller)</u>	<u>Beta</u>
Atmos Energy Corp.	0.80
Chesapeake Utilities Corp.	0.80
NiSource Inc.	0.85
Northwest Natural Holding Co.	0.80
ONE Gas, Inc.	0.80
Spire Inc.	0.85
<b>Average beta for CAPM</b>	<b><u>0.82</u></b>

**Source:**

Value Line  
February 25, 2022

<u>Company (Spadaccio)</u>	<u>Beta</u>
Ameren Corp.	0.80
American Electric Power Company Inc.	0.75
CMS Energy Corp.	0.80
Consolidated Edison Inc.	0.75
Dominion Energy	0.80
Duke Energy Corp.	0.85
Entergy Corp.	0.95
Eversource Energy	0.90
FirstEnergy Corp.	0.80
IDACORP Inc.	0.80
Portland General Electric Company	0.85
Public Service Enterprise Group Inc.	0.90
Xcel Energy Inc.	0.80
<b>Average beta for CAPM</b>	<b><u>0.83</u></b>

**Source:**

Value Line  
3/11/22 - 4/22/22 - 5/13/22



Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
I&E Corrected CAPM

**CAPM with Forecasted Return (Keller)**

---

**Re** Required return on individual equity security  
**Rf** Risk-free rate  
**Rm** Required return on the market as a whole  
**Be** Beta on individual equity security

**Re (CAPM) =**  $Rf + Be(Rm - Rf)$   
**Re (ECAPM) =**  $Rf + Be(Rm - Rf) \times 0.75 + (Rm - Rf) \times 0.25$

<b>Rf =</b>	3.41
<b>Rm =</b>	15.81
<b>Be =</b>	0.82
<b>Re (CAPM) =</b>	<u><u>13.58</u></u>
<b>Re (ECAPM) =</b>	<u><u>14.14</u></u>
<b>Average</b>	<u><u>13.86</u></u>

**Sources:** Value Line February 25, 2022  
 Blue Chip December 1, 2021 and April 29, 2022

**CAPM with Forecasted Return (Spadaccio)**

---

**Re** Required return on individual equity security  
**Rf** Risk-free rate  
**Rm** Required return on the market as a whole  
**Be** Beta on individual equity security

**Re (CAPM) =**  $Rf + Be(Rm - Rf)$   
**Re (ECAPM) =**  $Rf + Be(Rm - Rf) \times 0.75 + (Rm - Rf) \times 0.25$

<b>Rf =</b>	3.41
<b>Rm =</b>	14.88
<b>Be =</b>	0.83
<b>Re (CAPM) =</b>	<u><u>12.93</u></u>
<b>Re (ECAPM) =</b>	<u><u>13.42</u></u>
<b>Average</b>	<u><u>13.17</u></u>

**Sources:** Value Line 3/11/22 - 4/22/22 - 5/13/22  
 Blue Chip December 1, 2021 and April 29, 2022

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# FINANCIAL **Q**UARTERLY

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R · E · V · I · E · W

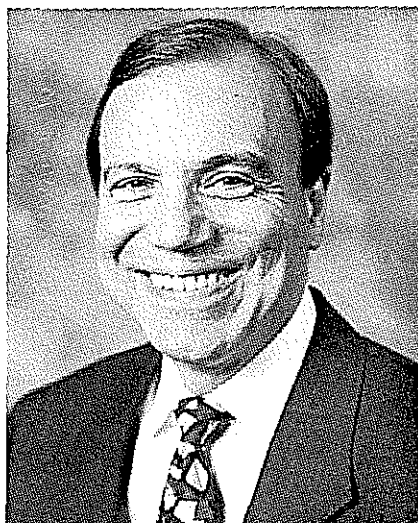
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## **Comparable Earnings: New Life for an Old Precept**

by  
**Frank J. Hanley**  
**Pauline M. Ahern**

# Comparable Earnings: New Life for an Old Precept

**A**ccelerating deregulation has greatly increased the investment risk of natural gas utilities. As a result, the authors believe it more appropriate than ever to employ the comparable earnings model. We believe our application of the model overcomes the greatest traditional objection to it — lack of comparability of the selected non-utility proxy firms. Our illustration focuses on a target gas pipeline company with a beta of 0.96 — almost equal to the market's beta of 1.00.



## Introduction

The comparable earnings model used to determine a common equity cost rate is deeply rooted in the standard of “corresponding risk” enunciated in the landmark *Bluefield* and *Hope* decisions of the U.S. Supreme Court.<sup>1</sup> With such solid grounding in the foundations of rate of return regulation, comparable earnings should be accepted as a principal model, along with the currently popular market-based models, provided that its most common criticism, non-comparability of the proxy companies, is overcome.

Our comparable earnings model overcomes the non-comparability issue of the non-utility firms selected as a proxy for the target utility, in this example, a gas pipeline company. We should note that in the absence of common stock prices for the target utility (as with a wholly-owned subsidiary), it is appropriate to use the average of a proxy group of similar risk gas pipeline companies whose common stocks are actively traded. As we will demonstrate, our selection process results in a group of domestic, non-utility firms that is comparable in total risk, the sum of business and financial risk, which reflects both non-diversifiable systematic, or market, risk as well as diversifiable unsystematic, or firm-specific, risk.

*Frank J. Hanley is president of AUS Consultants — Utility Services Group. He has testified in several hundred rate proceedings on the subject of cost of capital before the Federal Energy Regulatory Commission and 27 state regulatory commissions. Before joining AUS in 1971, he was an assistant treasurer of a number of operating companies in the American Water Works System, as well as a financial planning officer with the Philadelphia National Bank. He is a Certified Rate of Return Analyst.*

*Pauline M. Ahern is a senior financial analyst with AUS Consultants — Utility Services Group. She has participated in many cost-of-capital studies. A former employee of the U.S. Department of the Treasury and the Federal Reserve Bank of Boston, she holds an MBA degree from Rutgers University and is a Certified Rate of Return Analyst.*

## Embedded in the Landmark Decisions

As stated in *Bluefield* in 1922: “A public utility is entitled to such rates as will permit it to earn a return ... on investments in other business undertakings which are attended by corresponding risks and uncertainties ...”

In addition, the court stated in *Hope* in 1944: “By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks.”

Thus, the “corresponding risk” pre-

cept of *Bluefield* and *Hope* predates the use of such market-based cost-of-equity models as the Discounted Cash Flow (DCF) and Capital Asset Pricing (CAPM), which were developed later and are currently popular in rate-base/rate-of-return regulation. Consequently, the comparable earnings model has a longer regulatory and judicial history. However, it has far greater relevance now than ever before in its history because significant deregulation has substantially increased natural gas utilities’ investment risk to a level similar to that of non-utility firms. As a result, it is

## Comparable Earnings from page 4

more important than ever to look to similar-risk non-utility firms for insight into common equity cost rate, especially in view of the deficiencies inherent in the currently popular market-based cost of common equity models, particularly the DCF model.

Despite the fact that the landmark decisions are still regarded as having set the standards for determining a fair rate of return, the comparable earnings model has experienced decreased usage by expert witnesses, as well as less regulatory acceptance over the years. We believe the decline in the popularity of the comparable earnings model, in large measure, is attributable to the difficulty of selecting non-utility proxy firms that regulators will accept as comparable to the target utility. Regulatory acceptance is difficult to gain when the selection process is arbitrary. Our application of the model is objective and consistent with fundamental financial tenets.

### Principles of Comparable Earnings

Regulation is a substitute for the competition of the marketplace. Moreover, regulated public utilities compete in the capital markets with all firms, including unregulated non-utilities. The comparable earnings model is based upon the opportunity cost principle; i.e., that the true cost of an investment is the return that could have been earned on the next best available alternative investment of similar risk. Consequently, the comparable earnings model is consistent with regulatory and financial principles, as it is a surrogate for the competition of the marketplace, and investors seek the greatest available rate of return for bearing similar risk.

The selection of comparable firms is the most difficult step in applying the comparable earnings model, as noted by Phillips<sup>2</sup> as well as by Bonbright, Danielsen and Kamerschen.<sup>3</sup> The selection of non-utility proxy firms should result in a sufficiently broad-based group in order to minimize the effect of company-specific aberrations. How-

ever, if the selection process is arbitrary, it likely would result in a proxy group that is too broad-based, such as the Standard & Poor's 500 Composite Index or the Value Line Industrial Composite. The use of such groups would require subjective adjustments to the comparable earnings results to reflect risk differences between the group(s) and the target utility, a gas pipeline company in this example.

### Authors' Selection Criteria

We base the selection of comparable non-utility firms on market-based, objective, quantitative measures of risk resulting from market prices that subsume investors' assessments of all elements of risk. Thus, our approach is based upon the principle of risk and return; namely, that firms of comparable risk should be expected to earn comparable returns. It is also consistent with the "corresponding risk" standard established in *Bluefield* and *Hope*. We measure total investment risk as the sum of non-diversifiable systematic and diversifiable unsystematic risk. We use the unadjusted beta as a measure of systematic risk and the standard error of the estimate (residual standard error) as a measure of unsystematic risk. Both the unadjusted beta and the residual standard error are derived from a regression of the target utility's security returns relative to the market's returns, which takes the general form:

$$r_{it} = a_i + b_i r_{mt} + e_{it}$$

where:

$r_{it}$  =  $t$ th observation of the  $i$ th utility's rate of return

$r_{mt}$  =  $t$ th observation of the market's rate of return

$e_{it}$  =  $t$ th random error term

$a_i$  = constant least-squares regression coefficient

$b_i$  = least-squares regression slope coefficient, the unadjusted beta.

As shown by Francis,<sup>4</sup> the total variation or risk of a firm's return,  $\text{Var}(r_i)$ , comes from two sources:

$$\text{Var}(r_i) = \text{total risk of } i\text{th asset}$$

$$\begin{aligned} &= \text{var}(a_i + b_i r_m + e) \\ &\quad \text{substituting } (a_i + b_i r_m + e) \\ &\quad \text{for } r_i \\ &= \text{var}(b_i r_m) + \text{var}(e) \text{ since} \\ &\quad \text{var}(a_i) = 0 \\ &= b_i^2 \text{var}(r_m) + \text{var}(e) \\ &\quad \text{since } \text{var}(b_i r_m) = b_i^2 \\ &\quad \text{var}(r_m) \\ &= \text{systematic} + \\ &\quad \text{unsystematic risk} \end{aligned}$$

Francis<sup>5</sup> also notes: "The term  $\sigma^2(r_i|r_m)$  is called the *residual variance around the regression line* in statistical terms or *unsystematic risk* in capital market theory language.  $\sigma^2(r_i|r_m) = \dots = \text{var}(e)$ . The residual variance is the squared standard error in regression language, a measure of unsystematic risk." Application of these criteria results in a group of non-utility firms whose average total investment risk is indeed comparable to that of the target gas pipeline.

As a measure of systematic risk, we use the Value Line unadjusted beta. Beta measures the extent to which market-wide or macro-economic events affect a firm's stock price. We use the unadjusted beta of the target utility as a starting point because it results from the regression of the target utility's security returns relative to the market's returns. Thus, the resulting standard deviation of beta relates to the unadjusted beta. We use the standard deviation of the unadjusted beta to determine the range around it as the selection criterion based on systematic risk.

We use the residual standard error of the regression as a measure of unsystematic risk. The residual standard error reflects the extent to which events specific to the firm's operations affect a firm's stock price. Thus, it is a measure of diversifiable, unsystematic, firm-specific risk.

### An Illustration of Authors' Approach

**Step One:** We begin our approach by establishing the selection criteria as a range of both unadjusted beta and residual standard error of the target gas  
*continued on page 6*

## Comparable Earnings *from page 5*

pipeline company.

As shown in table 1, our target gas pipeline company has a Value Line unadjusted beta of 0.90, whose standard deviation is 0.1250. The selection criterion range of unadjusted beta is the unadjusted beta plus (+) and minus (-) three of its standard deviations. By using three standard deviations, 99.73 percent of the comparable unadjusted betas is captured.

Three standard deviations of the target utility's unadjusted beta equals 0.38 ( $0.1250 \times 3 = 0.3750$ , rounded to 0.38). Consequently, the range of unadjusted betas to be used as a selection criteria is  $0.52 - 1.28$  ( $0.52 = 0.90 - 0.38$ ) and  $1.28 = 0.90 + 0.38$ .

Likewise, the selection criterion range of residual standard error equals the residual standard error plus (+) and

minus (-) three of its standard deviations. The standard deviation of the residual standard error is defined as:  $\sigma/\sqrt{2N}$ .

As also shown in table 1, the target gas pipeline company has a residual standard error of 3.7867. According to the above formula, the standard deviation of the residual standard error would be 0.1664 ( $0.1664 = 3.7867/\sqrt{2(259)} = 3.7867/22.7596$ , where  $259 = N$ , the number of weekly price change observations over a period of five years). Three standard deviations of the target utility's residual standard error would be 0.4992 ( $0.1664 \times 3 = .4992$ ). Consequently, the range of residual standard errors to be used as a selection criterion is  $3.2875 - 4.2859$  ( $3.2875 = 3.7867 - 0.4992$ ) and  $4.2859 = 3.7867 + 0.4992$ .

**Step Two:** The step one criteria are applied to Value Line's data base of nearly 4,000 firms for which Value Line derives unadjusted betas and residual standard errors on a weekly basis. All firms with unadjusted betas and residual standard errors within the criteria ranges are then selected.

**Step Three:** In the regulatory ratemaking environment, authorized common equity return rates are applied to a book-value rate base. Thus, the earnings rates on book common equity, or net worth, of competitive, non-utility firms are highly relevant provided those firms are indeed comparable in total risk to the target gas pipeline. The use of the return rates of other utilities has no relevance because their allowed, and hence subsequently achieved, earnings rates are dependent upon the regulatory

table 1

### Summary of the Comparable Earnings Analysis for the Proxy Group of 248 Non-Utility Companies Comparable in Total Risk to the Target Gas Pipeline Company<sup>1</sup>

	1	2	3	4	5	6	7	8
	adj. beta	unadj. beta	residual standard error	rate of return on net worth				
				3-year average <sup>2</sup>	4-year average <sup>2</sup>	5-year average <sup>2</sup>	5-year projected <sup>3</sup>	
average for the proxy group of 248 non-utility companies comparable in total risk to the target gas pipeline company	0.97	0.92	3.7705					
target gas pipeline company	0.96	0.90 <sup>4</sup>	3.7867					
median				11.7%	12.0%	12.6%	15.5%	
average of the median historical returns					12.1%			
conclusion <sup>5</sup>								13.8%

<sup>1</sup> The criteria for selection of the non-utility group was that the non-utility companies be domestic and included in Value Line Investment Survey. The non-utility group was selected based on an unadjusted beta range of 0.52 to 1.28 and a residual standard error range of 3.2875 to 4.2859.

<sup>2</sup> Ending 1992.

<sup>3</sup> 1996-1998/1997-1999.

<sup>4</sup> The average standard deviation of the target gas pipeline company's unadjusted beta is 0.1250.

<sup>5</sup> Equal weight given to both the average of the 3-, 4- and 5-year historical medians (12.1%) and 5-year projected median rate of return on net worth (15.5%). Thus,  $13.8\% = (12.1\% + 15.5\% / 2)$ .

Source: Value Line Inc., March 15, 1994  
 Value Line Investment Survey

## Comparable Earnings *from page 6*

process. Consequently, we believe all utilities must be eliminated to avoid circularity. Moreover, we believe non-domestic firms must be eliminated because their reporting methods differ significantly from U.S. firms.

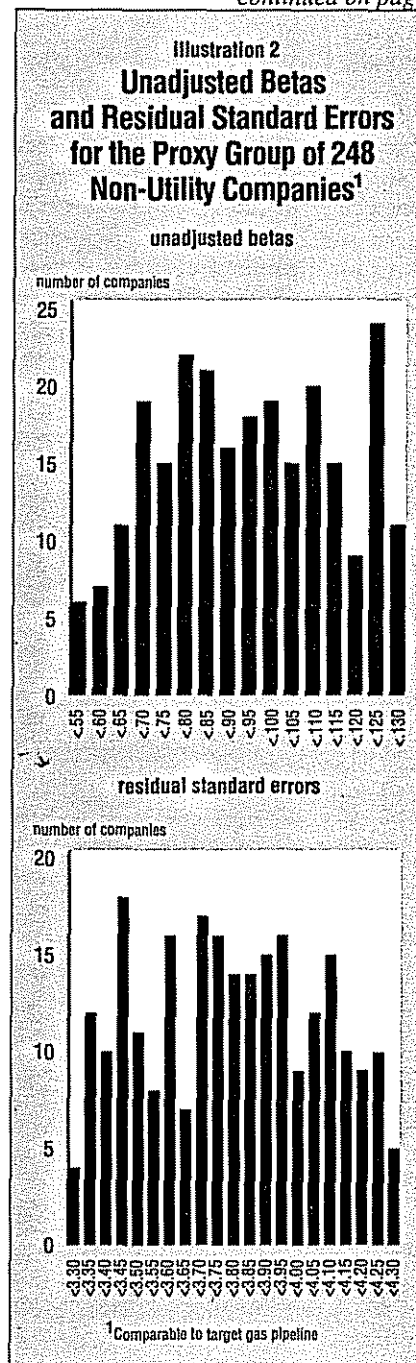
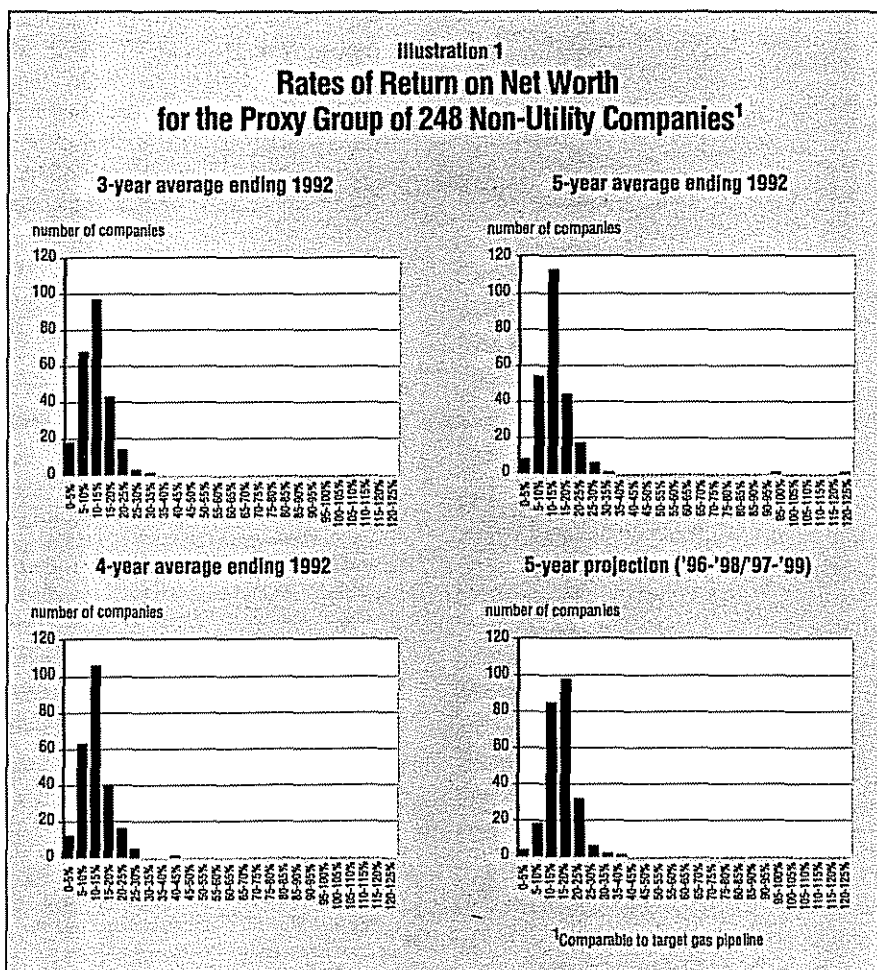
**Step Four:** We then eliminated those firms for which Value Line does not publish a "Ratings & Report" in *Value Line Investment Survey* so that the historical and projected returns on net worth<sup>6</sup> are from a consistent source. We use historical returns on net worth for the most recent five years, as well as those projected three to five years into the future. We believe it is logical to evaluate both historical and projected return rates because it is reasonable to assume that investors avail themselves of both when they are available from widely disseminated information ser-

VICES, such as Value Line Inc. The use of Value Line's return rates on net worth understates the common equity return rates for two reasons. First, preferred stock is included in net worth. Second, the net worth return rates are as of the end of each period. Thus, the use of average common equity return rates would yield higher results.

**Step Five:** Median returns based on the historical average three, four and five years ending 1992 and projected 1996-1998 or 1997-1999 rates of return on net worth are then determined as shown in columns 4 through 7 of table 1. The median is used due to the wide variations and skewness in rates of return on net worth for the non-utility firms as evidenced by the frequency distributions of those returns as shown in illustration 1.

However, we show the average unadjusted beta, 0.92, and residual standard error, 3.7705, for the proxy group in columns 2 and 3 of table 1 because their frequency distributions are not significantly skewed, as shown in illustration 2.

**Step Six:** Our conclusion of a com-  
*continued on page 8*



## Comparable Earnings *from page 7*

comparable earnings cost rate is based upon the mid-point of the average of the median three-, four- and five-year historical rates of return on net worth of 12.1 percent as shown in column 5 and the median projected 1996-1998/1997-1999 rate of return on net worth of 15.5 percent as shown in column 7 of table 1. As shown in column 8, it is 13.8 percent.

### Summary

Our comparable earnings approach demonstrates that it is possible to select a proxy group of non-utility firms that is comparable in total risk to a target utility. In our example, the 13.8 percent comparable earnings cost rate is very conservative as it is an expected achieved rate on book common equity (a regulatory allowed rate should be

greater) and because it is based on end-of-period net worth. A similar rate on average net worth would be about 20 to 40 basis points higher (i.e., 14.0 to 14.2 percent) and still understate the appropriate regulatory allowed rate of return on book common equity.

Our selection criteria are based upon measures of systematic and unsystematic risk, specifically unadjusted beta and residual standard error. They provide the basis for the objective selection of comparable non-utility firms. Our selection criteria rely on changes in market prices over approximately five years. We compare the aggregate total risk, or the sum of systematic and unsystematic risk, which reflects investors' aggregate assessment of both business and financial risk. Thus, no adjustments are necessary to the proxy group results to

compensate for the differences in business risk and financial risk, such as accounting practices and debt/equity ratios. Moreover, it is inappropriate to attempt a comparison of the target utility with any individual firm, or subset of firms, in the proxy group because only the average firm of the group is relevant.

Because the comparable earnings model is firmly anchored in the "corresponding risk" precept established in the landmark court decisions, it is worthy of consideration as a principal model for use in estimating the cost rate of common equity capital of a regulated utility. Our approach to the comparable earnings model produces a proxy group that is indeed comparable in total risk because the selection process is objective and quantitative. It therefore overcomes criticism linked to arbitrary selection processes.

All cost-of-common-equity models, including the DCF and CAPM, are fraught with deficiencies, usually stemming from the many necessary but unrealistic assumptions that underlie them. The effects of the deficiencies of individual models can be mitigated by using more than one model when estimating a utility's common equity cost rate. Therefore, when the non-comparability issue is overcome, the comparable earnings model deserves to receive the same consideration as a primary model, as do the currently popular market-based models. ■

## Report Lists Pipeline, Storage Projects

More than \$9 billion worth of projects to expand the nation's natural gas pipeline network are in various stages of development, according to an A.G.A. report. These projects involve nearly 8,000 miles of new pipelines and capacity additions to existing lines and represent 15.3 billion cubic feet (Bcf) per day of new pipeline capacity.

During 1993 and early 1994, construction on 3,100 miles of pipeline was completed or under way, at a cost of nearly \$4 billion, says A.G.A. These projects are adding 5.4 Bcf in daily delivery capacity nationwide.

Among the projects completed in 1993 were Pacific Gas Transmission Co.'s 805 miles of looping that allows increased deliveries of Canadian gas to the West Coast; Northwest Pipeline Corp.'s addition of 433 million cubic feet of daily capacity for customers in the Pacific Northwest and Rocky Mountain areas; and the 156-mile Empire State Pipeline in New York.

In addition, major construction projects were started on the systems of Texas Eastern Transmission Corp. and Algonquin Gas Transmission Co. — both subsidiaries of Panhandle Eastern Corp. — and along Florida Gas Transmission Co.'s pipeline.

The report goes on to discuss another \$5 billion in proposed projects, which, if completed, will add nearly 5,000 miles of pipeline and 9.8 Bcf per day in capacity, much of it serving Florida and West Coast markets.

A.G.A. also identifies 47 storage projects and says that if all of them are built, existing storage capacity will increase by more than 500 Bcf, or 15 percent.

For a copy of *New Pipeline Construction: Status Report 1993-94* (#F00103), call A.G.A. at (703) 841-8490. Price per copy is \$6 for employees of member companies and associates and \$12 for other customers.

<sup>1</sup>Bluefield Water Works Improvement Co. v. Public Service Commission. 262 U.S. 679 (1922) and Federal Power Commission v. Hope Natural Gas Co. 320 U.S. 519 (1944).

<sup>2</sup>Charles F. Phillips Jr., *The Regulation of Public Utilities: Theory and Practice*, Public Utilities Reports Inc. 1988, p. 379


<sup>3</sup>James C. Bonbright, Albert L. Danielsen and David R. Kamerschen, *Principles of Public Utilities Rates*, 2nd edition, Public Utilities Reports Inc. 1988, p. 329

<sup>4</sup>Jack Clark Francis, *Investments: Analysis and Management*, 3rd edition, McGraw-Hill Book Co., 1980, p. 363

<sup>5</sup>Id., p. 548.

<sup>6</sup>Returns on net worth must be used when relying on Value Line data because returns on book common equity for non-utility firms are not available from Value Line





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Investments:  
Analysis and  
Management

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Fifth Edition

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Jack Clark Francis

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**Beta Measurements** The beta coefficient is an *index of systematic risk*. Beta coefficients may be used for ranking the systematic risk of different assets. If the beta is larger than 1,  $b > 1.0$ , then the asset is more volatile than the market and is called an **aggressive asset**. If the beta is less than 1,  $b < 1.0$ , the asset is a **defensive asset**; its price fluctuations are less volatile than the market's. Figure 10-1 illustrates the characteristic lines for three different assets that have low, medium, and high levels of beta (or undiversifiable risk).

Figure 10-2 shows that IBM is a stock with an average amount of systematic risk. IBM's beta of 1.02 indicates that its return tends to increase 2 percent more than the return on the market average when the market is rising. When the market falls, IBM's return tends to fall 2 percent more than the market's. The characteristic line for IBM has an above average correlation coefficient of  $\rho = .7495$ , indicating that the returns on this security follow its particular characteristic line slightly more closely than those of the average stock.

**Partitioning Risk**

Total risk can be measured by the variance of returns, denoted  $\text{Var}(r)$ . This measure of *total risk is partitioned into its systematic and unsystematic components in Equation (10-8).*<sup>7</sup>

$$\begin{aligned} \text{Var}(r_i) &= \text{total risk of } i\text{th asset} \\ &= \text{Var}(a_i + b_i r_{m,t} + e_{i,t}) \\ &\quad \text{by substituting } (a_i + b_i r_{m,t} + e_{i,t}) \text{ for } r_{i,t} \\ &= 0 + \text{Var}(b_i r_{m,t}) + \text{Var}(e_{i,t}) \\ &\quad \text{since } \text{Var}(a_i) = 0 \end{aligned} \tag{10-8}$$

$$\begin{aligned} \text{Var}(r_i) &= b_i^2 \text{Var}(r_m) + \text{Var}(e) \quad \text{since } \text{Var}(b_i r_m) = b_i^2 \text{Var}(r_m) \\ &= \text{systematic} + \text{unsystematic risk} \end{aligned} \tag{10-8a}$$

$$.01389 = .00780 + .00609 \quad \text{for IBM}$$

The unsystematic risk measure  $\text{Var}(e)$  is called in regression language the *residual variance* or, synonymously, the *standard error squared*.

**Undiversifiable Proportion** The percentage of total risk that is systematic can be measured by the coefficient of determination  $\rho^2$  (that is, the characteristic line's squared correlation coefficient).

<sup>7</sup>In this context, **partition** is a technical statistical term that means to divide the total variance into *mutually exclusive* and *exhaustive* pieces. This partition is only possible if the returns from the market are statistically independent from the residual error terms that occur simultaneously,  $\text{Cov}(r_{m,t}, e_{i,t}) = 0$ . The mathematics of regression analysis will orthogonalize the residuals and thus ensure that the needed statistical independence exists.

$$\frac{\text{Systematic risk}}{\text{Total risk}} = \frac{b_i^2 \text{Var}(r_m)}{\text{Var}(r_i)} = \rho^2 \quad (10-9)$$

$$\frac{.007802}{.01389} = \frac{(1.021)^2 (.00749)}{.00749} = .5617 \times 100 = 56.17\% \quad \text{for IBM}$$

**Diversifiable Proportion** The percentage of unsystematic risk equals  $(1.0 - \rho^2)$ .

$$\frac{\text{Unsystematic risk}}{\text{Total risk}} = \frac{\text{Var}(e)}{\text{Var}(r_i)} = (1.0 - \rho^2)$$

$$\frac{.00609}{.01389} = (1.0 - .5617) = .438 \times 100 \quad (10-10)$$

$$= 43.8\% \text{ unsystematic} \quad \text{for IBM}$$

Studies of the characteristic lines of hundreds of stocks listed on the NYSE indicate that the average correlation coefficient is approximately  $\rho = .5$ .<sup>8</sup> This means that about  $\rho^2 = 25$  percent of the total variability of return in most NYSE securities is explained by movements in the market.

	NYSE average	IBM
Systematic risk: $\rho^2$	.25	.5617
Unsystematic risk: $(1.0 - \rho^2)$	.75	.4383
Total risk: 100%	1.00	1.0000

As explained above, systematic changes are common to all stocks and are therefore undiversifiable.

A primary use of the characteristic line (or *market model*, or the *single-index model*, as it is also called) is to assess the risk characteristics of one asset.<sup>9</sup> The statistics in Table 10-2, for instance, indicate that IBM's common stock is slightly more risky than the average common stock in terms of total risk and

<sup>8</sup>The average  $\rho$  was found to be about .5, as reported in Marshall Blume, "On the Assessment of Risk," *Journal of Finance*, March 1971, p. 4. For similar estimates, see J. C. Francis, "Statistical Analysis of Risk Surrogates for NYSE Stocks," *Journal of Financial and Quantitative Analysis*, Dec. 1979.

<sup>9</sup>Professor Jensen reformulated the characteristic line in a risk-premium form. See M. C. Jensen, "The Performance of Mutual Funds in the Period 1945 through 1964," *Journal of Finance*, May 1968, pp. 389-416. See also M. C. Jensen, "Risk, the Pricing of Capital Assets, and the Evaluation of Investment Portfolios," *Journal of Business*, vol. XLII, 1969. Jensen interprets the alpha intercept term of the characteristic line, as he formulates it, as an investment performance measure. It has been suggested that Jensen's performance measure is biased. See Keith V. Smith and Dennis A. Tito, "Risk-Return Measures of Ex-Post Portfolio Performance," *Journal of Financial and Quantitative Analysis*, Dec. 1969, vol. IV, no. 4, p. 466.

systematic risk.<sup>10</sup> New risk measurements must be made periodically, however, because the risk and return of an asset may change with the passage of time.<sup>11</sup>

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**10-3 CAPITAL ASSET PRICING MODEL (CAPM)**

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An old axiom states “there is no such thing as a free lunch.” This means that you cannot expect to get something for nothing—a rule that certainly applies to investment returns. Investors who want to earn high average rates of return must take high risks and endure the associated loss of sleep, the possibility of ulcers, and the chance of bankruptcy. The question to which we now turn is: Should investors worry about total risk, undiversifiable risk, diversifiable risk, or all three?

In Chapter 1 it was suggested that *investors should seek investments that have the maximum expected return in their risk class*. Their happiness from investing is presumed to be derived as indicated in the expected utility  $E(U)$  function below.

$$E(U) = f[E(r), \sigma]$$

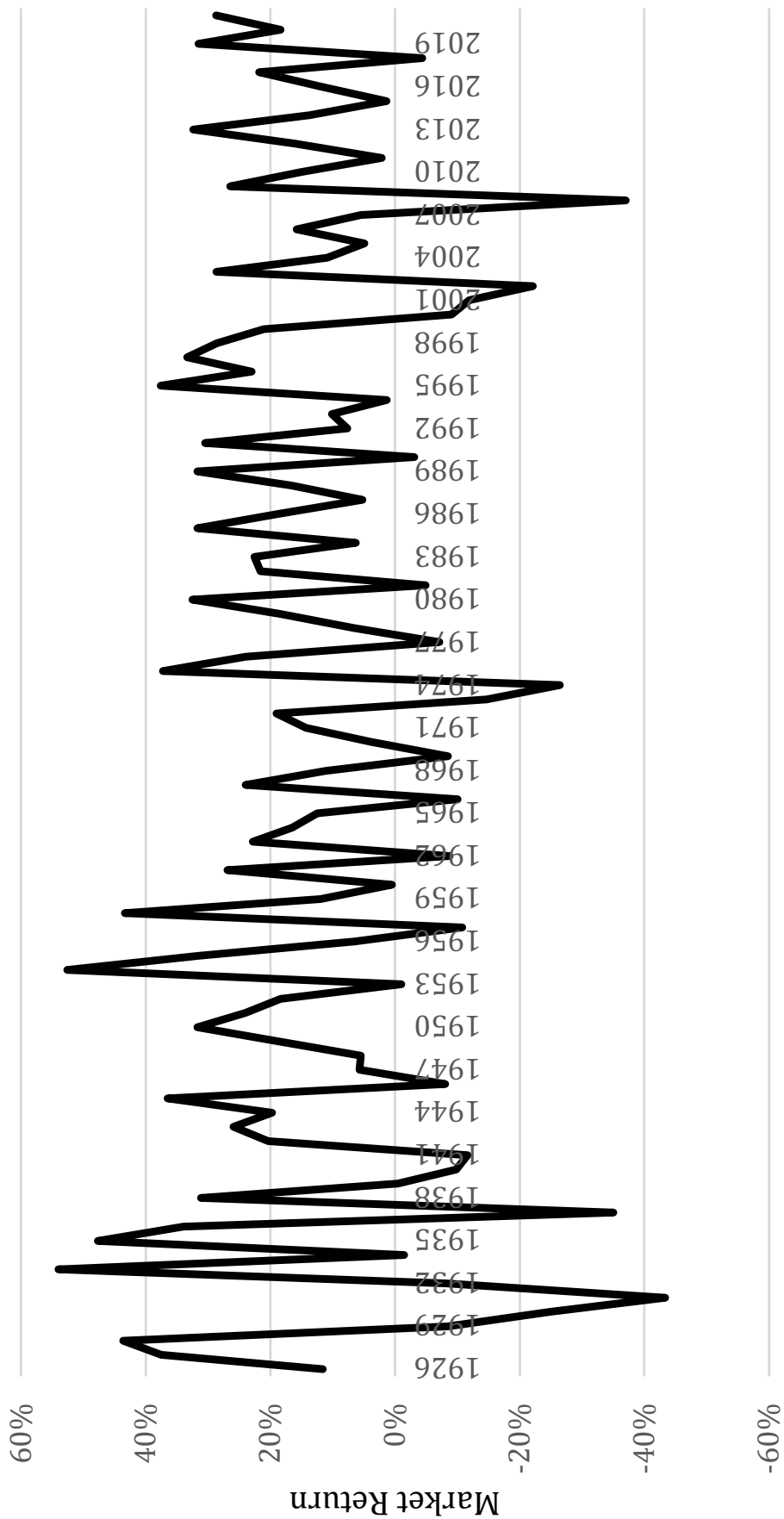
The investment preferences of wealth-seeking risk-averse investors represented by the function above cause them to maximize their expected utility (or, equivalently, happiness) by (1) maximizing their expected return in any given risk class,  $\partial E(U)/\partial E(r) > 0$ , or, conversely, (2) minimizing their total risk at any given rate of expected return,  $\partial E(U)/\partial \sigma < 0$ . However, in selecting individual assets, investors will not be particularly concerned with the asset’s total risk  $\sigma$ . Figure 9-1 showed that the unsystematic portion of total risk can be easily diversified by holding a portfolio of different securities. But, systematic risk affects all stocks in the market because it is undiversifiable. Portfolio theory therefore suggests that only the undiversifiable (or systematic) risk is worth avoiding.<sup>12</sup>

<sup>10</sup>Statements about the relative degree of total risk are made in the context of a long-run horizon—that is, over at least one *complete business cycle*. Obviously, an accurate short-run forecast which says that some particular company will go bankrupt next quarter makes it more risky than IBM, although IBM may have had more historical variability of return.

<sup>11</sup>Empirical studies documenting the intertemporal instability of betas have been published. Marshall Blume, “Betas and Their Regression Tendencies,” *Journal of Finance*, June 1975, pp. 785–795. See also J. C. Francis, “Statistical Analysis of Risk Coefficients for NYSE Stocks,” *Journal of Financial and Quantitative Analysis*, Dec. 1979, vol. XIV, no. 5, pp. 981–997. An appendix at the end of this chapter reviews some evidence about shifting betas, standard deviations, and correlations.

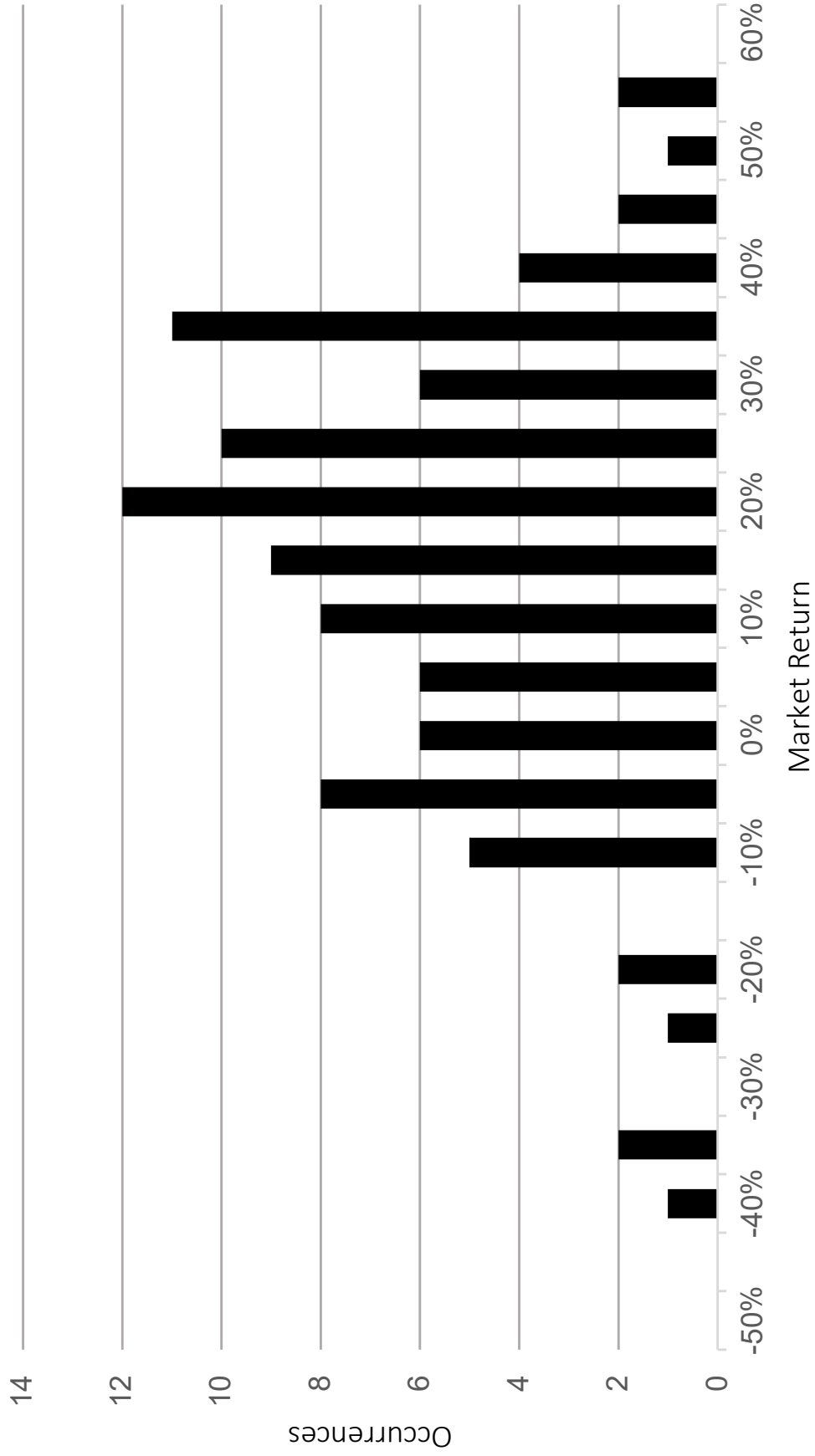
<sup>12</sup>Both the systematic and unsystematic portions of total risk must be considered by **undiversified investors**. Entrepreneurs who have their entire net worth invested in one business, for example, can be bankrupted by a piece of bad luck that could be easily averaged away to zero in a diversified portfolio. Poorly diversified investors should not treat diversifiable risk lightly. Only well-diversified investors can afford to ignore diversifiable risk.

## U.S. Large Company Stock Returns 1926 - 2021



Source: Kroll, SBI 2022 Yearbook: Stocks, Bonds, Bills, and Inflation 1926 - 2021, Appendix A

Histogram of U.S. Large Company Stock Returns 1926 - 2021



Source: Kroll, SBBI 2022 Yearbook: Stocks, Bonds, Bills, and Inflation 1926 - 2021,  
Appendix A

Valley Energy, Inc. / Citizens' Electric  
Company of Lewisburg, PA  
OCA Corrected CAPM

<b>Risk-Free Rate</b>	
<b><u>Treasury 30-yr Note (1)</u></b>	<b><u>Yield</u></b>
3Q 2022	3.50
4Q 2022	3.60
1Q 2023	3.70
2Q 2023	3.80
3Q 2023	3.80
4Q 2023	3.80
2024-2028	3.80
2029-2033	3.90
<b>Average</b>	<b><u><u>3.74</u></u></b>

**Notes:**

(1) Page 2 and 3 of this Schedule.

**Source:**

Blue Chip Financial Forecasts  
June 1, 2022 and July 1, 2022

## Consensus Forecasts of U.S. Interest Rates and Key Assumptions

Interest Rates	History								Consensus Forecasts-Quarterly Avg.					
	Average For Week Ending				Average For Month				Latest Qtr	3Q 2022	4Q 2022	1Q 2023	2Q 2023	3Q 2023
	Jun 24	Jun 17	Jun 10	Jun 3	May	Apr	Mar	2Q 2022*	2022	2022	2023	2023	2023	2023
Federal Funds Rate	1.58	0.83	0.83	0.83	0.77	0.33	0.20	0.73	2.4	3.1	3.5	3.5	3.5	3.4
Prime Rate	4.75	4.00	4.00	4.00	3.94	3.50	3.37	3.90	5.4	6.2	6.6	6.7	6.6	6.5
SOFR	1.45	1.00	0.76	0.79	0.72	0.29	0.16	0.69	2.1	2.9	3.4	3.5	3.4	3.3
Commercial Paper, 1-mo.	1.60	1.40	1.00	0.87	0.80	0.44	0.32	0.80	2.2	3.0	3.4	3.4	3.4	3.3
Treasury bill, 3-mo.	1.67	1.70	1.30	1.17	0.99	0.76	0.45	1.08	2.3	3.0	3.4	3.4	3.4	3.3
Treasury bill, 6-mo.	2.45	2.30	1.81	1.65	1.49	1.26	0.86	1.62	2.7	3.3	3.5	3.6	3.5	3.4
Treasury bill, 1 yr.	2.83	2.94	2.34	2.14	2.06	1.89	1.34	2.18	3.0	3.5	3.7	3.7	3.6	3.5
Treasury note, 2 yr.	3.08	3.27	2.83	2.63	2.62	2.54	1.91	2.71	3.3	3.6	3.7	3.6	3.6	3.4
Treasury note, 5 yr.	3.23	3.45	3.07	2.91	2.87	2.78	2.11	2.95	3.4	3.6	3.6	3.6	3.6	3.5
Treasury note, 10 yr.	3.17	3.36	3.05	2.92	2.90	2.75	2.13	2.93	3.3	3.5	3.6	3.6	3.6	3.6
Treasury note, 30 yr.	3.28	3.38	3.18	3.09	3.07	2.81	2.41	3.04	3.5	3.6	3.7	3.8	3.8	3.8
Corporate Aaa bond	4.58	4.68	4.39	4.27	4.37	4.01	3.63	4.30	4.7	5.0	5.1	5.1	5.1	5.1
Corporate Baa bond	5.30	5.38	5.05	4.94	5.05	4.63	4.23	4.97	5.6	6.0	6.2	6.2	6.2	6.2
State & Local bonds	4.05	4.08	3.77	3.73	3.96	3.70	3.30	3.87	4.0	4.3	4.4	4.5	4.5	4.4
Home mortgage rate	5.81	5.78	5.23	5.09	5.23	4.98	4.17	5.23	5.7	5.9	6.0	5.9	5.8	5.7

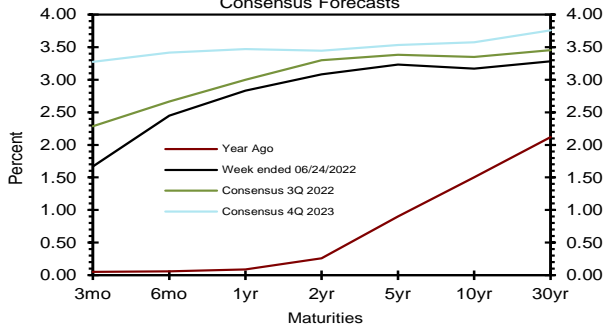
  

Key Assumptions	History								Consensus Forecasts-Quarterly					
	3Q 2020	4Q 2020	1Q 2021	2Q 2021	3Q 2021	4Q 2021	1Q 2022	2Q 2022**	3Q 2022	4Q 2022	1Q 2023	2Q 2023	3Q 2023	4Q 2023
Fed's AFE \$ Index	107.2	105.1	103.4	102.9	105.0	107.0	108.4	113.6	115.3	115.4	115.1	114.6	114.0	113.8
Real GDP	33.8	4.5	6.3	6.7	2.3	6.9	-1.6	2.9	2.1	1.6	1.2	1.0	1.3	1.6
GDP Price Index	3.6	2.2	4.3	6.1	6.0	7.1	8.2	5.9	5.2	3.9	3.4	2.8	2.7	2.6
Consumer Price Index	4.8	2.2	4.1	8.2	6.7	7.9	9.2	7.6	6.0	3.8	3.3	2.7	2.5	2.5
PCE Price Index	3.7	1.5	3.8	6.5	5.3	6.4	7.1	5.8	5.2	3.6	3.1	2.5	2.4	2.3

Forecasts for interest rates and the Federal Reserve's Advanced Foreign Economies Index represent averages for the quarter. Forecasts for Real GDP, GDP Price Index, CPI and PCE Price Index are seasonally-adjusted annual rates of change (saar). Individual panel members' forecasts are on pages 4 through 9. Historical data: Treasury rates from the Federal Reserve Board's H.15; AAA-AA and A-BBB corporate bond yields from Bank of America-Merrill Lynch and are 15+ years, yield to maturity; State and local bond yields from Bank of America-Merrill Lynch, A-rated, yield to maturity; Mortgage rates from Freddie Mac, 30-year, fixed; SOFR from the New York Fed. \*Interest rate data for 2Q 2022 based on historical data through the week ended June 24. \*\*Data for 2Q 2022 for the Fed's AFE \$ Index based on data through the week ended June 24. Figures for 2Q 2022 Real GDP, GDP Chained Price Index, Consumer Price Index, and PCE Price Index are consensus forecasts from the June 2022 survey.

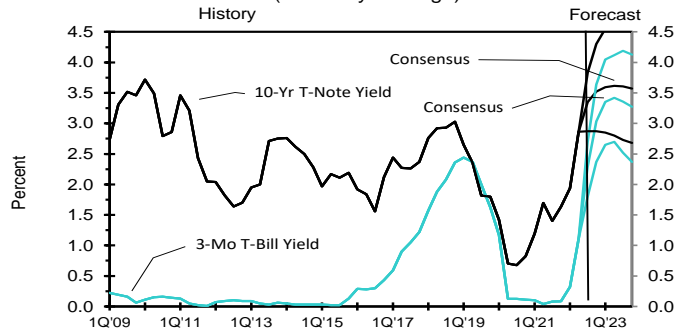
### U.S. Treasury Yield Curve

Week ended Jun 24, 2022 & Year Ago vs.  
 3Q 2022 & 4Q 2023  
 Consensus Forecasts



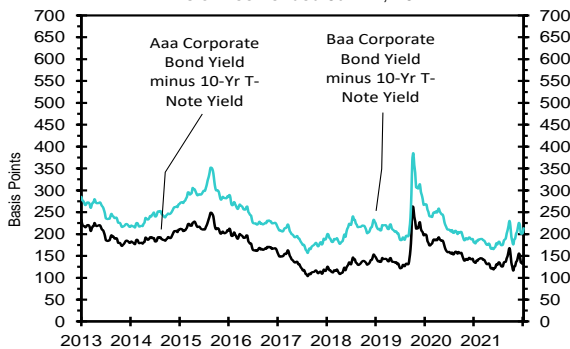
### US 3-Mo T-Bills & 10-Yr T-Note Yield

(Quarterly Average)



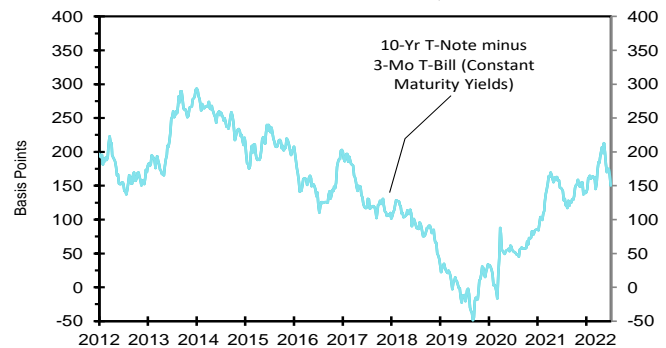
### Corporate Bond Spreads

As of week ended Jun 24, 2022



### U.S. Treasury Yield Curve

As of week ended Jun 24, 2022





## Long-Range Survey:

The table below contains the results of our twice-annual long-range CONSENSUS survey. There are also Top 10 and Bottom 10 averages for each variable. Shown are consensus estimates for the years 2023 through 2028 and averages for the five-year periods 2024-2028 and 2029-2033. Apply these projections cautiously. Few if any economic, demographic and political forces can be evaluated accurately over such long time spans.

		----- Average For The Year -----					Five-Year Averages		
		2023	2024	2025	2026	2027	2028	2024-2028	2029-2033
1. Federal Funds Rate	<b>CONSENSUS</b>	<b>3.0</b>	<b>2.7</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.6</b>	<b>2.5</b>
	Top 10 Average	3.5	3.3	3.0	2.8	2.8	2.8	3.0	2.8
	Bottom 10 Average	2.6	2.1	2.0	2.2	2.2	2.2	2.2	2.1
2. Prime Rate	<b>CONSENSUS</b>	<b>6.1</b>	<b>5.9</b>	<b>5.7</b>	<b>5.6</b>	<b>5.6</b>	<b>5.6</b>	<b>5.7</b>	<b>5.6</b>
	Top 10 Average	6.6	6.4	6.1	6.0	6.0	6.0	6.1	5.9
	Bottom 10 Average	5.6	5.3	5.2	5.3	5.3	5.3	5.3	5.2
3. SOFR	<b>CONSENSUS</b>	<b>3.0</b>	<b>2.8</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.6</b>	<b>2.5</b>
	Top 10 Average	3.4	3.3	3.0	2.9	2.8	2.8	3.0	2.8
	Bottom 10 Average	2.7	2.2	2.0	2.2	2.2	2.2	2.2	2.1
4. Commercial Paper, 1-Mo	<b>CONSENSUS</b>	<b>3.2</b>	<b>2.9</b>	<b>2.6</b>	<b>2.6</b>	<b>2.6</b>	<b>2.6</b>	<b>2.7</b>	<b>2.6</b>
	Top 10 Average	3.5	3.4	3.1	2.9	2.9	2.9	3.0	2.9
	Bottom 10 Average	2.8	2.5	2.3	2.4	2.4	2.3	2.3	2.3
5. Treasury Bill Yield, 3-Mo	<b>CONSENSUS</b>	<b>3.0</b>	<b>2.8</b>	<b>2.6</b>	<b>2.6</b>	<b>2.6</b>	<b>2.5</b>	<b>2.6</b>	<b>2.5</b>
	Top 10 Average	3.6	3.4	3.1	3.1	3.0	2.9	3.1	2.9
	Bottom 10 Average	2.5	2.2	2.0	2.1	2.2	2.2	2.1	2.2
6. Treasury Bill Yield, 6-Mo	<b>CONSENSUS</b>	<b>3.2</b>	<b>2.9</b>	<b>2.7</b>	<b>2.7</b>	<b>2.7</b>	<b>2.6</b>	<b>2.7</b>	<b>2.6</b>
	Top 10 Average	3.8	3.6	3.2	3.2	3.1	3.0	3.2	3.0
	Bottom 10 Average	2.6	2.2	2.1	2.2	2.3	2.3	2.2	2.3
7. Treasury Bill Yield, 1-Yr	<b>CONSENSUS</b>	<b>3.2</b>	<b>3.0</b>	<b>2.9</b>	<b>2.9</b>	<b>2.8</b>	<b>2.8</b>	<b>2.9</b>	<b>2.8</b>
	Top 10 Average	3.9	3.8	3.5	3.4	3.3	3.2	3.4	3.2
	Bottom 10 Average	2.6	2.4	2.2	2.4	2.4	2.4	2.3	2.4
8. Treasury Note Yield, 2-Yr	<b>CONSENSUS</b>	<b>3.4</b>	<b>3.2</b>	<b>3.1</b>	<b>3.1</b>	<b>3.0</b>	<b>3.0</b>	<b>3.1</b>	<b>3.0</b>
	Top 10 Average	4.3	4.1	3.8	3.6	3.5	3.5	3.7	3.5
	Bottom 10 Average	2.7	2.4	2.3	2.5	2.6	2.5	2.4	2.5
9. Treasury Note Yield, 5-Yr	<b>CONSENSUS</b>	<b>3.5</b>	<b>3.4</b>	<b>3.3</b>	<b>3.3</b>	<b>3.3</b>	<b>3.2</b>	<b>3.3</b>	<b>3.3</b>
	Top 10 Average	4.3	4.2	4.1	3.9	3.8	3.8	3.9	3.8
	Bottom 10 Average	2.8	2.6	2.5	2.7	2.7	2.7	2.6	2.8
10. Treasury Note Yield, 10-Yr	<b>CONSENSUS</b>	<b>3.5</b>	<b>3.5</b>	<b>3.4</b>	<b>3.5</b>	<b>3.5</b>	<b>3.4</b>	<b>3.5</b>	<b>3.5</b>
	Top 10 Average	4.4	4.4	4.2	4.2	4.1	4.1	4.2	4.1
	Bottom 10 Average	2.8	2.5	2.6	2.9	2.9	2.8	2.7	2.8
11. Treasury Bond Yield, 30-Yr	<b>CONSENSUS</b>	<b>3.8</b>	<b>3.8</b>	<b>3.8</b>	<b>3.9</b>	<b>3.8</b>	<b>3.8</b>	<b>3.8</b>	<b>3.9</b>
	Top 10 Average	4.6	4.7	4.5	4.5	4.4	4.5	4.5	4.5
	Bottom 10 Average	3.0	2.9	3.0	3.3	3.2	3.2	3.1	3.2
12. Corporate Aaa Bond Yield	<b>CONSENSUS</b>	<b>5.0</b>	<b>5.0</b>	<b>4.9</b>	<b>5.0</b>	<b>5.0</b>	<b>4.9</b>	<b>4.9</b>	<b>5.0</b>
	Top 10 Average	5.7	5.7	5.6	5.5	5.5	5.5	5.5	5.6
	Bottom 10 Average	4.4	4.2	4.3	4.4	4.4	4.4	4.3	4.4
13. Corporate Baa Bond Yield	<b>CONSENSUS</b>	<b>6.0</b>	<b>5.9</b>	<b>5.8</b>	<b>5.9</b>	<b>5.9</b>	<b>5.9</b>	<b>5.9</b>	<b>5.9</b>
	Top 10 Average	6.6	6.6	6.4	6.3	6.3	6.3	6.4	6.4
	Bottom 10 Average	5.4	5.3	5.2	5.4	5.4	5.4	5.3	5.4
14. State & Local Bonds Yield	<b>CONSENSUS</b>	<b>4.3</b>	<b>4.3</b>	<b>4.2</b>	<b>4.3</b>	<b>4.3</b>	<b>4.3</b>	<b>4.3</b>	<b>4.3</b>
	Top 10 Average	5.0	5.0	4.8	4.8	4.7	4.7	4.8	4.8
	Bottom 10 Average	3.7	3.7	3.7	3.9	3.9	3.9	3.8	3.9
15. Home Mortgage Rate	<b>CONSENSUS</b>	<b>5.7</b>	<b>5.5</b>	<b>5.4</b>	<b>5.4</b>	<b>5.4</b>	<b>5.4</b>	<b>5.4</b>	<b>5.4</b>
	Top 10 Average	6.4	6.4	6.1	6.0	6.0	6.0	6.1	6.0
	Bottom 10 Average	4.9	4.7	4.6	4.8	4.8	4.8	4.7	4.8
A. Fed's AFE Nominal \$ Index	<b>CONSENSUS</b>	<b>113.8</b>	<b>112.8</b>	<b>111.9</b>	<b>111.0</b>	<b>110.6</b>	<b>110.4</b>	<b>111.3</b>	<b>109.8</b>
	Top 10 Average	115.6	114.7	114.0	113.4	113.1	112.8	113.6	112.7
	Bottom 10 Average	112.2	111.0	109.9	108.8	108.2	107.9	109.2	107.4
		----- Year-Over-Year, % Change -----					Five-Year Averages		
		2023	2024	2025	2026	2027	2028	2024-2028	2029-2033
B. Real GDP	<b>CONSENSUS</b>	<b>2.0</b>	<b>2.0</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>2.1</b>	<b>2.0</b>
	Top 10 Average	2.6	2.4	2.4	2.4	2.4	2.4	2.4	2.3
	Bottom 10 Average	1.5	1.5	1.8	1.8	1.8	1.8	1.7	1.8
C. GDP Chained Price Index	<b>CONSENSUS</b>	<b>3.0</b>	<b>2.4</b>	<b>2.3</b>	<b>2.3</b>	<b>2.2</b>	<b>2.2</b>	<b>2.3</b>	<b>2.2</b>
	Top 10 Average	3.7	2.8	2.7	2.6	2.6	2.6	2.7	2.6
	Bottom 10 Average	2.3	2.0	1.9	1.9	1.9	1.9	1.9	1.9
D. Consumer Price Index	<b>CONSENSUS</b>	<b>3.2</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.3</b>	<b>2.3</b>	<b>2.4</b>	<b>2.3</b>
	Top 10 Average	4.1	3.0	2.9	2.8	2.7	2.7	2.8	2.7
	Bottom 10 Average	2.3	1.8	2.0	2.0	1.9	1.9	1.9	1.9
E. PCE Price Index	<b>CONSENSUS</b>	<b>3.0</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.3</b>	<b>2.2</b>	<b>2.3</b>	<b>2.3</b>
	Top 10 Average	3.8	2.8	2.8	2.7	2.7	2.6	2.7	2.7
	Bottom 10 Average	2.2	1.8	1.9	1.9	1.9	1.8	1.9	1.9

Valley Energy, Inc. / Citizens' Electric Company of  
Lewisburg, PA  
OCA Corrected CAPM

<u>Company (Gas Proxy)</u>	<u>Beta</u>
Atmos Energy Corporation (ATO)	0.80
New Jersey Resources Corporation (NJR)	0.95
NiSource, Inc. (NI)	0.85
Northwest Natural Holding Company (NWN)	0.80
ONE Gas, Inc. (OGS)	0.80
Spire Inc. (SR)	0.80
<b>Average beta for CAPM</b>	<b><u>0.83</u></b>

**Source:**  
Value Line

<u>Company (Electric Proxy)</u>	<u>Beta</u>
Alliant Energy Corporation (LNT)	0.80
Ameren Corp. (AEE)	0.80
American Electric Power Company Inc. (AEP)	0.75
Duke Energy Corp. (DUK)	0.85
Edison International (EIX)	0.95
Entergy Corp. (ETR)	0.90
Evergy, Inc. (EVRG)	0.90
Eversource Energy (ES)	0.90
IDACORP Inc. (IDA)	0.80
NorthWestern Corporation (NWE)	0.95
OGE Energy Corporation (OGE)	1.00
Portland General Electric Company (POR)	0.85
The Southern Company (SO)	0.90
Xcel Energy Inc. (XEL)	0.80
<b>Average beta for CAPM</b>	<b><u>0.87</u></b>

**Source:**  
Value Line

Valley Energy, Inc. / Citizens' Electric Company of Lewisburg, PA  
OCA Corrected CAPM

**CAPM with Forecasted Return (Valley)**

---

**Re** Required return on individual equity security  
**Rf** Risk-free rate  
**Rm** Required return on the market as a whole  
**Be** Beta on individual equity security

**Re (CAPM) =**  $Rf + Be(Rm - Rf)$   
**Re (ECAPM) =**  $Rf + Be(Rm - Rf) \times 0.75 + (Rm - Rf) \times 0.25$

<b>Rf =</b>	3.74
<b>Rm =</b>	7.40 (a)
<b>Be =</b>	0.83
<b>Re (CAPM) =</b>	<u><u>9.90</u></u>
<b>Re (ECAPM) =</b>	<u><u>10.21</u></u>
<b>Average</b>	<u><u>10.06</u></u>

(a) Kroll SBBI-2022, at 145. Represents Arithmetic Mean Total Return on Large-Cap Stocks (12.30%) minus the Arithmetic Mean Income-Only Return on Long-Term Government Bonds (4.90%); 12.30% - 4.90% = 7.40%.

**Sources:** Value Line  
 Blue Chip June 1, 2022 and July 1, 2022

**CAPM with Forecasted Return (Citizens')**

---

**Re** Required return on individual equity security  
**Rf** Risk-free rate  
**Rm** Required return on the market as a whole  
**Be** Beta on individual equity security

**Re (CAPM) =**  $Rf + Be(Rm - Rf)$   
**Re (ECAPM) =**  $Rf + Be(Rm - Rf) \times 0.75 + (Rm - Rf) \times 0.25$

<b>Rf =</b>	3.74
<b>Rm =</b>	7.40 (a)
<b>Be =</b>	0.87
<b>Re (CAPM) =</b>	<u><u>10.16</u></u>
<b>Re (ECAPM) =</b>	<u><u>10.40</u></u>
<b>Average</b>	<u><u>10.28</u></u>

(a) Kroll SBBI-2022, at 145. Represents Arithmetic Mean Total Return on Large-Cap Stocks (12.30%) minus the Arithmetic Mean Income-Only Return on Long-Term Government Bonds (4.90%); 12.30% - 4.90% = 7.40%.

**Sources:** Value Line  
 Blue Chip June 1, 2022 and July 1, 2022

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket Nos. R-2022-3032369</b>
	:	<b>R-2022-3032300</b>
<b>Citizens' Electric Company of Lewisburg, PA and Valley Energy, Inc.</b>	:	
	:	

**REBUTTAL TESTIMONY  
AND EXHIBIT  
OF  
MELISSA SULLIVAN**

**ON BEHALF OF  
CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA  
AND  
VALLEY ENERGY, INC.**

**AUGUST 16, 2022**

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Pennsylvania Public Utility Commission :  
v. :  
Citizens' Electric Company of Lewisburg, PA : **Docket Nos. R-2022-3032369**  
and Valley Energy, Inc. : **R-2022-3032300**

**REBUTTAL TESTIMONY OF MELISSA SULLIVAN  
ON BEHALF OF CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA, AND  
VALLEY ENERGY, INC.**

1 **Q. Please state your name and business address.**

2 A. My name is Melissa Sullivan and my business address is 33 Austin Street, 3<sup>rd</sup> Floor,  
3 Wellsboro, Pennsylvania.

4 **Q. Are you the same Melissa Sullivan who previously submitted Direct Testimony in this**  
5 **proceeding on behalf of Citizens' Electric Company of Lewisburg, PA ("Citizens")**  
6 **and Valley Energy, Inc. ("Valley") (collectively, "Companies")?**

7 A. Yes. Terms defined in my direct testimony have the same meaning in this rebuttal  
8 testimony.

9 **Q. What is the purpose of your testimony today?**

10 A. The purpose of my testimony is to rebut the testimony of OCA Witness Mugrace regarding  
11 the Companies' Shared Services allocations and Act 40 of 2016 ("Act 40") requirements.

12 **Q. Can you summarize the adjustments proposed by OCA to Citizens' and Valley's**  
13 **Shared Services allocations? (OCA Statement No. 1 at 15 (Citizens'), OCA Statement**  
14 **No. 1 at 15 (Valley))?**

1 A. Yes, OCA Witness Mugrace observes increases to the actual and projected Shared Services  
2 expense allocated to the Companies' from C&T from 2020 through 2023. Mr. Mugrace  
3 claims the Companies have not provided any basis for the increasing expense by 25.25%  
4 from the HTY to the FTY, and proposes to average the expenses over the four-year period  
5 instead of accepting the projected FPFTY expense proposed by the Companies. This  
6 results in identical \$18,575 reductions to Shared Services expense for both Citizens' and  
7 Valley.

8 **Q. Is Mr. Mugrace correct?**

9 A. No, Mr. Mugrace is not correct. The Companies have provided support for the increasing  
10 Shared Services expense. As I testified, the C&T Expenses reflect wage, salary, overhead  
11 and benefits increases for the existing C&T Shared Services employees, and anticipated  
12 new positions at C&T to better serve Valley, Citizens' and the other operating companies.  
13 In the FTY, the Companies added a Network Systems Specialist in its Information  
14 Technology department. In the FPFTY, C&T will be adding a Payroll Specialist in the  
15 Human Resources department and will be replacing a retiring Vice President of  
16 Communications.

17 **Q. Mr. Mugrace claims that his adjustment is appropriate because Citizens' and Valley**  
18 **have not itemized the reasons for the increase in the C&T Shared Services costs from**  
19 **2021 to 2022. Please respond.**

20 A. Based on my recollection of the discovery, no party asked for Citizens' or Valley to provide  
21 an itemization of the reasons for the increase in Shared Services costs from the HTY (2021)

1 to the FTY (2022). From 2021 to 2022, the Shared Services allocated cost for Valley and  
2 Citizens' increased by \$42,946. The increase is attributable to several factors:

- 3 • First, the increase is due to the additional Shared Services position discussed above.  
4 Citizens' and Valley each pay 12.84% of the wages and benefits associated with  
5 this new position.
- 6 • Second, the historical amount for 2021 reflects the impact of the COVID-19  
7 pandemic on travel and training costs. During 2021 and due to COVID-19, many  
8 training programs and conferences were held with remote participation rather than  
9 in-person participation. In 2022, most of those events have returned to in-person  
10 participation. In 2021, the actual travel costs were \$16,765 while in 2022, the  
11 projected costs for the Shared Services employee travel is \$30,000.
- 12 • Third, from 2021 to 2022, the C&T Shared Services employees received the 4.5%  
13 base compensation increase discussed in my Direct Testimony. This increased the  
14 total Wages & Salaries for the C&T Shared Services employees from \$1,336,000  
15 to \$1,386,000.
- 16 • Fourth, the retirement benefit costs from the C&T Shared Services employees  
17 increased from \$653,983 in 2021 to \$772,152 in 2022 due to the previously-  
18 discussed salary increases and because two additional C&T Shared Services  
19 employees became eligible for our pension and 401(k) retirement plans. We have  
20 a one-year waiting period after an employee begins with C&T before that benefit  
21 starts. One employee was hired in late 2020 and one as of January 1, 2021, both of  
22 which became eligible for the benefit and increased this expense. The portion of  
23 this expense that is allocated to Valley and Citizens' would follow the allocation

1 percentage for the position that is set forth in Exhibit\_\_(MS-1R), which attaches  
2 responses to OCA-II-8 (Valley) and OCA-I-10 (Citizens'). The Chief Legal &  
3 Regulatory Officer was one of those positions that became eligible for retirement  
4 benefits. The costs of that position are allocated 30%/30%/30% to Citizens', Valley  
5 and Wellsboro Electric Company.

6 **Q. How does OCA's proposed Shared Services expense for the FPFTY compare to the**  
7 **expense for the FTY?**

8 A. For both Companies, OCA's proposal to average Shared Services expense over four years  
9 would result in a FPFTY expense *lower than the FTY expense*:

10 Table 1

	<b>Company FTY Shared Services Allocation</b>	<b>Company Proposed FPFTY Shared Services Allocation</b>	<b>OCA Proposed FPFTY Shared Services Allocation</b>
Citizens'/Valley	\$213,011	\$219,401	\$200,826

11  
12 See OCA Statement No. 1 at 14-15 (Citizens'), OCA Statement No. 1 at 14-15 (Valley).  
13 Considering that OCA Witness Mugrace has acknowledged the Shared Services expense  
14 increased in each year from 2020 - 2022, I am very challenged to understand the logic  
15 behind proposing a FPFTY Shared Service expense lower than the FTY Shared Service  
16 expense. This result is unreasonable and would not allow the Companies to recover the  
17 costs of administrative services necessary to support the utility operations, including



1 critical cybersecurity support costs. As explained above, the increase from the HTY to the  
2 FTY has been justified and should not serve as the basis for the OCA's adjustment.

3 **Q. Did OCA Witness Mugrace present testimony addressing the Companies' Act 40**  
4 **requirements (OCA Statement No. 1 at 35-37 (Citizens'), OCA Statement No. 1 at 35-**  
5 **37 (Valley))?**

6 A. Yes. Mr. Mugrace claims the Companies have not prepared a consolidated income tax  
7 adjustment to determine whether the Companies have properly allocated the revenue  
8 differential from pre-Act 40 ratemaking tax treatment to post-Act 40 ratemaking tax  
9 treatment. As discussed in his direct testimony, such revenue differentials are to be  
10 allocated 50/50 to general corporate use and infrastructure-related capital investment. Mr.  
11 Mugrace requests that the Commission direct the Companies to explain why a consolidated  
12 tax adjustment has not been presented.

13 **Q. Do you have any comments in response to this request?**

14 A. Yes. Although C&T submits a consolidated tax filing, there is no difference between  
15 Valley or Citizens' tax liability on a stand-alone basis and on a consolidated basis. No  
16 entity within our corporate family has operating losses (either current or historic) that are  
17 available to offset taxes that Valley and Citizens' would otherwise pay. Although we take  
18 advantage of bonus depreciation when possible, the benefits are allocated directly back to  
19 the particular entity that purchased the depreciable asset. There is no "net" differential that  
20 needs to be allocated between general corporate use an infrastructure-related capital  
21 investment.

22 **Q. Does this conclude your Rebuttal Testimony?**

23 A. Yes.

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket Nos. R-2022-3032369</b>
	:	<b>R-2022-3032300</b>
<b>Citizens' Electric Company of Lewisburg, PA and Valley Energy, Inc.</b>	:	
	:	

**EXHIBIT  
OF  
MELISSA SULLIVAN**

**ON BEHALF OF  
CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA  
AND  
VALLEY ENERGY, INC.**

**AUGUST 16, 2022**

**VALLEY ENERGY, INC. RESPONSE TO  
OFFICE OF CONSUMER ADVOCATE INTERROGATORIES  
DOCKET NO. R-2022-3032300**

**OCA-II-8** Please provide a schedule and description of all costs (shared services) allocated to Valley Energy from C&T Enterprises, Claverack Rural Electric Cooperative, Inc. (if applicable) and from Tri-County Rural Electric Cooperative, Inc. (if applicable). Please provide this schedule for the years 2020-2023. Please show where these costs are accounted for in the Company's filing by account nos. Please include the average number of employees (and titles) assigned from C&T, Claverack Rural Electric and Tri- County for services provided. Please also include in the breakdown costs related to (1) IT Costs; (2) Charitable Contributions; (3) Lobbying/Other; (4) Incentive Compensation and Stock Awards; (5) A&G Costs and; (6) Other/Miscellaneous.

**Response:** All shared services costs allocation to Valley are from C&T Enterprises only. There are no services rendered from either Cooperative.

	Account Code	2020	2021	2022	2023
<b>Average Shared Services Count Assigned (Percentage of FT Position)</b>	<b>N/A</b>				<b>(Est)</b>
Chief Financial Officer/Controller		33.333%	33.333%	33.333%	33.333%
Director of Human Resources		13.410%	13.270%	12.840%	13.130%
Payroll Specialist/Benefits		13.410%	13.270%	12.840%	13.130%
Payroll Specialist/Analyst		13.410%	13.270%	12.840%	13.130%
Payroll Specialist		0.000%	0.000%	0.000%	13.130%
VP of Communications		13.410%	13.270%	12.840%	13.130%
Chief Information Officer		13.410%	13.270%	12.840%	13.130%
Manager Information Services		13.410%	13.270%	12.840%	13.130%
Network Systems Specialist		13.410%	13.270%	12.840%	13.130%
Network Systems Specialist		0.000%	0.000%	12.840%	13.130%
IT Specialist		13.410%	13.270%	12.840%	13.130%
IT Specialist		13.410%	13.270%	12.840%	13.130%
IT Specialist		13.410%	13.270%	12.840%	13.130%
Safety Manager		13.410%	13.270%	12.840%	13.130%
Chief Legal/Regulatory Officer		0.000%	30.000%	30.000%	30.000%
<b>Total Annual Allocation Billing</b>	See Below	\$ 120,340	\$ 130,018	\$ 167,501	\$ 172,526
<b>Total IT Expense Allocation (Not Including Wages/Benefits)</b>	See Below	\$ 14,637	\$ 14,833	\$ 20,215	\$ 20,821
<b>Total Administrative Expense Allocation (Not Including Wages/Benefits)</b>	See Below	\$ 26,823	\$ 25,214	\$ 25,295	\$ 26,054
<b>Charitable Contributions</b>	N/A	\$ -	\$ -	\$ -	\$ -
<b>Lobbying/Other</b>	N/A	\$ -	\$ -	\$ -	\$ -
<b>Incentive Compensation</b>	N/A	\$ -	\$ -	\$ -	\$ -
<b>Other/Miscellaneous</b>	N/A	\$ -	\$ -	\$ -	\$ -

**VALLEY ENERGY, INC. RESPONSE TO  
OFFICE OF CONSUMER ADVOCATE INTERROGATORIES  
DOCKET NO. R-2022-3032300**

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The costs allocated to Valley Energy from C&T Enterprises are spread to the following accounts, as well as a portion to Valley Energy's NY Division based on labor activity for the month:

107	874	889
108	875	890
163	876	891
184	877	891
416	877	892
416	878	893
602	879	902
870	885	903
874	886	920
874	887	930
874	887	932

**Response Provided by: Melissa Sullivan, Chief Financial Officer  
C&T Enterprises, Inc.**

**Jamie Levering, Vice President/Treasurer  
Valley Energy, Inc.**

**Date: July 13, 2022**

**CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA RESPONSE TO  
OFFICE OF CONSUMER ADVOCATE INTERROGATORIES REQUEST  
DOCKET NO. R-2022-3032369**

**OCA-I-10** Please refer to the Direct Testimony and Exhibits of Howard S. Gorman, Exhibit HSG, Schedule E-5D. Please define the inputs and calculation of each of the allocators named and listed in Schedule E-5D.

**Response:** All shared services costs allocation to Citizens' Electric from C&T Enterprises only. There are no services rendered from either Cooperative.

	Account Code	2020	2021	2022	2023
<b>Average Shared Services Count Assigned (Percentage of FT Position)</b>	<b>N/A</b>				<b>(Est)</b>
Chief Financial Officer/Controller		33.333%	33.333%	33.333%	33.333%
Director of Human Resources		13.410%	13.270%	12.840%	13.130%
Payroll Specialist/Benefits		13.410%	13.270%	12.840%	13.130%
Payroll Specialist/Analyst		13.410%	13.270%	12.840%	13.130%
Payroll Specialist		0.000%	0.000%	0.000%	13.130%
VP of Communications		13.410%	13.270%	12.840%	13.130%
Chief Information Officer		13.410%	13.270%	12.840%	13.130%
Manager Information Services		13.410%	13.270%	12.840%	13.130%
Network Systems Specialist		13.410%	13.270%	12.840%	13.130%
Network Systems Specialist		0.000%	0.000%	12.840%	13.130%
IT Specialist		13.410%	13.270%	12.840%	13.130%
IT Specialist		13.410%	13.270%	12.840%	13.130%
IT Specialist		13.410%	13.270%	12.840%	13.130%
Safety Manager		13.410%	13.270%	12.840%	13.130%
Chief Legal/Regulatory Officer		0.000%	30.000%	30.000%	30.000%
<b>Total Annual Allocation Billing</b>	See Below	\$ 120,340	\$ 130,018	\$ 167,501	\$ 172,526
<b>Total IT Expense Allocation (Not Including Wages/Benefits)</b>	See Below	\$ 14,637	\$ 14,833	\$ 20,215	\$ 20,821
<b>Total Administrative Expense Allocation (Not Including Wages/Benefits)</b>	See Below	\$ 26,823	\$ 25,214	\$ 25,295	\$ 26,054
<b>Charitable Contributions</b>	N/A	\$ -	\$ -	\$ -	\$ -
<b>Lobbying/Other</b>	N/A	\$ -	\$ -	\$ -	\$ -
<b>Incentive Compensation</b>	N/A	\$ -	\$ -	\$ -	\$ -
<b>Other/Miscellaneous</b>	N/A	\$ -	\$ -	\$ -	\$ -

**CITIZENS' ELECTRIC COMPANY OF LEWISBURG, PA RESPONSE TO  
OFFICE OF CONSUMER ADVOCATE INTERROGATORIES REQUEST  
DOCKET NO. R-2022-3032369**

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The costs allocated to Citizens' Electric from C&T Enterprises are spread to the following accounts based on labor activity for the month:

107	588.72	920.2
108	588.82	932.2
184	592.2	
580.2	593.2	
582.2	593.52	
583.2	593.62	
584.2	594.2	
586.2	595.2	
587.2	596.2	
588.2	903.2	

**Response Provided by: Melissa Sullivan, Chief Financial Officer  
C&T Enterprises, Inc.**

**Kathy Stauder, Chief Financial Officer  
Citizens' Electric Company of Lewisburg, PA**

**Date: July 14, 2022**

**BEFORE  
THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission** :  
 :  
 **v.** : **Docket No. R-2022-3032300**  
 :  
**Valley Energy, Inc.** :

**REBUTTAL TESTIMONY  
OF  
EDWARD E. ROGERS**

**ON BEHALF OF  
VALLEY ENERGY, INC.**

**AUGUST 16, 2022**

**BEFORE  
THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission** :  
 :  
 **v.** : **Docket No. R-2022-3032300**  
 :  
**Valley Energy, Inc.** :

**REBUTTAL TESTIMONY OF EDWARD E. ROGERS  
ON BEHALF OF VALLEY ENERGY, INC.**

**Q. Please state your name.**

A. My name is Edward E. Rogers.

**Q. Are you the same Edward Rogers that presented Direct Testimony on behalf of Valley Energy Company ("Valley" or "Company")?**

A. Yes.

**Q. What is the purpose of your Rebuttal Testimony?**

A. My testimony will respond to the following witnesses' direct testimony:

- Office of Consumer Advocate ("OCA") Witness DeAngelo and Bureau of Investigation and Enforcement ("I&E") Witness Keller regarding recommended Return on Equity ("ROE") allowances, including their proposals to deny the Company's proposed size and performance adjustments
- OCA Witness Mugrace regarding his proposed adjustments to the Company's rate case expenses, employee benefits, and salary and wage adjustment;
- I&E Witness Sakaya regarding his proposed reporting requirements for the Company's plant in service; and



- OCA Witness DeAngelo regarding her proposed adjustments to the Company's proposed disconnection and reconnection fees.

I will also briefly respond to public input testimony from Athens Borough Manager Mark Burgress and South Waverly Borough Council Vice-President Burdett Porter.

**RETURN ON EQUITY**

**Q. Please summarize the parties' positions regarding an appropriate ROE for Valley (OCA Statement No. 2 at 5; I&E Statement No. 2 at 6).**

A. I&E Witness Mr. Keller recommends an ROE of 9.7%, and OCA Witness Ms. DeAngelo recommends an ROE of 9.5%.

**Q. Do you have any initial comments regarding the OCA and I&E recommendations?**

A. Yes. In the Company's 2019 base rate case proceeding, the Commission approved an ROE of 9.73%, which included a size adjustment and a management effectiveness adjustment. Since then, we have seen significant inflationary trends that did not exist in 2019 and would justify a higher ROE, as supported by Valley's Witness D'Ascendis.

**Q. Have you reviewed the parties' positions on Mr. D'Ascendis' adjustments to the Company's ROE (OCA Statement No. 2 at 11-13; I&E Statement No. 2 at 37-45)?**

A. Yes. Both Ms. DeAngelo and Mr. Keller oppose the Company's proposed size and performance adjustments.

**Q. Do you have any further comments with regard to the size and performance adjustments?**

A. Mr. D'Ascendis' Rebuttal Testimony provides the primary response to I&E and OCA on these adjustments. My testimony supplements Mr. D'Ascendis' response..

## Valley Statement No. 4R

Regarding the performance adjustment, both Ms. DeAngelo and Mr. Keller inappropriately accuse the Company of seeking additional returns for complying with its mandatory obligations. These arguments are directly contradicted by my Direct Testimony, where I reviewed several initiatives and accomplishments that reflect Valley's commitment to exceeding performance standards, not merely meeting them. For example, Valley was under no obligation to offer Smarthub online account access to its customers. Similarly, Valley proactively replaced 100% of its cast iron and steel mains years before larger Natural Gas Distribution Companies ("NGDCs") implemented DSICs for their replacement programs, which is illustrative of the Company's effective management and commitment to reliability and customer service. Once that was accomplished, we turned our focus to replacing vintage plastic mains. Our proactive initiatives to maintain and replace gas infrastructure so as to reduce significantly the lost and unaccounted for gas to levels that are far below other NGDCs. Exhibit\_\_(ER-1R) compares our lost and unaccounted for gas percentage to other Pennsylvania utilities. Proactively managing our lost and accounted for gas percentage saves our consumers money on every mcf of gas that they use and is better for the environment.

Additionally, our outstanding emergency response, low customer complaints rate and high favorable customer feedback, as well as Valley's customer service efforts to assist payment-troubled accounts during COVID-19 should be considered in awarding an upward performance adjustment. A performance adjustment mechanism is available under Pennsylvania statute, and I believe Valley has earned it based on the Company's achievements and initiatives outlined in my Direct Testimony. Neither Mr. Keller nor Ms. DeAngelo have the experience in utility operations to appreciate the effort that is necessary

to ensure that “operations are running exactly as they are expected,” as Ms. DeAngelo suggests in her testimony rejecting the performance adjustment.<sup>1</sup> I can attest based on my 30 years of utility experience that Valley exceeds the performance of other utilities and deserves the small performance adjustment that we are proposing.

**Q. Do you have any comments regarding the size adjustment?**

A. With respect to Valley's proposed size adjustment, my Direct Testimony explains the real risk of losing one or more of our largest customers who have access to potential alternatives to natural gas service. Additionally, the Commission has previously approved a size adjustment for small utilities, including Valley. Contrary to OCA Witness DeAngelo's characterization of the Commission's holding regarding the outcome of Citizens' request for a size adjustment in its 2019 rate base case proceeding, the Commission specifically considered the size of the company. In doing so, the Commission approved an upward adjustment to the cost of equity by allowing for one standard deviation above the average of the mean and median proxy group ROE of the Company's DCF analysis.<sup>2</sup> In doing so, the Commission specifically recognized Mr. D'Ascendis' record evidence of a general inverse relationship between size and risk, such that smaller companies like Citizens' face greater risk. Although not referenced in Ms. DeAngelo's testimony, the Commission used the same analysis to award a size adjustment in Valley's 2019 rate proceeding<sup>3</sup> Consistent with the Commission's affirmative finding of size risk in the 2019 Valley and Citizens'

---

<sup>1</sup> OCA Statement No. 2 at 13.

<sup>2</sup> *Pa. PUC v. Citizens Electric Company of Lewisburg, PA*, Docket No. R-2019-3008212 (Order Entered April 29, 2020). See generally Disposition of Cost of Common Equity at 103-104.

<sup>3</sup> *Pa. PUC v. Valley Energy, Inc.*, Docket No. R-2019-3008209 (Order Entered April 27, 2020). See generally Disposition of Rate of Return of Common Equity at 124-125.

decisions, Company Witness D'Ascendis recommended a size premium of 0.90% for Valley. This recommendation should be approved by the Commission.

**Q. Have the considerations on which the Commission's size and performance adjustment determinations were based changed since the last rate case?**

A. No. Valley is still a very small utility. As Mr. D'Ascendis has testified, it still requires a higher return to provide the resources to handle significant events that affect revenues, costs, plant and earnings. And as stated above, Valley still performs very well on the measures of management effectiveness discussed in the Commission's Order in the last rate case.

**Q. Is it important that the Commission be consistent in applying the criteria it uses to determine ROE?**

A. Yes, it is critically important. Mr. Gorman discusses some of the policy reasons why consistency is important. It is also very important for business and financial planning. When we are making investment decisions and planning for future financial activities, including the timing of rate cases, it is important for us to be able to use consistent assumptions. Large changes in regulatory treatment on the size adjustment would complicate our planning and create additional financial risk for Valley.

**OTHER PROPOSED ADJUSTMENTS**

**Q. Mr. Rogers, will you be the only respondent addressing adjustments to expenses and rate base proposed by the OCA and I&E Witnesses in this proceeding?**

A. No. Mr. Gorman, Ms. Sullivan and Ms. Levering will also address the proposed expense adjustments. My testimony will supplement Mr. Gorman's responses to the adjustments. To the extent I do not address a proposed adjustment in my testimony, such omission does not represent my acceptance of, or agreement with, the proposed adjustment.

**SALARY AND WAGE BALANCES**

**Q. Did OCA propose adjustments to Valley's Salary and Wage balances (OCA Statement No. 1 at 16)?**

A. Yes. Mr. Mugrace proposed adjustments totaling \$81,853 to the Company's FPPTY Salary and Wage balances based on his recommendation to average the Company's Salary and Wage balances over the period 2021 – 2023.

**Q. Did you find the adjustments to Valley's Salary and Wage balance proposed by OCA to be generally reasonable?**

A. No. I think OCA misunderstands the relationship between the holding company, C&T Enterprises, Inc. ("C&T") and the operating utilities, Citizens, Wellsboro and Valley. OCA Witness Mugrace describes his basis for the adjustment as follows:

My reasoning is that the parent Company C&T currently provides oversight in allocating human resources, and payroll to each of its regulated subsidiaries. Company Witness Ms. Sullivan stated that the AIA assigns various employees to the each of the subsidiaries (Statement No. 3 at 5). OCA Statement No. 1 at 16.

This is not accurate. While Ms. Sullivan did reference the assignment of employees to the Companies, she also clarified that "[t]he operating companies each determine which individuals they want to have on their staffs... ." Valley Statement No. 3 at 6. As a result, C&T does not oversee or assign the allocation of employees to the Companies, these decisions are made by the respective companies based on operational needs. Once an employee is placed with Valley, the employee will perform services for Valley and remain a Valley employee unless and until the employee quits, retires or is involuntarily separated. Those decisions are made by the Valley management team, not by C&T. Any year-to-year expense fluctuations are due to events and decisions at Valley, including decisions to create new positions, vacancies that may occur as we transition an employee (either voluntarily or

involuntarily), disability leaves, etc., C&T does not have an independent role in determining the employee complement for Valley or the other operating companies.

Valley has developed its FPFTY Salaries and Wage balance using a thorough bottom-up approach that reflects the actual employee complement needed for its operations, as allowed when using FPFTY. Additionally, the projected Salary and Wage balance includes merit and step increases, which can result in an overall increase that exceeds the base compensation adjustment. We provided multiple detailed discovery responses that support the Salary and Wage projections for the FTY and FPFTY. A redacted version of one such response is attached as Exhibit\_\_(ER-2R). We also provided discovery responses explaining how we will establish the base compensation adjustment for the FPFTY, which no party disputed in the Direct Testimony. Therefore, averaging the Company's Salary and Wage balance over a three-year period is inappropriate.

**Q. Did OCA propose an adjustment to Valley's Payroll Tax expense (OCA Statement No. 1 at 18)?**

A. Yes. Applying the same 3-year averaging approach applied to the Salary and Wage balance, OCA calculated a total of \$7,482 downward adjustments to Valley's proposed Payroll Tax expense.

**Q. Do you agree with the adjustment?**

A. No. Valley Witness Jamie Levering addresses the support for the Company's claimed Payroll Tax expense. As detailed in her testimony, OCA's proposed adjustment conflicts with the evidence provided by Valley. Valley's proposed Payroll Tax expense has been supported and should be approved.

***O&M INFLATION***

**Q. What did OCA propose for Valley's O&M Inflation factor (OCA Statement No. 1 at 20)?**

A. OCA recommends that the Commission deny Valley's proposal to increase certain FPFTY expenses by an inflation factor equal to the 2% Gross Domestic Product ("GDP") rate. This adjustment reduces the Company's claims for Distribution and Maintenance expense by \$18,800 and \$7,583, respectively.

**Q. Is OCA correct?**

A. No. OCA is analogizing this adjustment to the Company's prior rate case where budgeted 2019 costs were proposed to increase by 3% to project costs for 2020 (the fully projected future test year in that rate case). Specifically, OCA argues that Inflation-related increases or adjustments are broad blanket-type adjustments that are applied to all goods and services, which may or may not be directly related to costs incurred by the Company. The Company acknowledges that it applied a broad inflation adjustment to budgeted O&M expense in its 2019 rate case. However, the Company adopted a far more granular approach for this 2022 rate case and applied the proposed 2% 20-year average GDP price deflator to calculate FPFTY increases to certain materials costs. Exhibit\_\_(ER-3R) is our response and Attachments A-B to OCA-II-5, which explains our analysis in more detail.

For service-related expenses, the Company undertook a granular review of year-to-year variances over a four-year period and removed one-time expenses to calculate an average FPFTY increase. See *id.* The Company provided a detailed accounting of the methods applied for individual FPFTY expenses through discovery. See Exhibit\_\_(ER-3R), Attachment A to OCA-II-5. The Company cannot hope to support the FPFTY expenses

with the specificity of FTY expense because these costs will remain projections for the duration of the rate case. However, the Company has not applied a broad inflation adjustment as suggested by OCA. The Company's limited use of an inflation factor for materials FPFTY expense is reasonable and should be approved.

***DISTRIBUTION AND MAINTENANCE EXPENSE***

**Q. Do you have any comments in response to OCA's proposed adjustment to Distribution and Maintenance Labor Overhead – Payroll Tax expense (OCA Statement No. 1 at 20)?**

A. Yes. This adjustment derives from the previously discussed Salary and Wage expense adjustment and would result in decreases to Labor Overhead – Payroll Tax and Maintenance Expenses Labor Overhead Payroll.

**Q. Do you agree with OCA?**

A. No. OCA proposes to average Valley's Distribution and Maintenance - Labor Overhead-Payroll Tax expense over three years based on the mistaken premise that the projected costs are not known and measurable. As discussed in my response to the proposed Salary and Wage adjustment, Valley developed its costs using a bottom-up approach and provided support for its forecast labor expenses, including the Labor Overhead-Payroll expense.

***CUSTOMER ACCOUNTING AND COLLECTION EXPENSE***

**Q. Do you have any comments in response to OCA's proposed adjustment to the filed Customer Accounting and Collection expense (OCA Statement No. 1 at 21-22)?**

A. Yes. OCA proposes to adjust the Company's Customer Accounting and Collection expense to reflect its Inflation, Sponsorships/Advertising, and Labor Overhead and Payroll adjustments. These adjustments would respectively reduce the Company's Customer



Accounting and Collection expense by \$12,852, \$4,237, and \$637. I will discuss the inflation and Labor/Overhead/Payroll adjustments. Mr. Gorman will address the Sponsorships/Advertising adjustment.

**Q. Do you agree to OCA's proposed Inflationary adjustment for Customer Accounting and Collection expense?**

A. No. As explained in my prior response to the OCA's proposed O&M Inflation adjustment, the Company has supported a 2% GDP deflator inflation adjustment for certain materials expenses based on an analysis of those expenses. We did this based on a full analysis, which is a reasonable method to project costs for the FPFTY.

**Q. Do you agree with OCA's proposed adjustment for Customer Accounting and Collection – Payroll Tax expense?**

A. No. OCA proposes to average Valley's Customer Accounting and Collection - Labor Overhead-Payroll Tax expense over three years based on the mistaken premise that the projected costs are not known and measurable. As discussed in my response to the proposed Salary and Wage adjustment, Valley developed its costs using a bottom-up approach and provided support for its forecast labor expenses, including the Labor Overhead-Payroll expense.

***ADMIN AND GENERAL EXPENSE***

**Q. Have you reviewed OCA's proposed adjustments to the Company's claimed Admin and General expense (OCA Statement No. 1 at 27-28)?**

A. Yes. OCA applies its Payroll Tax and Inflation factor proposals to support downward adjustments to Admin and General expense for Labor and Payroll Tax and for Inflation. The OCA also proposes adjustments for rate case, employee recognition dues and

subscriptions, office supplies and expense, outside services and property insurance expenses. In addition to my responses below, Ms. Levering and Mr. Gorman will also address some of these adjustments.

**Q. Do you agree with OCA's proposed Payroll Tax and Inflation factor adjustments?**

A. No. As explained in the discussion of OCA's proposed Salary and Wage adjustment, the Company has supported its increased labor costs. Similarly, my response to OCA's proposed Distribution and Maintenance expense explains the basis for the limited FPPTY inflationary adjustments.

**Q. Please summarize the OCA proposed adjustments to the Company's claim for rate case expense (OCA Statement No. 1 at 24-26)?**

A. Mr. Mugrace makes two distinct adjustments to the Company's claimed base rate case expense. First, he adds the costs of the Company's five base rate case proceedings, starting with 2004, and calculates an average cost for the proceedings. Mr. Mugrace then proposes to normalize the average cost over a four-year period. He explains that this method reduces the Company's proposed rate case expense from \$122,359 to \$85,919.

**Q. Do you agree with the adjustment to average Valley's proposed rate case expense over the past five proceedings?**

A. No. Mr. Mugrace's proposed rate case expense allowance is clearly insufficient. The costs of preparing, defending and litigating a rate case have increased dramatically over the 18-year period that Mr. Mugrace uses as the basis for his calculation. For example, the total cost of our 2007 rate case was \$136,214, while the cost of our 2019 rate case was \$326,773. The cost of our 2019 case actually exceeded the projected cost that the Commission accepted and included in rates, which was \$271,000 (normalized over 3 years). When the

litigation cost exceeds the allowed rate case expense that is included in rates, the utility absorbs that amount.

In addition, the actual expenses from our 2019 case demonstrate that our current rate case expense claim is reasonable. Mr. Gorman will address this issue in detail in his rebuttal testimony.

**Q. Do you have any comments regarding Mr. Mugrace’s proposal to normalize the rate case expense over 4 years, rather than 3 years?**

A. Yes. The PUC rejected a similar proposal in the 2019 rate case. As I explained in my testimony in that case, the Company was able to avoid filing a rate case between 2010 and 2019 due to a very large new contract customer that connected to the Valley system following our 2010 rate case. Without that customer, we would have sought rate relief at least one time between 2010 and 2019. In addition, as I testified in the 2019 rate case, we anticipate that Valley will be filing rate cases on a three-year cycle going forward. The current proceeding confirms that my testimony was correct. We still anticipate a three-year cycle going forward from this case.

**Q. Do you have any comments in response to OCA proposed adjustments to Employee Pension and Benefits?**

A. Yes. OCA Witness Mugrace proposed to disallow \$11,085 of costs related to Employee Benefits and Pension and allow only a clothing allowance. The “Benefits and Pension” expenses at issue are employee recognition costs. I am informed by counsel that the Commission has a long history of recognizing that employee recognition events can incentivize an effective workforce and are recoverable expenses. For example, the Commission allowed Citizens' employee recognition expenses at the last 2019 rate base

case.<sup>4</sup> At every Valley employee appreciation event, remarks are made by the Company's senior staff recognizing employee contributions to the Company. An important benefit of these minor costs is to improve morale which reduces turnover and improves customer service. Accordingly, the Company should be permitted to recover expenses for employee recognition events, including Employee Service Awards, Employee Appreciation Events, retirement parties, and holiday events, as listed in Exhibit\_\_(ER-4R), which attaches the Company's response to Interrogatory OCA-II-10.

**Q. Do you have any response to OCA's proposed adjustments to Dues and Subscriptions?**

A. Yes. OCA Witness Mugrace proposes a \$5,415 adjustment to the Company's Dues and Subscriptions expense based on his observation that all identified expenses other than the Company's dues to the American Gas Association ("AGA") and the Northeast Gas Association ("NGA") are unrecoverable costs for fraternal or social clubs and chamber of commerce organizations.

**Q. Does Valley accept this adjustment?**

A. Partially. The Company agrees its AGA and NGA memberships are recoverable. However, several other dues and subscriptions relate to the Company's utility operations and should be recoverable. Specifically, OCA's adjustment should be modified to include allowances for dues and subscriptions for BKD Integra Hotline (fraud prevention), National Association of Corrosion Engineers (corrosion control association critical for maintaining best practices and certifications), National Fire Protection Association (fire protection association critical for maintaining best practices), American Public Gas Association (Distribution Integrity

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<sup>4</sup> *Pa. PUC v. Citizens Electric Company of Lewisburg, PA*, Docket No. R-2019-3008212 (Order Entered April 29, 2020). See generally *Employee Pension & Benefits (Account 926)* at 73-75.

Management Plan subscription fee for software model), and the Energy Association of Pennsylvania (state-wide industry association complementing the regional and national industry knowledge and updates provided by AGA and NGA). These expenses should be accepted. As detailed in Mr. Gorman's testimony, this modification would reduce OCA's adjustment to \$1,244.

**RATE BASE REPORTING REQUIREMENTS**

**Q. Have you reviewed the plant in service proposal from I&E (I&E St. No. 3 at 6-7).**

A. Yes. I&E witness Sakaya accepts the Company's plant in service projections for the FTY and FPFTY, but adds a request for the Company to submit updates to Schedule C3-CU by April 1, 2023 (for the year ended December 31, 2022) and by April 1, 2024 (for the year ended December 31, 2023).

**Q. Do you have a response to Mr. Sakaya's proposal?**

A. Yes. The Commission has not adopted rules or regulations comprehensively addressing the requirements for public utilities utilizing the FPFTY. The Company should not be required to comply with additional filing requirements unless those requirements are part of the regulations applicable to all NGDCs. I&E and other interested parties will have the opportunities to review this information when the Company files a subsequent base rate case.

**Q. Did the PUC address a similar issue in Valley's 2019 Rate Case?**

A. Yes. On pages 135 to 136 of its Final Order in the Company's 2019 rate case, the Commission denied I&E's request for this reporting<sup>5</sup>. The Commission explained several reasons for the rejection, including:

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<sup>5</sup> *Pa. PUC v. Valley Energy, Inc.*, Docket No. R-2019-3008209 (Order Entered April 27, 2020). See generally Disposition of Rate of Return of Common Equity at 135-136.

- “We find that, on balance, and because reporting requirements are not uniform to all NGDCs, requiring additional reporting by Valley is unnecessary in this case.”<sup>6</sup>
- “[T]he imposition of additional reporting requirements is not required by statute or regulation.”<sup>7</sup>
- “In addition, a careful review of each case is advisable when considering the imposition of reporting beyond that required in the already heavily regulated utility industry. The instant case is distinguishable from I&E’s cited cases, in that there is no agreement by the utilities in the context of a negotiated settlement. Further, we find that requiring such augmented reporting is not in the public interest, because we have not adopted comprehensive FPFTY regulations defining reporting parameters. Finally, we find persuasive Valley’s argument that requiring increased reporting would impose an unfair regulatory burden on a small utility.”<sup>8</sup>
- “We observe that, consistent with the regulatory requirements of all NGDCs, Valley already submits numerous filings to the Commission each year, providing much of the information that I&E seeks.”<sup>9</sup>

**Q. Do those reasons remain valid today?**

A. Yes. All of those reasons remain valid and applicable today and support rejection of I&E’s reporting requirements.

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<sup>6</sup> *Id.*

<sup>7</sup> *Id.*

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

**DISCONNECTION AND RECONNECTION FEES**

**Q. OCA Witness Ms. DeAngelo opposes Valley’s changes to its disconnection and reconnection fees in Tariff Rules 7C and 8(2). Please summarize her position.**

A. On pages 13 to 15 of her testimony, Ms. DeAngelo opposes the revised fees because our proposed fees allegedly are not comparable to other Pennsylvania NGDCs, and because we had not responded to the OCA’s discovery requesting cost support for the fee.

**Q. Do you agree that Valley’ proposed fees are not comparable to other Pennsylvania NGDC?**

A. No. Ms. DeAngelo lists six NGDCs on page 14 of her Direct Testimony. Our fees are comparable to National Fuel Gas and Peoples’ Gas on her table. More importantly, however, the proposed fees reflect Valley’s costs for disconnections and reconnections.

**Q. When did the OCA request the cost support for the proposed fee changes?**

A. The OCA issued this question along with 28 other questions in its Set IV discovery, which was issued on July 13, 2022 and due on July 25, 2022. On the July 25 due date, Valley responded to OCA-IV-4 by providing the analysis attached as Exhibit\_\_(ER-5R) showing how the rates were calculated. This should resolve any disputes regarding the cost-justification for the proposed fees.

**Q. Ms. DeAngelo indicates that disconnection and reconnection fee increases would be unfair to customers who face termination for non-payment. Do you have any comments?**

A. Valley views the “fairness” of appropriately-established disconnection and reconnection fees from the context of its entire customer base. While the customer who is paying the fee

surely would like to avoid the cost, I question whether that is fair to the many other customers on our system.

**Q. Do you have any final comments?**

A. Yes. Our disconnection and reconnection fees have not been increased for 15 years. In the last proceeding, the Commission rejected our request to increase the fee because we did not provide cost support. In this proceeding, we developed the fees using the cost analysis that is attached as Exhibit\_\_(ER-5R). These fees are appropriate and should be approved.

**PUBLIC INPUT HEARING TESTIMONY**

**Q. Did you participate in the August 11, 2022, Public Input Hearing and do you have a response to the testimony?**

A. Yes. I listened to the testimony by the representatives of Athens and South Waverly during the August 11th Public Input Hearing. As they were testifying, I was struck by the similarities between the increased costs that they face and the increased costs that Valley faces. We fully appreciate the impact of increasing material and employee costs, and the needed expenditures to meet regulatory requirements or facility relocations due to ongoing projects like the PennDOT road relocations. We are very sensitive to the economic situation in our territory. We worked very hard to access funds to ensure that our payment troubled customers were not terminated after the COVID moratorium ended. We also agreed to voluntarily limit our increase to just under \$1 million, due in part to the desire to mitigate the impact on our customers. We have an obligation to provide safe and reliable service, and the rate increase requested here is needed to fulfill those obligations.

**Q. Does this complete your testimony?**

A. Yes.



**BEFORE  
THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Pennsylvania Public Utility Commission** :  
 :  
 **v.** : **Docket No. R-2022-3032300**  
 :  
**Valley Energy, Inc.** :

**EXHIBITS  
OF  
EDWARD E. ROGERS**

**ON BEHALF OF  
VALLEY ENERGY, INC.**

**AUGUST 16, 2022**

**Lost and Unaccounted For Gas Percentage Calculation - as reported to the PA Public Utility Commission under 52 Pa. Code §59.111**

	2014	2015	2016	2017	2018	2019	2020
<b>Columbia Gas of PA</b>	0.48%	1.70%	0.55%	1.33%	1.99%	0.68%	0.87%
<b>Leatherstocking Gas Co.</b>						2.02%	2.66%
<b>National Fuel Gas Distrib. Corp.</b>	-0.14%	0.29%	0.11%	-0.13%	0.41%	-0.08%	-0.17%
<b>PECO - Gas</b>	2.84%	2.37%	1.92%	0.10%	1.15%	1.04%	1.51%
<b>Peoples Natural Gas - Peoples</b>	1.50%	1.60%	2.75%	2.42%			
<b>Peoples Natural Gas - Equitable</b>	1.69%	1.70%	2.75%	2.42%			
<b>Peoples Natural Gas Co. LLC</b>	1.60%	1.65%	2.75%	2.42%	1.98%	2.79%	2.82%
<b>Peoples Gas Company LLC</b>	2.88%	3.40%	3.95%	2.47%	1.92%	2.67%	2.75%
<b>Philadelphia Gas Works *</b>	1.39%	2.08%	1.76%	1.59%	0.96%	1.36%	1.30%
<b>Pike County Light &amp; Power - Gas</b>				3.11%	4.04%	2.33%	1.96%
<b>UGI Central Rate District (CPG)</b>	1.06%	0.84%	0.77%	1.17%	1.51%	1.58%	
<b>UGI North Rate District (PNG)</b>	0.26%	0.44%	1.01%	0.18%	0.34%	0.28%	
<b>UGI South Rate District (UGI)</b>	-0.04%	0.28%	-0.12%	0.31%	0.13%	0.47%	
<b>UGI Utilities - Gas Div.</b>	0.43%	0.52%	0.55%	0.55%	0.66%	0.78%	0.34%
<b>Valley Energy</b>	-1.14%	-0.18%	0.13%	-0.11%	0.19%	-0.16%	0.33%

	BASE <sup>1</sup>	2021 Performance/Step Increase <sup>2</sup>	Total
President & CEO			
Executive Assistant			
VP/Treasurer			
Accounting Assistant			
Customer Service Manager			
Customer Service Rep A			
Customer Service Rep B			
Customer Service Rep C			
VP Operations			
Operations Assistant			
Measurement Technician			
Regulator Shop Technician			
GIS Analyst			
Corrosion Technician			
Regulator Technician			
Operations Manager			
Damage Prevention Technician			
Safety Surveillance Technician			
Inventory/Purchasing Agent			
Construction Manager			
Construction Crew Leader A			
Construction Crew Leader B			
Construction Mechanic A			
Construction Mechanic B			
Field Service Manager			
Meter Reader			
Field Service Technician A			
Field Service Technician B			LTD starting Mar 15, 2021
Field Service Technician C			
Field Service Technician D			
Field Service Technician E			hired Oct 18, 2021
	<hr/>		
	1,932,048	21,740	1,875,799
		Call Duty	13,000
		Overtime	22,811
			<hr/>
			1,911,610

<sup>1</sup> Includes an annual cost of living increase of 3.0%

<sup>2</sup> Employees are awarded performance/step increases based on job performance and level within pay grade. Performance/step increase are usually awarded April 1st and October 1st. The monies are monetary values for the portion of the year based on time of year.

	2022			
	BASE	4.5% Cost of Living Increase	Performance/Step Increase <sup>1</sup>	Total
President & CEO				
Executive Assistant				
Training & Compliance Coordinator				
VP/Treasurer				
Accounting Assistant				
Customer Service Manager				
Customer Service Rep A				
Customer Service Rep B				
Customer Service Rep C				
VP Operations				
Operations Assistant				
Measurement Technician				
Regulator Shop Technician				
GIS Analyst				
Corrosion Technician				
Regulator Technician				
Operations Manager				
Damage Prevention Technician				
Safety Surveillance Technician				
Inventory/Purchasing Agent				
Construction Manager				
Construction Crew Leader A				
Construction Crew Leader B				
Construction Mechanic A				
Construction Mechanic B				
Field Service Manager <sup>3</sup>				
Meter Reader				
Field Service Crew Chief <sup>2</sup>				
Field Service Technician B <sup>4</sup>				
Field Service Technician C				
Field Service Technician D				
Field Service Technician E				
	2,002,937	88,843	23,790	2,115,570
			Call Duty	13,000
			Overtime	19,893
				2,148,463

<sup>1</sup> Employees are awarded performance/step increases based on job performance and level within pay grade. Performance/step increase are usually awarded April 1st and October 1st. The monies are monetary values for the portion of the year based on time of year.

<sup>2</sup> Field Service Technician A promoted to newly created Field Service Crew Chief position

<sup>3</sup> Retired February 28, 2022

<sup>4</sup> Retired February 2, 2022

2023

	BASE	Projected 3.0% Cost of Living Increase	Performance/Step Increase <sup>1</sup>	Total
President & CEO				
Executive Assistant				
Training & Compliance Coordinator				
VP/Treasurer				
Accounting Assistant				
Customer Service Manager				
Customer Service Rep A				
Customer Service Rep B				
Customer Service Rep C				
VP Operations				
Operations Assistant				
Measurement Technician				
Regulator Shop Technician				
GIS Analyst				
Corrosion Technician				
Regulator Technician				
Operations Manager				
Damage Prevention Technician				
Safety Surveillance Technician				
Inventory/Purchasing Agent				
Construction Manager				
Construction Crew Leader A				
Construction Crew Leader B				
Construction Mechanic A				
Construction Mechanic B				
Meter Reader				
Field Service Crew Chief				
Field Service Technician C				
Field Service Technician D				
Field Service Technician E				
	2,046,898	61,407	18,170	2,126,475
			Call Duty	13,000
			Overtime <sup>2</sup>	28,669
				2,168,144

<sup>1</sup> Employees are awarded performance/step increases based on job performance and level within pay grade. Performance/step increase are usually awarded April 1st and October 1st. The monies are monetary values for the portion of the year based on time of year.

<sup>2</sup> Increased overtime labor hours for budgeted capital work

**VALLEY ENERGY, INC. RESPONSE TO  
OFFICE OF CONSUMER ADVOCATE INTERROGATORIES  
DOCKET NO. R-2022-3032300**

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**OCA-II-5** Please provide a schedule and development of all Inflationary and CIP's adjustments that the Company used to develop its proposed revenue requirement increase of approximately \$1.0 million. Please also show where these adjustments are accounted for and recorded in the Company's O&M Expense categories, and if applicable, Rate Base category along with the actual percentage of inflation and deflation adjustments.

**Response:**

The Company performed an analysis of all expense accounts that took into account the make-up of the expenses (material purchases vs. service oriented), variances from year to year, removal of one-time expenses (expenses not projected to reoccur), coding of expenses, inflation percentage based on historical averages and known percentage increases.

To calculate expenses for Future Test Year (FTY) and Fully Projected Test Year (FPTY), these five factors were applied:

1. Material purchases vs. service oriented expenses – for expenses that were primarily comprised of material purchases; an inflation factor was applied based on review of materials in addition to these other analysis.
2. Variances from year to year – previous four years of data was examined to evaluate percentage increases and decreases in expenses, and an average expense was applied in addition to these other analysis.
3. Removal of one-time expenses – expenses that were not anticipated to reoccur were removed from future year projections.
4. Coding of expenses –expenses that were miscoded and allocated to the wrong account were reassigned to correct account and credit the original account.
5. Inflation factor – for materials the Company uses the Gross Domestic Product (GDP) price deflator inflation 20-year average rather than the Consumer Price Index (CPI) for this same time period. The GDP price deflator is a more comprehensive inflation measure than the CPI index because it isn't based on a fixed basket of goods. The GDP price deflator measures the changes in prices for all the goods and services produced in an economy. Refer to Attachment A to OCA-II-5 GDP vs. CPI Table (2000-2021) for historical values.

Refer to Attachment B to OCA-II-5 Expense Schedule Analysis for breakdown of material expense by account and analysis used to determine expense for FTY and FPTY.

**VALLEY ENERGY, INC. RESPONSE TO  
OFFICE OF CONSUMER ADVOCATE INTERROGATORIES  
DOCKET NO. R-2022-3032300**

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Transportation expenses are calculated by using a three percent annual increase based on 20-year average of actual expense allocations and not applied to previous year expense due to wide fluctuations in expense from year to year (e.g., fuel costs and major repairs).

The same inflation and deflation adjustments used for O&M expenses are used to calculate capital projects (labor, labor overheads, transportation and material costs).

**Response Provided by: Edward E. Rogers, President and Chief Executive Officer  
Valley Energy, Inc.**

**Date: July 18, 2022**

	<b>CPI</b>	<b>GDP</b>
<b>2002</b>	1.6	1.6
<b>2003</b>	2.3	2.0
<b>2004</b>	2.7	2.7
<b>2005</b>	3.4	3.1
<b>2006</b>	3.2	3.1
<b>2007</b>	2.8	2.7
<b>2008</b>	3.8	1.9
<b>2009</b>	-0.4	0.6
<b>2010</b>	1.6	1.2
<b>2011</b>	3.2	2.1
<b>2012</b>	2.1	1.9
<b>2013</b>	1.5	1.7
<b>2014</b>	1.6	1.9
<b>2015</b>	0.1	1.0
<b>2016</b>	1.3	1.0
<b>2017</b>	2.1	1.9
<b>2018</b>	2.4	2.4
<b>2019</b>	1.8	1.8
<b>2020</b>	1.2	1.2
<b>2021</b>	4.7	4.1
<b>Average</b>	<b>2.2</b>	<b>2.0</b>



O&M Account	Description	2022 Adjustment Summary	2023 Adjustment Summary
871.45	DISTRIBUTION LOAD DISPATCHING	Historical % increase of expenses plus 2021 invoice for vendor paid in December 2020 rather than January of the following year.	Historical % increase of expenses
874.45	MAT & SUP MAINS & SERVICES	Average expense for last 3 years used	2% GDP
874.50	CALL CENTER EXP	Average expense for last 3 years used plus increase in base fee	2022 expense plus base fee increase
875.45	MAT/SUP MEAS & REG STATION	Average expense for last 3 years used	2% GDP
876.45	MAT & SUP IND/CM METER/REG	Known increase in amortization of prover certification	Known increase in amortization of prover certification
877.45	MAT/SUP CITY GATE	Historical % increase and crediting account	Historical % increase and 2% GDP
878.45	MAT/SUP MTR/HSE REG	Average expense for last 4 years used (removing 2019 due to higher than normal expense)	2% GDP
879.45	MAT/SUP CUST INSTALL EXP	Average expense for last 3 years used	2% GDP
880.45	MAT/SUP OTHER DISTRIBUTION EXP	Average expense for last 3 years used	2% GDP
881.45	RENTS - DISTRIBUTION EXP	Historical % increase	Historical % increase
886.45	MAT/SUP MAINT STRUCTURES	Average expense for last 3 years used with deductions for one-time expenses not reoccurring	2% GDP
887.45	MAT/SUP MAINT MAIN	5% due to material increases expensed to this account and crediting of expenses and deductions for one-time expenses not reoccurring	2% GDP
889.45	MAT/SUP MAINT M&R STATION	5% due to material increases expensed to this account and additional material required for planned enhanced over-pressure protection equipment maintenance	2% GDP
890.45	MAT/SUP MAINT M&R IND	5% due to material increases expensed to this account and additional material required for planned enhanced over-pressure protection equipment maintenance	2% GDP

O&M Account	Description	2022 Adjustment Summary	2023 Adjustment Summary
891.45	MAT/SUP MAINT CITY GATE	Average expense for last 4 years used (removing 2019 due to lower than normal expense)	2% GDP
892.45	MAT/SUP MAINT SERVICE	Average expense for last 4 years used	no inflation factor applied
893.45	MAT/SUP MAINT MTR & HSE REG	Average expense for last 4 years used (removing 2019 due to lower than normal expense) plus 5% GDP	2% GDP
902.45	MAT/SUP METER READING EXP	Average expense for last 3 years used	2% GDP
903.25	NISC BILLING	Average expense for last 3 years used	2% GDP
903.45	MAT/SUP CUSTOMER	no inflation factor applied	2% GDP
903.55	DOLLAR ENERGY FUND EXP	Historical % increase	Historical % increase
905.45	MAT/SUP MISC CUSTOMER	Average expense for last 3 years used plus 5%	2% GDP
909.45	INFORMATION/INSTRUCTIONAL	Average expense for last 3 years used	2% GDP
913.45	ADVERTISING	Average expense for last 3 years used	2% GDP
920.45	MAT/SUP ADMINISTRATIVE	Average expense for last 3 years used	2% GDP
921.00	GENERAL OFFICE SUPPLIES	Historical % increase plus deductions for one-time expenses not reoccurring	2% GDP
921.40	MEALS EXPENSE	Expense based on budgeted outside training	Expense based on budgeted outside training
921.45	TRAVEL AND TRAINING	Expense based on budgeted outside training	Expense based on budgeted outside training
921.50	COMMUNICATION EQUIPMENT	Based on known costs with no % increase	Based on known costs with no % increase
923.00	OUTSIDE SERVICES EMPLOYED	Based on known costs with historical % increase	Based on known costs with historical % increase
923.25	AUDITORS FEES	Based on projected increase (4%)	Based on projected increase (7%)

O&M Account	Description	2022 Adjustment Summary	2023 Adjustment Summary
923.45	ATTORNEY FEES	No increase other than including invoice for vendor paid in February 2022 rather than December the previous year.	2% GDP
924.00	PROPERTY INSURANCE	Historical % increase	Historical % increase
925.00	INJURIES & DAMAGES	Historical % increase	Historical % increase
925.10	INSURANCE STREET BONDS	2% GDP	2% GDP
926.45	EMPLOYEE BENEFITS - DIRECT EXP	2% GDP	2% GDP
928.00	REGULATORY COMMISSION EXP	Known amortization amount	Known plus projected amortization amount
930.20	MISCELLANEOUS GENERAL EXP	Average expense for last 3 years used plus debiting expense from other account	2% GDP
930.22	DUES/COMPANY MEMBERSHIPS	Historical % increase	Historical % increase
930.25	DIRECTORS EXPENSE	Budgeted increases to expense	Budgeted increases to expense
930.45	DIRECTOR EXP - TRAVEL/TRAINING	Planned expense	Planned expense
932.45	MAINT GENERAL PLANT	Average expense for last 3 years used	2% GDP

**VALLEY ENERGY, INC. RESPONSE TO  
OFFICE OF CONSUMER ADVOCATE INTERROGATORIES  
DOCKET NO. R-2022-3032300**

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**OCA-II-10** Please provide a breakdown of the following by expense category/account nos. and a brief explanation for the periods 2020-2023:

- Sponsorships/Volunteer Activities/Outside Non-Profit Boards
- Corporate Dues
- Research and Development
- Employee Activities
- Public Venue Ads/Events/Communication Activities
- Economic Development /Workforce Development
- Community Services/Community Involvement

**Response:**

See Attachment A to OCA-II-10 for an annual breakdown.

**Response Provided by: Jamie Levering, Vice President/Treasurer  
Valley Energy, Inc.**

**Date: July 13, 2022**

**Valley Energy, Inc.**  
**Attachment A to OCA-II-10 2020**

<u>Date</u>	<u>Description</u>	<u>Amount</u>
<b>Sponsorships/Advertisements - Account 913.45</b>		
01/01/20	WATS BROADCASTING (CHRISTMAS IS FOR KIDS)	82.82
01/09/20	ARTS4ALL	100.00
01/10/20	SAYRE LITTLE LEAGUE	75.00
02/03/20	WATS BROADCASTING	579.74
02/10/20	KEYSTONE WARDENS	75.00
02/18/20	ROYAL PUBLISHING PIAA 2020 BASKETBALL	65.00
02/20/20	TOWANDA ROTARY CLUB	100.00
02/20/20	ST. AGNES SCHOOL	30.00
03/04/20	ROYAL PUBLISHING PIAA 2020 SWIMMING	55.00
04/01/20	ENDLESS MOUNTAINS PREGNANCY CTR	100.00
05/18/20	GAMBAL LLC	99.00
07/01/20	GREATER VALLEY CHAMBER OF COMMERCE	62.24
07/01/20	VALLEY YOUTH SOCCER ASSOCIATION	165.98
07/17/20	KEYSTONE WARDENS	75.00
08/01/20	BRADFORD SULLIVAN COUNTIES OYW	45.00
08/14/20	CENTRAL BRADFORD COUNTY	50.00
08/31/20	GREATER VALLEY CHAMBER OF COMMERCE	124.48
10/01/20	ATHENIAN	55.00
10/26/20	ROYAL PUBLISHING PIAA 2020 PLAYOFFS	45.00
11/23/20	RADIGAN BROADCASTING 2020 CHRISTMAS	259.00
<b>Dues &amp; Subscriptions - 930.22</b>		
1/9/2020	Bradford County Regional Arts	\$100.00
1/15/2020	Bradford County Conservation	\$25.00
1/31/2020	BKD Integra Hotline	\$448.62
3/4/2020	Northeast Gas Association	\$5,383.30
4/1/2020	Sayre Rotary Club	\$250.00
7/31/2020	Bradford County Regional Arts	\$100.00
8/4/2020	National Fire Protection Association (NFPA)	\$145.23
9/30/2020	Sayre Rotary Club	\$269.38
10/6/2020	Quill Corp	\$69.99
11/1/2020	Greater Valley Chamber of Commerce	\$207.47
11/13/2020	Midwest Energy Association	\$1,335.94
12/1/2020	PA Dept of State	\$58.09
12/1/2020	American Gas Association	\$6,897.96
12/14/2020	Energy Association of PA	\$1,656.00
12/31/2020	Sayre Rotary Club	\$125.00
<b>Research &amp; Development</b>		
No expenses were claimed in filing		
<b>Employee Activities - Account 926</b>		
	Awards	\$214.00
	Employee Recognition Event - December	\$430.00
	Employee Luncheon	\$790.00
	End of Year Benefit	\$5,145.00
	Retirement Gifts	\$724.00
	Employee Clothing	\$712.00
<b>Economic Development</b>		

No expenses were claimed in filing

**Workforce Development**

Staking University	\$	1,925.57
CEO Conference	\$	2,459.67
Liberty Bell CP	\$	253.26
NRECA Conference	\$	1,732.94
Financial Accounting Institute	\$	2,435.07
AGA Spring Conference	\$	804.24
Line Location Training	\$	367.06
MEA VHS-DVD	\$	447.31
Northeast Gas Association	\$	48.13
Pipeline Personnel Qualification Book	\$	310.96
EAP Consumer Services Conference	\$	62.24
APGASIF-SHRIMP	\$	825.73
AGA Mutual Aid Webinar	\$	207.47
Equipment for Training	\$	207.26

**Community Services/Community Involvement**

No expenses were claimed in filing

## Valley Energy, Inc.

## Attachment A to OCA-II-10 HTY 2021

<u>Date</u>	<u>Description</u>	<u>Amount</u>
<b>Sponsorships/Advertisements - Account 913.45</b>		
01/20/21	KEYSTONE WARDENS	75.00
01/29/21	C & N (2021 SPONSORSHIP)	829.88
01/31/21	RADIGAN BROADCASTING	580.92
02/01/21	SAYRENADE- SAYRE JR.SR. HIGH SCHOOL	55.00
02/01/21	SAYRE LITTLE LEAGUE	75.00
02/19/21	SHS DRAMA DEPT- SHREK! 2021 SPONSOR	41.49
02/25/21	GAMBAL LLC	145.00
03/01/21	TOWANDA ROTARY CLUB (2021 SPONSOR)	100.00
04/01/21	ENDLESS MOUNTAINS PREGNANCY CTR	50.00
04/01/21	ENDLESS MOUNTAINS PREGNANCY CTR	50.00
04/01/21	TOWANDA RIVERFEST	250.00
05/01/21	KEYSTONE WARDENS	100.00
06/01/21	CENTRAL BRADFORD COUNTY	50.00
06/01/21	BIG BROTHERS BIG SISTERS	71.73
06/01/21	BRADFORD SULLIVAN COUNTIES OYW	50.00
06/20/21	VALLEY YOUTH SOCCER ASSOCIATION	168.79
07/01/21	GREATER VALLEY CHAMBER OF COMMERCE	63.29
07/01/21	WINDING RIVER PLAYERS	21.10
07/29/21	BRADFORD COUNTY REGIONAL ARTS COUNCIL	421.97
09/01/21	GREATER VALLEY CHAMBER OF COMMERCE	126.59
09/30/21	C & T ENTERPRISES	259.42
10/01/21	ROYAL PUBLISHING	45.00
10/01/21	THE VALLEY CHORUS	42.20
10/01/21	KEYSTONE WARDENS	100.00
10/01/21	ATHENIAN	65.00
10/28/21	ROYAL PUBLISHING	50.00
11/24/21	ARTS4ALL	100.00
12/31/21	RADIGAN BROADCASTING	421.97
<b>Dues &amp; Subscriptions - 930.22</b>		
1/13/2021	Bradford County Conservation	\$25.00
1/20/2021	Northeast Gas Association	\$5,394.22
1/31/2021	BKD Integra Hotline	\$345.79
3/23/2021	Sayre Rotary Club	\$125.00
4/19/2021	NACE	\$253.18
6/29/2021	Sayre Rotary Club	\$125.00
7/1/2021	Central Bradford County Chamber of Commerce	\$250.00
8/19/2021	APGA	\$839.71
9/28/2021	Sayre Rotary Club	\$133.00
10/1/2021	National Fire Protection Association (NFPA)	\$175.00
10/9/2021	Quill Corp	\$69.99
11/1/2021	Greater Valley Chamber of Commerce	\$210.98
11/19/2021	American Gas Association	\$7,090.70
12/9/2021	Central Bradford County Chamber of Commerce	\$250.00
12/16/2021	Energy Association of PA	\$1,694.00
12/22/2021	Recorder of Deeds - Prothonotary	\$31.65
12/28/2021	Sayre Rotary Club	\$125.00

12/31/2021 BKD Integra Hotline	\$351.64
<b>Research &amp; Development</b>	
No expenses were claimed in filing	
<b>Employee Activities - Account 926</b>	
Awards	\$491.00
Bereavement Meals	\$82.00
Employee Recognition Event - December	\$1,940.00
Employee Luncheon	\$1,712.00
End of Year Benefit	\$6,540.00
C&T Employee Picnic	\$99.00
Employee Clothing	\$522.00
<b>Economic Development</b>	
No expenses were claimed in filing	
<b>Workforce Development</b>	
Training book	11.43
AGA Training	207.47
Customer Service Webinar	152.70
NACE International	4,778.33
AGA Operations Conference	835.68
Northeast Gas Association	126.59
Intentional Leaders Training	456.85
FAI Accounting Seminar	4,264.10
AGA Conference	4,184.58
CPR Training	962.08
Northeast Gas Association	120.05
NRECA Conference	2,318.11
Zoom	134.09
<b>Community Services/Community Involvement</b>	
No expenses were claimed in filing	



## Valley Energy, Inc.

## Attachment A to OCA-II-10 FTY 2022

<u>Date</u>	<u>Description</u>	<u>Amount</u>
<b>Sponsorships/Advertisements - Account 913.45</b>		
	KEYSTONE WARDENS	75.00
	C & N (2021 SPONSORSHIP)	829.88
	RADIGAN BROADCASTING	580.92
	SAYRENADE- SAYRE JR.SR. HIGH SCHOOL	55.00
	SAYRE LITTLE LEAGUE	75.00
	SHS DRAMA DEPT- SHREK! 2021 SPONSOR	41.49
	GAMBAL LLC	145.00
	TOWANDA ROTARY CLUB (2021 SPONSOR)	100.00
	ENDLESS MOUNTAINS PREGNANCY CTR	50.00
	ENDLESS MOUNTAINS PREGNANCY CTR	50.00
	TOWANDA RIVERFEST	250.00
	KEYSTONE WARDENS	100.00
	CENTRAL BRADFORD COUNTY	50.00
	BIG BROTHERS BIG SISTERS	71.73
	BRADFORD SULLIVAN COUNTIES OYW	50.00
	VALLEY YOUTH SOCCER ASSOCIATION	168.79
	GREATER VALLEY CHAMBER OF COMMERCE	63.29
	WINDING RIVER PLAYERS	21.10
	BRADFORD COUNTY REGIONAL ARTS COUNCIL	421.97
	GREATER VALLEY CHAMBER OF COMMERCE	126.59
	C & T ENTERPRISES	259.42
	ROYAL PUBLISHING	45.00
	THE VALLEY CHORUS	42.20
	KEYSTONE WARDENS	100.00
	ATHENIAN	65.00
	ROYAL PUBLISHING	50.00
	ARTS4ALL	100.00
	RADIGAN BROADCASTING	421.97
	MISC	-255.00
<b>Dues &amp; Subscriptions - 930.22</b>		
	Bradford County Conservation	\$25.00
	Northeast Gas Association	\$5,394.22
	BKD Integra Hotline	\$345.79
	Sayre Rotary Club	\$125.00
	NACE	\$253.18
	Sayre Rotary Club	\$125.00
	Central Bradford County Chamber of Commerce	\$250.00
	APGA	\$839.71
	Sayre Rotary Club	\$133.00
	National Fire Protection Association (NFPA)	\$175.00
	Quill Corp	\$69.99
	Greater Valley Chamber of Commerce	\$210.98
	American Gas Association *(See Comment below)	\$7,227.00
	Central Bradford County Chamber of Commerce	\$250.00
	Energy Association of PA	\$1,694.00
	Recorder of Deeds - Prothonotary	\$31.65

Sayre Rotary Club	\$125.00
BKD Integra Hotline	\$351.64

**Research & Development**

No expenses were claimed in filing

**Employee Activities - Account 926**

Awards	\$501.00
Bereavement Meals	\$84.00
Employee Recognition Event - December	\$1,979.00
Employee Luncheon	\$1,746.00
End of Year Benefit	\$6,674.00
C&T Employee Picnic	\$101.00
Employee Clothing	\$533.00

**Economic Development**

No expenses were claimed in filing

**Workforce Development**

Regulator Training - Steve M	\$ 1,810.00
NGA Gas Ops - 5 employees	\$ 5,125.00
NGA - 192 Training	\$ 2,443.00
AUCS - 2 employees	\$ 1,180.00
AGMSC - 3 employees	\$ 1,774.00
EAP Conference	\$ 1,625.00
Liberty Bell CP	\$ 749.00
CEO Conference	\$ 2,920.00
NRECA Conference	\$ 3,030.00
AGA Fall Conference - 2 employees	\$ 3,645.00
Synergi Training	\$ 450.00
PA PUC Safety Seminar - 5 employees	\$ 1,347.00
EAP Consumer Services	\$ 300.00
AGA Accounting	\$ 3,400.00
NY PSC Safety Seminar - 3 employees	\$ 2,367.00
OQ - implementation	\$ 3,749.00

**Community Services/Community Involvement**

No expenses were claimed in filing

## Valley Energy, Inc.

## Attachment A to OCA-II-10 FPFTY 2023

<u>Date</u>	<u>Description</u>	<u>Amount</u>
<b>Sponsorships/Advertisements - Account 913.45</b>		
	KEYSTONE WARDENS	75.00
	C & N (2021 SPONSORSHIP)	829.88
	RADIGAN BROADCASTING	580.92
	SAYRENADE- SAYRE JR.SR. HIGH SCHOOL	55.00
	SAYRE LITTLE LEAGUE	75.00
	SHS DRAMA DEPT- SHREK! 2021 SPONSOR	41.49
	GAMBAL LLC	145.00
	TOWANDA ROTARY CLUB (2021 SPONSOR)	100.00
	ENDLESS MOUNTAINS PREGNANCY CTR	50.00
	ENDLESS MOUNTAINS PREGNANCY CTR	50.00
	TOWANDA RIVERFEST	250.00
	KEYSTONE WARDENS	100.00
	CENTRAL BRADFORD COUNTY	50.00
	BIG BROTHERS BIG SISTERS	71.73
	BRADFORD SULLIVAN COUNTIES OYW	50.00
	VALLEY YOUTH SOCCER ASSOCIATION	168.79
	GREATER VALLEY CHAMBER OF COMMERCE	63.29
	WINDING RIVER PLAYERS	21.10
	BRADFORD COUNTY REGIONAL ARTS COUNCIL	421.97
	GREATER VALLEY CHAMBER OF COMMERCE	126.59
	C & T ENTERPRISES	259.42
	ROYAL PUBLISHING	45.00
	THE VALLEY CHORUS	42.20
	KEYSTONE WARDENS	100.00
	ATHENIAN	65.00
	ROYAL PUBLISHING	50.00
	ARTS4ALL	100.00
	RADIGAN BROADCASTING	421.97
	MISC	-172.00
<b>Dues &amp; Subscriptions - 930.22</b>		
	Bradford County Conservation	\$25.00
	Northeast Gas Association	\$5,394.22
	BKD Integra Hotline	\$345.79
	Sayre Rotary Club	\$125.00
	NACE	\$253.18
	Sayre Rotary Club	\$125.00
	Central Bradford County Chamber of Commerce	\$250.00
	APGA	\$839.71
	Sayre Rotary Club	\$133.00
	National Fire Protection Association (NFPA)	\$175.00
	Quill Corp	\$69.99
	Greater Valley Chamber of Commerce	\$210.98
	American Gas Association *(See Comment below)	\$7,324.00
	Central Bradford County Chamber of Commerce	\$250.00
	Energy Association of PA	\$1,732.00
	Recorder of Deeds - Prothonotary	\$31.65

Sayre Rotary Club	\$125.00
BKD Integra Hotline	\$351.64

**Research & Development**

No expenses were claimed in filing

**Employee Activities - Account 926**

Awards	\$511.00
Bereavement Meals	\$86.00
Employee Recognition Event - December	\$2,018.00
Employee Luncheon	\$1,781.00
End of Year Benefit	\$6,808.00
C&T Employee Picnic	\$103.00
Employee Clothing	\$543.00

**Economic Development**

No expenses were claimed in filing

**Workforce Development**

Regulator Training - Steve M	\$ 1,810.00
NGA Gas Ops - 4 employees	\$ 5,125.00
NGA - 192 Training	\$ 2,443.00
AUCS - 2 employees	\$ 1,180.00
AGMSC - 3 employees	\$ 1,774.00
EAP Conference	\$ 1,625.00
Liberty Bell CP	\$ 749.00
CEO Conference	\$ 2,920.00
NRECA Conference	\$ 3,030.00
AGA Fall Conference - 2 employees	\$ 3,645.00
Synergi Training	\$ 450.00
PA PUC Safety Seminar - 5 employees	\$ 1,347.00
EAP Consumer Services	\$ 300.00
AGA Accounting	\$ 3,400.00
Damage Prevention Conference	\$ 2,527.00
NISC MIC - 2 employees	\$ 4,560.00
AGA Spring Conference - 2 employees	\$ 5,754.00
OQ Training	\$ 5,049.00

**Community Services/Community Involvement**

No expenses were claimed in filing

<b>PENNSYLVANIA NON-PAY RECONNECTION LABOR HOURS</b>				
DATE	ADDRESS	TOWN		HRS
4/14/21	601 N.Lehigh	Sayre	PA	1.25
4/19/21	205 Chemung St	Sayre	PA	0.75
4/21/21	23862 RT220	Ulster	PA	1
4/21/21	210 Chestnut #3	Tow	PA	0.5
4/23/21	99 Tioga St	Sayre	PA	1
4/23/21	187 Center st	Tow	PA	1.25
4/27/21	38 Marigold Ln	Sayre	PA	1
4/28/21	419 Hillcrest Dr	Sayre	PA	0.5
4/30/21	106 N.Main St	Athens	PA	1
4/30/21	23321 RT220	Ulster	PA	1
4/30/21	12 Moose Lane	Athens	PA	0.5
4/30/21	167 Buffalo Lane	Athens	PA	0.5
4/30/21	375 Fulton St-B	S.Wav	PA	0.5
5/3/21	146 Blackman St	Sayre	PA	0.75
5/7/21	256 Chelsea Ln	Sayre	PA	0.25
5/10/21	106 W.Lockhart St	Sayre	PA	0.75
5/11/21	314 N.Hopkins St	Sayre	PA	1
5/14/21	16 1/2 Collage Ave	Tow	PA	0.75
5/14/21	127 Golden Mile Rd	Wysox	PA	0.75
5/21/21	106 West St	Sayre	PA	0.75
5/21/21	505 Powell St	Sayre	PA	0.5
5/21/21	309 N.Elmer ave	Sayre	PA	0.5
5/25/21	707 N. Elmer Ave	Sayre	PA	1
5/24/21	310 Stevenson St	Sayre	PA	1
5/25/21	601 N.Lehigh	Sayre	PA	0.5
5/25/21	517 Lincoln St	Sayre	PA	1
5/28/21	121 Stedman St	Sayre	PA	1
6/4/21	402 N.Main St-#2	Athens	PA	0.75
6/4/21	111 Elizebeth St	Tow	PA	1
6/7/21	378 Desisti Ln	Sayre	PA	0.75
6/7/21	140 Sruce St	Athens	PA	0.5
6/8/21	232 S.Main St	Athens	PA	1
6/10/21	2267 Rt 187 Motel	Wysox	PA	1.5
6/25/21	108 S.Higgins Ave	Sayre	PA	1.75
6/25/21	107 N.Elmer Ave	Sayre	PA	1
6/29/21	102 West St	Sayre	PA	0.5
7/8/21	167 Buffalo Ln	Athens	PA	1.25

No. of reconnections

37

31.25 hours

Total time  
divided by # of  
reconnections

0.844595 average

	WAGE		
Technician A	31.66		
Technician B	26.20		
Technician C	24.46		
Technician D	22.95		
	<hr/>		
	105.27		
NORMAL	26.32	AVERAGE WAGE	
	34.56	C&T & VE OVHDS	131.327%
	12.77	TRANSPORTATION	
	<hr/>	TOTAL	
	73.65		
	<hr/>		
	62.20	84.45%	
OVERTIME	39.48	AVERAGE WAGE	
	34.56	C&T & VE OVHDS	
	12.77	TRANSPORTATION	
	<hr/>	TOTAL	
	86.81		
	<hr/>		
	73.31	84.45%	

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket No. R-2022-3032300</b>
	:	
<b>Valley, Energy, Inc.</b>	:	

**REBUTTAL TESTIMONY**

**AND EXHIBITS**

**OF**

**JAMIE LEVERING**

**ON BEHALF OF**  
**VALLEY ENERGY, INC.**

**AUGUST 16, 2022**

BEFORE

THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission :  
 :  
 v. : Docket No. R-2022-3032300  
 :  
 Valley Energy, Inc. :

REBUTTAL TESTIMONY OF JAMIE LEVERING  
ON BEHALF OF VALLEY ENERGY, INC.

- Q. Please state your name and business address.**
- A. My name is Jamie Levering and my business address is 523 Keystone Avenue, Sayre, Pennsylvania.
- Q. Are you the same Jamie Levering who previously submitted Direct Testimony in this proceeding on behalf of Valley Energy, Inc. ("Valley" or "Company")?**
- A. Yes. Terms defined in my direct testimony have the same meaning in this rebuttal testimony.
- Q. What is the purpose of your testimony today?**
- A. The purpose of my testimony is to rebut the testimony of OCA Witness Mugrace regarding his adjustments to the Company's Payroll Tax and his certain Admin and General expenses.
- Q. Please summarize OCA's proposed adjustment to the Company's Payroll Tax expense (OCA Statement No. 1 at 18).**
- A. OCA proposes to adjust the Payroll Tax expense to reflect an average of the Company's expenses over the period 2021 – 2023. This adjustment is connected with the OCA's Salary and Wages adjustment, which Mr. Rogers rebuts in his



testimony. The Payroll Tax adjustment should be rejected for the same reasons as the Salary and Wage adjustment.

**Q. The OCA expresses confusion over how the payroll tax claim was calculated.**

**Can you discuss this issue?**

A. Yes. The FTY labor balance of \$669,500 shown on the Company's Attachment A to I&E-RE-21-D is not consistent with the FTY labor balance of \$1,091,381 shown on Exhibit HSG-1 Schedule C1-1 (CU) because the two calculations reflect different timing. OCA is comparing apples to oranges as the information on I&E-RE-21-D and the information in Exhibit HSG-1 Schedule C1-1 (CU) were compiled at different points in the FTY. As the parties agree on the applicable payroll tax rate, the updated payroll tax calculation in Company Witness Gorman's Rebuttal Testimony is correct.

**Q. What Admin and General adjustments are you addressing?**

A. I am addressing Office Supplies and Expense (Account 921), Outside Services (Account 923), Property Insurance, and Injury and Damages.

**Q. Does Valley agree with OCA's adjustment to Office Supplies and Expense?**

A. No. OCA proposes to normalize the Company's Office Supplies and Expense over the period 2021-2023. This proposal would reduce the Company's Office Supplies and Expense by \$16,925. Normalizing the Company's Office Supplies and Expense claim for this period ignores the impacts of COVID-19 on the Company's operations. Office Supplies and Expense includes items like meals, travel, and training costs. Our meals, travel and training costs were lower in 2021 due to the continued impacts of the COVID-19 pandemic, which eliminated or changed the

format of many conferences (going from in-person to remote attendance). As the Company continues to emerge from the pandemic, these expenses will increase over the FPFTY. Normalizing Office Supplies and Expense would understate the Company's FPFTY costs due to an abnormal and extraordinary event that impacted the HTY.

**Q. Does Valley agree with OCA's adjustment to Outside Services expense?**

A. No. OCA's proposal to normalize Outside Services expense would reduce the Company's claim by \$4,418. As detailed in Valley's response to OCA-II-38 (attached as Exhibit\_\_(JL-1R)), the Company's Outside Services expenses increased from 2020 to 2021 and again from 2022 to 2023. The OCA attempts to create the "variability" necessary to support the averaging approach by including expenses from 2018-2020. As the exhibit shows, the outside legal services expenses during 2018-2020 were much higher than the HTY, FTY and FPFTY. This is due, in large part, to C&T's creation of the Chief Legal & Regulatory Officer position as of January 1, 2021, which enabled Valley to address more legal issues without outside counsel. The Company's FPFTY Outside Services expense is based on actuals from the FTY and historic increase rates. OCA's proposed normalization adjustment should be denied.

**Q. Do you have any comments to OCA's proposed Property Insurance adjustment (OCA Statement No. 1 at 30)?**

A. Yes. OCA proposes a \$3,407 reduction to the Company's Property Insurance expense claim based on rejecting the Company's projection of a 15% increase for 2023 and holding the expense at the 2022 level. Holding the Company's Property

## Valley Statement No. 5R

Insurance expense at the 2022 level is unreasonable based on the historical variability of this expense. First, please recognize that the property insurance policy covers May 1 to April 30 of the following year. While the premium increase from the 2020/2021 policy period to the 2021/2022 policy period may have been 7.97%, this smaller than normal increase occurred because we removed insurable assets and increased the deductible. The increase from the 2021/2022 policy period to the 2022/2023 policy period was 11.13%. It is not reasonable to assume that the premium cost will remain constant for the 2023/2024 policy period. Our original projection is reasonable and well supported; however, the Company would accept calculating the 2023/2024 premium by averaging the increases over the prior 3 years, which results in a 12.77% premium increase for 2023/2024. Applying a 12.77% premium to the FPFTY results in a \$291 downward adjustment to the Company's claim. The attached Exhibit\_\_(JL-2R) calculates this adjustment. This modified adjustment should be approved in place of OCA's unsupported adjustment.

**Q. Do you have any comments to OCA's proposed adjustment to the Company's Injury and Damages expense (OCA Statement No. 1 at 30)?**

A. Yes. OCA proposes to normalize Valley's Injury and Damages expense over a five-year period on the basis that such costs are out of the Company's control. This adjustment would reduce the Company's claim by \$3,780. There is no basis for normalizing the Company's claim. Although we cannot guarantee that our employees will not sustain injuries or have workplace accidents, we have a very low historic rate. This account reflects the prepaid insurance costs that we pay,

which are based on our historic experience. This expense category has increased every year from 2018-2022, as set forth in Exhibit HSG-1, Schedule C1-1 (CU). Even with a low historic accident and injury rate, our premiums will continue to increase. If we unfortunately see an increase in accidents and injuries, our premium increases will be even higher.

The Company's claim is reasonable, consistent with historical experience, and should be approved.

**Q. Does this conclude your Rebuttal Testimony?**

A. Yes.

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket No. R-2022-3032300</b>
	:	
<b>Valley, Energy, Inc.</b>	:	

<p><b>EXHIBITS</b></p> <p><b>OF</b></p> <p><b>JAMIE LEVERING</b></p>
--

**ON BEHALF OF**  
**VALLEY ENERGY, INC.**

**AUGUST 16, 2022**

**VALLEY ENERGY, INC. RESPONSE TO  
OFFICE OF CONSUMER ADVOCATE INTERROGATORIES  
DOCKET NO. R-2022-3032300**

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OCA-II-38 Refer to Statement No. 5 page 5. (Exhibit JL-3) Please provide a schedule of Outside Services by vendor category for the periods 2018-2023.

**Response:**

The table below presents the detail requested for Outside Services by vendor category for the periods 2018-2023.

<b>Vendor Category</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Attorney Fees	\$54,089	\$100,734	\$18,525	\$7,433	\$11,785	\$12,021
Auditor Fees	\$47,837	\$26,565	\$36,598	\$29,692	\$30,880	\$33,041
GCR Expense	\$531	\$-	\$-	\$3,059	\$400	\$400
American Drug & Alcohol	\$1,179	\$1,170	\$864	\$1,515	\$1,152	\$1,152
Housekeeping	\$8,084	\$8,762	\$9,322	\$12,746	\$20,143	\$20,618
Solid Waste Authority	\$1,190	\$1,215	\$1,161	\$1,173	\$1,215	\$1,251
Public Awareness Effectiveness Study	\$2,118	\$2,121	\$2,125	\$2,493	\$1,595	\$1,740
Shredding Services	\$-	\$-	\$-	\$911	\$503	\$503
Communications	\$-	\$-	\$-	\$304	\$-	\$-
AGA Survey Report	\$-	\$-	\$1,144	\$-	\$-	\$-
Construction	\$586	\$-	\$-	\$-	\$-	\$-
	\$115,613	\$140,567	\$69,740	\$59,326	\$67,673	\$70,726

**Response Provided by: Jamie Levering, Vice President/Treasurer  
Valley Energy, Inc.**

**Date: July 11, 2022**

ACCOUNT NO.	DESCRIPTION	ACTUALS																			
		2021 JAN	2021 FEB	2021 MAR	2021 APR	2021 MAY	2021 JUN	2021 JUL	2021 AUG	2021 SEP	2021 OCT	2021 NOV	2021 DEC	2021	2020	2019	2021	2020	2019		
924	PROPERTY INSURANCE	1,310	1,310	1,310	1,310	1,390	1,390	1,390	1,390	1,390	1,390	1,390	1,390	11.13%	19.20%		2019	12,350			
														2021	16,360	14,721	12,350	2020	14,721	19.20%	
																			2021	16,360	11.13%
																			2022	17,664	7.97%
	UPDATE W/ NEW NUMBERS WHEN AVAILALBE	1,390	1,390	1,390	1,390	1,599	1,599	1,599	1,599	1,599	1,599	1,599	2022	18,348	APPLY 15% increase - average for 2019 to 2021						
		1,599	1,599	1,599	1,599	1,839	1,839	1,839	1,839	1,839	1,839	1,839	2023	21,107	APPLY 15% increase						
	UPDATED W/ NEW NUMBERS	1,390	1,390	1,390	1,390	1,513	1,513	1,513	1,513	1,513	1,513	1,513	2022	17,664	Premium 5/22 to 4/23						
		1,513	1,513	1,513	1,513	1,706	1,706	1,706	1,706	1,706	1,706	1,706	2023	19,702	21,939 18,150 x .84393 1512.5 divided by 12						
																			2023	19,702	APPLY 12.77% increase

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket No. R-2022-3032300</b>
	:	
<b>Valley, Energy, Inc.</b>	:	

**REBUTTAL TESTIMONY**

**AND EXHIBIT**

**OF**

**CODY CHAPMAN**

**ON BEHALF OF**  
**VALLEY ENERGY, INC.**

**AUGUST 16, 2022**



BEFORE

THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
v.	:	<b>Docket No. R-2022-3032300</b>
	:	
<b>Valley Energy, Inc.</b>	:	

REBUTTAL TESTIMONY OF CODY CHAPMAN  
ON BEHALF OF VALLEY ENERGY, INC.

1   **Q.    Please state your name and business address.**

2   A.    My name is Cody E. Chapman, PE and my business address is 523 Keystone Avenue,  
3        Sayre, Pennsylvania.

4   **Q.    Are you the same Cody Chapman who previously submitted Direct Testimony in this**  
5        **proceeding on behalf of Valley Energy, Inc. ("Valley" or "Company")?**

6   A.    Yes.  Terms defined in my direct testimony have the same meaning in this rebuttal  
7        testimony.

8   **Q.    What is the purpose of your testimony today?**

9   A.    The purpose of my testimony is to rebut the testimony of the Bureau of Enforcement and  
10        Investigation ("I&E") Witness Jessalynn Heydenreich regarding the Company's  
11        Distribution Integrity Management Plan ("DIMP").

1 **Q. Did I&E Witness Heydenreich comment the Company's recent changes to its DIMP**  
2 **asset categories (I&E Statement No. 4 at 6)?**

3 A. Yes, I&E discusses the Company's addition of a "Regulators/Relief" asset category for the  
4 2021 DIMP. I&E agrees that a new asset category was necessary, but proposes that the  
5 Company develop more clearly defined and broken-down DIMP asset categories instead  
6 of the singular Regulator/Relief asset category. I&E Witness Heydenreich advises that  
7 "dividing regulator/relief asset categories by pressure, location, and customer type as well  
8 as any other granular category will give Valley a clearer picture of the system risks and  
9 where to make system improvements to reduce the risk." See I&E Statement No. 4 at 9.

10 **Q. Do you agree with I&E's recommendation.**

11 A. I believe the singular category is reasonable, but I do not oppose I&E's recommendation  
12 either. Our system is not as large and diverse as some NGDCs, but we are willing to  
13 explore the creation of some sub-categories within the DIMP "Regulators/Relief" asset  
14 category. I propose that Valley adopt I&E's recommendation for its next DIMP update,  
15 which will be completed in 2024.

16 **Q. Did I&E Witness Heydenreich propose any additional changes to the Company's rec**  
17 **DIMP? (I&E Statement No. 4 at 8-9)?**

18 A. Yes, I&E Witness Heydenreich raises concerns about failures of non-vintage plastic pipe  
19 occurring within the past five years. Specifically, I&E observes that four of the fifteen  
20 total failures over this period occurred on non-vintage plastic pipe installed in the six-  
21 month period between July and December of 2013. As a remedy, I&E recommends that  
22 Valley perform a root cause analysis of each of the four failures and use that data to assess

1 whether any specific pipeline assets outside of vintage plastic carry an elevated risk of  
2 failure. Additionally, I&E requests that Valley incorporate the findings of the root cause  
3 analysis into its DIMP with appropriate mitigative measures to reduce this asset category's  
4 risk score. I&E also specifies anticipated mitigative measures for the DIMP update,  
5 which include, but should not be limited to, pipeline replacement, increased leak survey of  
6 the asset, and reporting plastic failures to I&E Pipeline Safety upon discovery.

7 **Q. Do you agree with all of these recommendations?**

8 A. No. On the first point, I am not sure a formal analysis is necessary. The causes of the  
9 failures are already known. One of the four leaks falls under the category of Compression  
10 Coupling – Permaserts and was taken into consideration as such in the current DIMP  
11 Plan. The other three leaks were failure to sleeve the service in the area of the excess flow  
12 valve and were previously taken into consideration in our DIMP plan under Incorrect  
13 Operations – Failure to Follow Procedures. In terms of I&E's request for additional  
14 mitigative measures, I think prescriptively replacing non-vintage pipeline is also  
15 unnecessary, as these leaks would have a low likelihood of becoming Grade 1 leaks. It  
16 would be burdensome to dig and replace any potential area that may develop this type of  
17 leak or increase the survey interval on all areas of the system that these leaks may  
18 occur. Any future leaks would be addressed through our normal maintenance processes,  
19 but the additional measures proposed by I&E would likely impact our entire system in a  
20 manner disproportionate to the relatively minor operational impact of the identified leaks.

21 **Q. Do you agree with the recommendation to report on plastic pipe failures upon**  
22 **discovery?**

1 A. Yes. To address I&E's concerns, I propose that Valley increase the frequency of our  
2 reporting of plastic pipe failures to I&E. Valley currently provides I&E with our plastic  
3 failure information as part of an annual data request, but we also submit similar  
4 information on a monthly basis to the Plastic Pipe Database Committee ("PPDC"), which  
5 is an association of federal/state regulators and gas and plastic pipe industry participants.  
6 From the issuance of a Final Order in this rate case through Valley's next base rate case,  
7 Valley could copy I&E on the monthly electronic submission to PPDC, the forms of which  
8 is attached as Exhibit\_\_(CC-1R). This would ensure I&E receives prompt notice of any  
9 plastic pipe failures. During the next base rate case, the parties could reassess this  
10 additional reporting requirement to determine whether it should continue.

11 **Q. Does this conclude your Rebuttal Testimony?**

12 A. Yes.

**BEFORE**

**THE PENNSYLVANIA PUBLIC UTILITY COMMISSION**

<b>Pennsylvania Public Utility Commission</b>	:	
	:	
<b>v.</b>	:	<b>Docket No. R-2022-3032300</b>
	:	
<b>Valley, Energy, Inc.</b>	:	

<p><b>EXHIBIT</b></p> <p><b>OF</b></p> <p><b>CODY CHAPMAN</b></p>
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**ON BEHALF OF**  
**VALLEY ENERGY, INC.**

**AUGUST 16, 2022**

Date:

PPDC c/o  
American Gas Association  
400 N. Capitol Street, NW, Ste. 450  
Washington. DC 20001

Return to: [ppdc@aga.org](mailto:ppdc@aga.org) or Fax: (202) 824-7136

**Re: Plastic Piping Data Collection Initiative – Negative Report**

This is to report that for the 1-month period ending, \_\_\_\_\_, we have no failures and/or leaks of plastic pipe and metal and/or plastic appurtenances to report.

Name (Print): \_\_\_\_\_

Name (Sign) \_\_\_\_\_

Company: \_\_\_\_\_

MATERIALS SECTION	
<a href="#">Click here to view Definitions Document</a>	
<b>1 PIPE OR FITTING IDENTIFICATION</b>	
TYPE OF MATERIAL (Check one)	OTHER SPECIFICATION: MANUFACTURER:
ABS	
HDPE - 3306	ASTM F2897 16-CHARACTER CODE,
HDPE - 3406	PRINT LINE OR LABEL:
HDPE - 3408	
HDPE - 4710	
MDPE - 2306	(Circle one and enter the value below)
MDPE - 2406	SDR, DR, SCHEDULE or
MDPE - 2708	WALL THICKNESS:
PB	
PVC	NOMINAL SIZE:
NYLON	
PA - 11	
OTHER (Describe)	
<b>2 DATE OF MANUFACTURE:</b>	
(mm/dd/yy)	

INSTALLATION AND OPERATIONS SECTION			
<b>3</b>	METHOD OF INSTALLATION (Check one)		<b>4</b> TYPE OF SOIL IN CONTACT WITH PIPE (Check one)
	OPEN TRENCH		SAND
	BORED/HDD		LOAM
	PLOWED IN		CLAY
	INSERTION		ROCKY
	JOINT TRENCH		SLURRY
	PLANTED		OTHER (Describe)
	UNKNOWN		
	OTHER (Describe)		
<b>5 OPERATING PRESSURE</b>			
<b>A.</b>	AT TIME OF FAILURE:	psig	
<b>B.</b>	NORMAL RANGE (IF KNOWN)	psig	

<b>6</b>	DATE OF INSTALLATION (mm/dd/yy or year)
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CONTACT NAME:
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FAILURE ANALYSIS SECTION	
<b>7a</b>	FAILURE/LEAK LOCATION
	PIPE (Go to Failure/Leak Cause)
	FITTING (Complete 7b)
	JOINT (Complete 7c)
<b>7b</b>	FAILURE/LEAK IN FITTING (Check one)
	TRANSITION
	VALVE
	METER RISER
	MECHANICAL FITTING (Stab)
	MECHANICAL FITTING (Nut Follower)
	MECHANICAL FITTING (Bolted)
	MECHANICAL FITTING (Other, Describe)
	HEAT FUSION FITTING
	ELECTROFUSION FITTING
	THREADED CAP
	OTHER (Describe)
<b>7c</b>	FAILURE/LEAK IN JOINT (Check one)
	MECHANICAL JOINT (Stab)
	MECHANICAL JOINT (Nut Follower)
	MECHANICAL JOINT (Bolted)
	MECHANICAL JOINT (Other, Describe)
	ELECTROFUSION
	BUTT FUSION
	SOCKET FUSION
	SADDLE FUSION
	SOLVENT
	OTHER (Describe)
<b>8</b>	FAILURE/LEAK CAUSE (Check all that apply)
	SQUEEZE OFF
	POINT LOADING
	EXCESSIVE EXPANSION/CONTRACTION
	EXCESS EXTERNAL EARTH LOADING
	INSTALLATION ERROR
	PREVIOUS IMPACT
	MATERIAL DEFECT (Describe)
	THREADED CAP (Cracked Cap)
	THREADED CAP (Loose cap, not cracked)
	THREADED CAP (Seal/O-ring defect)
	THREADED CAP (Other, Describe)
	CORROSION
	GOPHER/RODENT/WORM DAMAGE
	UNKNOWN: NOT EXCAVATED - ABANDONED
	UNKNOWN: NOT EXCAVATED - REPLACED
	UNKNOWN
	OTHER (Describe)
<b>9</b>	DATE OF FAILURE/LEAK (mm/dd/yy)
	E-MAIL
	PHONE#: