COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
COMMONWEALTH KEYSTONE BUILDING
400 NORTH STREET, HARRISBURG, PA 17120

BUREAU OF
INVESTIGATION
&
ENFORCEMENT

January 11, 2022

Via Electronic Filing
Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Re: Pennsylvania Public Utility Commission v.
Aqua Pennsylvania, Inc. and Aqua Pennsylvania Wastewater, Inc.
Docket Nos. R-2021-3027385 and R-2021-3027386
I&E Main Brief

Dear Secretary Chiavetta,

Enclosed for electronic filing please find the **Main Brief of the Bureau of Investigation and Enforcement** (I&E) for the above-captioned proceedings.

Copies are being served on parties of record per the attached Certificate of Service. Should you have any questions, please do not hesitate to contact me.

Sincerely,

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Prosecutor
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SBG/ac
Enclosures

cc: Administrative Law Judge Mary D. Long (*via First-Class and Electronic Mail*)
Per Certificate of Service

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission, *et al.*	:	
	:	
v.	:	Docket No. R-2021-3017385, *et al.*
	:	
Aqua Pennsylvania, Inc (Water)	:	

Pennsylvania Public Utility Commission, *et al.*	:	
	:	
v.	:	Docket No. R-2021-3017386, *et al.*
	:	
Aqua Pennsylvania Wastewater, Inc	:	

MAIN BRIEF
OF
THE BUREAU OF INVESTIGATION & ENFORCEMENT

Scott B. Granger
Prosecutor
PA Attorney ID No. 63641

Bureau of Investigation & Enforcement
Pennsylvania Public Utility Commission
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Dated: January 11, 2022

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I. INTRODUCTION

A. Description of Company

Aqua Pennsylvania, Inc. ("Aqua Water") provides water service to approximately 450,000 customers in portions of more than 200 municipalities throughout 32 Pennsylvania counties.[1] Aqua Pennsylvania Wastewater, Inc ("Aqua Wastewater") provides wastewater service to approximately 40,000 customers in portions of more than 40 municipalities throughout 15 Pennsylvania counties.[2]

B. Procedural History

The following is a summary of the procedural history of this proceeding. On August 20, 2021, Aqua Pennsylvania, Inc. (collectively "Aqua" or "AP" or the "Company") on its own behalf and on behalf of its wholly-owned subsidiary Aqua Pennsylvania Wastewater, Inc., filed, respectively, Original Tariff Water - PA P.U.C. No. 3 ("Tariff Water No. 3") and Original Tariff Sewer - PA P.U.C. No. 3 ("Tariff Sewer No. 3") to become effective on October 19, 2021.[3] Tariff Water No. 3 would increase Aqua Water's total annual operating revenues for water service by approximately $86,118,612 or 16.9%. Tariff Sewer No. 3 would increase Aqua Wastewater's total annual operating revenues for wastewater service by approximately $11,566,212 or 31.2%. The Company's proposed base rates will produce an increase in total annual operating revenues of $97,684,824, or approximately 17.86% over the level of revenues at present rates anticipated for the fully projected future test year ending March 31, 2023.[4]

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1 Aqua St. No. 1, p. 7.
2 *Id.*
3 Aqua Vol. 1, Statement of Specific Reasons for Proposed Rate Increase, p.1.
4 *Id.*

Broken down, Aqua's filing includes the revenue requirement for Aqua Water, Aqua Wastewater Base, Aqua Wastewater Limerick, Aqua Wastewater East Bradford, Aqua Wastewater Cheltenham, Aqua Wastewater East Norriton, and Aqua Wastewater New Garden.[5] Additionally, this filing includes an Act 11 allocation of revenue requirement from the wastewater systems to the water ratepayers.[6]

The parties to this base rate proceeding are Aqua, the Commission's Bureau of Investigation and Enforcement ("I&E"); the Office of Consumer Advocate ("OCA"); the Office of Small Business Advocate ("OSBA"); the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania ("CAUSE-PA"); the Aqua Large Users Group ("Aqua LUG"); and the Masthope Mountain Community Association ("Masthope" or "MMCA"). Additionally, there were dozens of formal complaints filed by Aqua ratepayers that were consolidated into this proceeding.

By Order entered on October 7, 2021, the Commission suspended the rate filings until May 19, 2022 and directed an investigation to determine the lawfulness, justness, and reasonableness of the rates, rules and regulations contained in this rate filing.

The matter was assigned to the Office of Administrative Law Judge, Administrative Law Judge Mary D. Long presiding, for the prompt scheduling of hearings to culminate in the issuance of a Recommended Decision. A Call-in Telephonic Prehearing Conference was held on October 15, 2021.

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[5] I&E St. No. 1, p. 2.
[6] *Id.*

Public input hearings were held on November 8 at 6:00 p.m.; November 9 and November 10 at 1:00 p.m. and 6:00 p.m.; and, November 12, 2021 at 1:00 p.m.

Pursuant to the established litigation schedule, I&E filed the following pieces of direct, rebuttal and surrebuttal testimony on November 10, 2021, December 2, 2021 and December 14, 2021 respectively:

Christine Wilson
- I&E Statement No. 1
- I&E Exhibit No. 1 (PROPRIETARY/Non-Proprietary)
- I&E Statement No. 1-R
- I&E Statement No. 1-SR
- I&E Exhibit No. 1-SR (PROPRIETARY/Non-Proprietary)

Anthony Spadaccio
- I&E Statement No. 2
- I&E Exhibit No. 2
- I&E Statement No. 2-SR

Esyan Sakaya
- I&E Statement No. 3
- I&E Exhibit No. 3
- I&E Statement No. 3-SR

Ethan Cline
- I&E Statement No. 4 (PROPRIETARY/Non-Proprietary)
- I&E Exhibit No. 4 (PROPRIETARY/Non-Proprietary)
- I&E Statement No. 4-SR (PROPRIETARY/Non-Proprietary)
- I&E Exhibit No. 4-SR

Joseph Kubas
- I&E Statement No. 5
- I&E Exhibit No. 5
- I&E Statement No. 5-R
- I&E Exhibit No. 5-R
- I&E Statement No. 5-SR
- I&E Exhibit No. 5-SR

During the course of this proceeding the parties held a series of settlement conferences but were unable to amicably resolve the issues presented in this Aqua base rate proceeding. On Monday, December 20, 2021, at the time and place set for the evidentiary hearing, the parties appeared telephonically before ALJ Long. Prior to the hearing, the parties had agreed to waive cross-examination of witnesses. Accordingly, each party moved for the admission of their pre-served written testimony and exhibits. I&E moved the pieces of I&E testimony and exhibits identified above into evidence. A court reporter was present and a Hearing Transcript ("Hrg. Tr.") for December 20, 2021 was recorded and later distributed to the parties. That same day, I&E served electronic copies of the I&E testimony and exhibits, along with witness verifications, on The Sargent's Group court reporting by email.

I&E now submits this Main Brief ("I&E MB") in support of the arguments made by the I&E witnesses in the record-evidence presented.

C. Burden of Proof

It is axiomatic that the burden of proof in any proceeding involving a utility's existing or proposed rates is on the utility.[7] Aqua must satisfy its burden of proof by presenting a preponderance of evidence.[8] A preponderance of the evidence is such evidence that is more convincing, by even the smallest amount, than that presented by another party.[9] If a preponderance of evidence is submitted, the burden of going forward

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[7] *See* 66 Pa. C.S. §§ 1301, 315(a); *Brockway Glass Co. v. Pennsylvania Public Utility Commission,* 437 A.2d 1067 (Pa. Commw. 1981); *Lower Frederick Twp. v. Pennsylvania Public Utility Commission*, 409 A.2d 505 (Pa. Commw. 1980).

[8] *Samuel J. Lansberry, Inc. v. Pennsylvania Public Utility Commission*, 578 A.2d 600 (Pa. Commw. 1990).

[9] *Se-Ling Hosiery v. Margulies*, 70 A.2d 854 (Pa. 1950).

with competing evidence shifts to opposing parties to produce credible evidence of at least equal weight.

While the burden of going forward and producing evidence may shift back and forth between the parties, the ultimate burden of persuasion remains with the Company. Further, the Commission must ensure that any adjudication is supported by substantial evidence. "Substantial evidence" is such relevant evidence that a reasonable mind might accept as adequate to support a conclusion.[10]

I&E asserts that Aqua has failed to meet its burden and therefore I&E respectfully requests that the Administrative Law Judge and the Commission adopt the adjustments and the overall revenue requirement set forth in the voluminous record evidence presented by I&E as summarized in this I&E Main Brief.

II. SUMMARY OF ARGUMENT

Aqua failed to present substantial credible record evidence to support its request for a $97.68 million revenue requirement increase. Based upon I&E's adjustments following hearings and the creation of a full evidentiary record on all issues, the record evidence proves that only a total revenue increase of $33.91 million inclusive of both water and wastewater is warranted. This recommendation is based upon the adjustments offered by I&E, as set forth more fully herein; in I&E's preserved testimony and exhibits; and summarized in the I&E Tables collectively attached hereto as Appendices "A" and "B".

[10] *Norfolk & Western Ry. Co. v. Pennsylvania Public Utility Commission,* 413 A.2d 1037 (Pa. 1980).

RATE BASE

Fair Value - Water. In summary, I&E separated the rate base fair value Water and Wastewater Base for purposes of this proceeding. I&E is recommending a total fair value for Aqua Water rate base of 3,815,961,707. I&E is not recommending any adjustments to the additions and deductions to the Company's claimed rate base for plant additions and retirements as claimed in their original filing. I&E is, however, recommending adjustments based on the acquisition of the Borough of Phoenixville water system.

I&E recommends that the Phoenixville acquisition adjustment of $2,437,305 be denied. I&E reasoned that the Phoenixville acquisition adjustment should be denied because Aqua failed to present substantial evidence that the Phoenixville acquisition meets the criteria set forth in Section 1327(a).

The denial of the Phoenixville acquisition adjustment, as recommended by I&E, results in the reduction of the Company's claimed annual amortization expense by $121,865 which is expressed as a depreciation expense in this filing. This results in the Company's total annual amortization expense being reduced to $409,015.

Fair Value - Wastewater Base. I&E is recommending a total fair value for Aqua Wastewater Base rate base of $198,368,990.

Future Test Year and Fully Projected Future Test Year Reporting – Utility Plant in Service. Finally, I&E recommends that the Company provide the Commission's Bureaus of Technical Utility Services and Investigation & Enforcement with an update to schedule G-2 of Aqua Exhibits 1-A, 1-B, 1- C, 1-D, 1-E, 1-F, and 1-G, no later than July

1, 2022 which should include actual capital expenditures, plant additions, and retirements by month for the 12 months ending March 31, 2022; and, an additional update for actuals for the year ending March 31, 2023 no later than July 1, 2023.

REVENUES

Forfeited Discounts - Water. I&E recommends that the Company's late payment claim under proposed rates be increased by the same percent increase as the overall base rate increases approved by the Commission.

Forfeited Discounts – Wastewater - Present Rates. I&E recommends that late payment revenue for zone 11-new garden be increased from zero dollars to $17,382 under present rates.

Forfeited Discounts – Wastewater - Proposed Rates. I&E reasoned that since the proposed wastewater rates have changed, and late payment revenue is based upon the overall percentage of the increase, it is necessary for I&E to recommend to revise the late payment revenue. Changes in proposed rates in Zones 1 through 6, cause the overall percentage to increase from 32.2% to 32.5%, which causes the late payment revenue to increase accordingly. Specifically, this change causes the late payment revenue to increase from $23,436 to $31,054, which is an increase of $7,618 or 32.5% under proposed rates for the FPFTY.

Sales for Resale Contracts - Rider DRS - Water. Aqua has sales for resale agreements with 11 different water utilities to supply water at various rates. I&E recommends that the following contracts be canceled; Sharpsville; Schwenksville; Chemung; Horsham; New Wilmington; and Masury, and the affected entities begin to

pay full tariff rates when they go into effect. As a result of I&E's recommendation to cancel the identified sales for resale rider contracts and rider rates, I&E recommends present rate revenue be increased by $3,248,807.

Third-Party Sales. Aqua has eight third-party sales customers. The Company proposed to increase rates for all but two of the third-party customers. Those to third parties are Southdown Homes and East Brandywine. I&E only recommends that the flat rate for East Brandywine be increased to $446.75 per month. I&E accepted the Company's revised proof of revenue for Southdown Homes.

EXPENSES

Rate Case Expense. I&E has accepted the Company's proposal of a 36 months rate case period. I&E recommends that the rate case expense be normalized rather than amortized.

Insurance Expense. I&E recommends increases to the Company's insurance expense claims for Wastewater Base; Limerick Wastewater; East Bradford Wastewater; Cheltenham Wastewater; and East Norriton Wastewater. I&E recommended reductions to the Company's insurance expense claims for Water, and New Garden Wastewater.

PURTA. I&E reviewed and has no recommendation for the Company's PURTA claim.

Depreciation - Amortization Expense – Water - Phoenixville. I&E recommends that the annual amortization expense of $121,865 related to the Phoenixville acquisition be denied.

Purchased Water Expense. I&E recommends that Aqua only be allowed to reflect water purchases from Aqua Ohio at $0.3449 per hundred gallons. This recommendation results in a decrease, or annual savings, of $166,795 for Pennsylvania ratepayers. I&E reasoned that the competitive rider rates granted to Masury be canceled because Masury does not have a water supply contract with Aqua and cannot qualify for rider DRS rates.

Dredging Expense Reserve. I&E recommends that the Company's dredging expense be normalized; and, that the Company's proposed use of a reserve account and regulatory liability be rejected because this is a routine operating expense and is more appropriately normalized for ratemaking purposes. Further, I&E recommends no adjustment to the claimed dollar amount for dredging expense.

Labor Expense. I&E and the Company have both accepted the OCA recommended full-time vacancy rate of 2.88%. Further, I&E withdrew both its proposed adjustment to Employee Benefits and its proposed adjustment to Federal and State Payroll Tax as a result of the Company's acceptance of the 2.88% vacancy rate.

Cash Working Capital. I&E agrees with the Company's use of a lead/lag study regarding cash working capital. Further, I&E recommends a cash working capital allowance for Water of $1,679,000. I&E did not recommend an adjustment to cash working capital for Wastewater Base or the other wastewater acquisitions. Also, cash working capital adjustments are subject to the iteration process.

Gas and Electric Expense. I&E did not recommend adjustments to the Company's claimed gas and electric expenses. However, I&E recommends that the proposed Energy Cost Adjustment Mechanism be denied.

TAXES

Federal Tax Adjustment Surcharge. I&E recommends that the proposed Federal Tax Adjustment Surcharge be denied. The Company's claimed need for the surcharge is pure speculation. Furthermore, the Commission and its advisory staff are fully equipped to handle any future changes in federal tax law just as they have done in the past.

RATE OF RETURN

I&E agreed with the Company's proposed Capital Structure and Cost of Long-Term Debt rate. I&E recommends the following rate of returns for Aqua:

Type of Capital	Ratio	Cost Rate	Weighted Cost
Long-Term Debt	46.05%	4.00%	1.84%
Common Equity	53.95%	8.90%	4.80%
Total	100.00%		6.64%

I&E continues to recommend using the Discounted Cash Flow method as the primary method to determine the cost of common equity. Further, I&E recommends using the results of the Capital Asset Pricing Model as a comparison to the DCF results.

Management Performance. I&E recommends that no additional basis points be awarded for management performance. I&E asserts that true strong management performance is earning a higher return through efficient use of resources and cost cutting measures. Additionally, any management performance basis points that may be awarded will simply be passed through as an additional cost to the ratepayers and as a benefit to the Company's shareholders.

Inflated Growth Rate. I&E recommends that the Commission reject the Company's assertion that DCF growth rates can be determined subjectively and inflated. I&E asserts that DCF growth rates must be established by mathematical formulation, and that any alternative method is subjective and introduces additional and unnecessary bias and should be avoided when possible.

Leverage Adjustment. I&E recommends that the Company's proposed 234 basis point leverage adjustment be rejected. Company's leverage adjustment is inappropriate because it incorrectly characterizes financial risk as market value; it is inconsistent with commission precedent; and, it would result in a large pass-through burden on ratepayers.

Size Adjustment. I&E recommends that the Company's proposal to use a CAPM size adjustment of 102 basis points be disallowed. The Company's proposed size adjustment is unnecessary and unsupported because none of the technical literature cited by the Company supports investment adjustments related to the size of the company in the utility industry. Therefore, a CAPM size adjustment is irrelevant in this proceeding.

Conclusion - Overall Rate of Return. I&E recommends that the Company should be afforded the opportunity to earn an overall rate of return of 6.64%.

CUSTOMER PROGRAMS AND MISCELLANEOUS ISSUES

Regulatory Asset Treatment for COVID-19 Uncollectible Expense. I&E recommends that the Company be required to track further COVID-19 related reductions to uncollectibles by Water and the individual Wastewater revenue requirements; and, that the balances be claimed in the next rate filing which the Company anticipates to be filed in 2024. Further, I&E recommends that the Company propose amortization of the

balance, at the time, amortized over a period of years, to be claimed in the next rate proceeding; and, that the Company not be allowed to claim interest or any time value of money component associated with the delay. Also, I&E recommends that the Company be allowed to claim no increases to COVID-19 related uncollectibles beyond the effective date of new rates in this proceeding, and that any new increases to the COVID-19 related uncollectibles should not be recoverable in a future proceeding.

Universal Service Programs. The Company provided a comprehensive description of the Company's proposed programs and support for universal service and low-income programming that will be utilized to assist Aqua Water and Wastewater customers. I&E recognized that as part of the Company's acquisition of the Peoples Companies, Aqua agreed to propose a universal service plan, and the Commission approved. I&E recommends acceptance of almost all of Aqua's proposed universal service plan with a few modifications and additions.

I&E recommends that the Company be required to perform income verifications to admit participants into the universal service programs to ensure legitimacy of applicants and reduce misuse of the programs. Also, I&E recommends that the Company be required to demonstrate effort is made to encourage participants to take advantage of the Federal Low-Income Household Water Assistance Program funds made available via the American Rescue Plan. Finally, I&E recommends that the Company monitor available federal and state assistance programs and notify customers of all available sources of aid.

Income Verification. I&E recommends the Commission require the Company to establish guidelines for income verification consistent with the Peoples Companies' requirements.

Universal Service Plan Costs Recovery. I&E recommends that the costs for a full-scale universal service plan, as proposed by the Company, be recovered via a reconcilable surcharge mechanism, like that used by the Peoples Companies, that tracks dollar-for-dollar net costs. Further, the Commission has recommended that a comparable funding mechanism as those used by the natural gas and electric distribution companies in Pennsylvania is preferable. Finally, I&E strongly opposes the OCA recommendation to recover the universal service plan costs through base rates.

RATE STRUCTURE

Cost of Service Study - Water. I&E made no recommendations regarding the cost-of-service study for Aqua Water operations.

Cost of Service Studies - Wastewater. I&E recommends the Company continue to combine Wastewater Zones 1 through 6 in one cost of service study. I&E also recommends the Company combine Wastewater Zones 7 through 11 into one cost of service study in its next base rate case. Further, future Section 1329 systems acquired subsequent to this rate proceeding should continue to have a separate cost of service study for each system included in the next base rate case following the acquisition.

Rate Zones - Water. I&E is proposing only a $17.22 million increase in rates to Water customers. I&E recommends all of the Company's proposed percentage increases

per rate class be subject to a final scale back based on the final approved revenue increase to be applied to the Water customers.

Rate Zones - Wastewater. I&E notes the Company has 11 different Wastewater rate zones, with different subsystems and eight different third-party customers. I&E agreed that given the wide variety of present wastewater rates, the Company's proposal to continue the various rate zones is reasonable. To summarize, I&E recommends that Zone 2 should not be merged into Zone 1, and that Zone 2 rates should be increased. Further, existing Zones 3 through 6 should remain and will need to have separate tariff pages.

Revenue Allocation - Generally. I&E recognizes that, generally, utilities that provide more than one different type of utility service cannot shift costs from one operation to the other. Act 11 however is a statutory exception to this rule.

Act 11 Subsidy. I&E recommends an Act 11 subsidy of $10,439,352. In contrast, the Company is proposing an Act 11 subsidy of $20,839,425.

Revenue Allocation – Water - Wastewater. I&E recommends the revenue allocations, after applying I&E's proposed Act 11 subsidy, as shown on I&E table VII – Water - Act 11 Allocation attached hereto in Appendix A.

Scale Back of Rates - Water. I&E recommends that the revenue requirements and the scale backs of Wastewater operations must first be determined prior to the application of a scale back of rates to the Water operations rates. The Wastewater operations revenue requirement must be set first because that will determine the amount of Act 11 subsidy revenue requirement to be allocated to Water operations. Once the Act 11 Wastewater to Water subsidy allocation is determined by the Commission, then the full revenue

requirement to be placed on Water operations can be determined and those rates can then be scaled back.

Scale Back of Rates - Wastewater. I&E recommends that no scale back of Wastewater rates should occur until the until the total Act 11 Wastewater subsidy is eliminated. It is in the public interest to reduce the Act 11 subsidy as much as possible. Wastewater customers in all rate zones should contribute to reduce and eliminate the Wastewater subsidy. Additionally, the Commission has the discretion to apply the concept of gradualism to any rate increase that may be approved.

Rate Structure - Water. I&E recommends a total revenue increase for water customers of $17,222,604. I&E's proposed total revenue increase for water customers is only 20% of the company's proposed increase of $86.12 million.

Rate Structure - Wastewater. I&E witness Joseph Kubas details I&E's proposed Wastewater rate design in his direct and surrebuttal testimony and the accompanying exhibits. Mr. Kubas performed a comprehensive review of the parties direct and rebuttal testimonies to arrive at I&E's final proposed Wastewater rate structure. I&E's proposed rate structure for Wastewater Zones 1 through 11 is summarized *infra*.

TARIFF PROPOSALS

Purchased Water Adjustment Clause. I&E recommends that the proposed purchased water adjustment clause be rejected. The Company's purchased water adjustment clause circumvents the normal rate case procedure and is discriminatory to tariff rate customers. Further, purchased water expense is not volatile and has a minimal impact compared to all other expenses.

Energy Cost Adjustment Mechanism. I&E recommends that the energy cost adjustment mechanism be rejected. Further, the Company's energy cost adjustment mechanism proposal is unsupported and it circumvents the normal rate case process. It is not appropriate for the Company to recover a routine operating expense through the proposed adjustment mechanism. Additionally, the adjustment mechanism is discriminatory to tariff rate customers.

CONCLUSION

Aqua has not met its burden of proof as the record evidence presented by Aqua does not substantiate a revenue increase of $97.68 million. Instead, based on the weight of the record evidence, the Commission should only grant Aqua the I&E recommended revenue increase of $33.91 million.

III. I&E OVERALL POSITION ON RATE INCREASE REQUEST

I&E's total recommendation for all Aqua revenue requirements combined is $584,241,297. This recommended revenue requirement represents an increase of $33,909,310[11] to the I&E-adjusted present rate revenues of $550,331,987.[12]

To provide further detail, I&E is recommending specific revenue increases as follows:

Water	Wastewater (WW) Base	WW Limerick	WW East Bradford	WW Cheltenham	WW East Norriton	WW New Garden
$6,783,252	$14,073,406	$5,112,610	$738,982	$2,366,685	$2,536,693	$2,297,682
	Total Wastewater Combined					
	$27,126,058					

[11] I&E St. No. 1-SR, p. 6. *See also*, App. A, I&E Table VII – Water – Act 11 Allocation.
[12] *Id.*, p. 7, Table II.

The figures in the table above do not reflect I&E's recommended Act 11 revenue subsidy shift of $10,439,352 from wastewater to water which would raise total revenue requirement increase for water from $6,783,252 to $17,222,604; and, at same time would lower the total revenue requirement for wastewater from $27,126,058 to $16,686,706.[13]

IV. RATE BASE

Rate base, also known as measure of value, is the depreciated original cost of a utility's investment in plant a utility has in place to serve customers plus other additions and deductions that the Commission determines to be necessary in order to keep the utility operating and providing safe and reliable service to its customers.[14] Rate base is one part of the financial equation used by the Commission to determine the appropriate revenue that a utility is granted in a rate proceeding.[15] Aqua's rate base claim calculation includes depreciated original cost plant in service plus additions of Materials and Supplies and Cash Working Capital as well as deductions of contributions in aid of construction ("CIAC") and customer advances for construction ("CAC"), deferred income taxes, and Investment Tax Credit as shown on Schedule G-1 on Aqua Exh. 1-A through 1-G.[16]

Additionally, the depreciated original cost is determined by subtracting the book reserve, which is the accumulation of all prior annual depreciation expense, and other items such as salvage value, from the original cost of the plant in service that is projected

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[13] App. A, I&E Table VII – Water – Act 11 Allocation.
[14] I&E St. No. 4, p. 3.
[15] *Id.*
[16] *Id.*, pp. 3-4.

to be used and useful in the public service.[17] The depreciated original cost of the plant in service is determined by taking a "snapshot" look at the depreciated original cost value of used and useful utility plant in service at the end of the FPFTY.[18]

Further, for a utility plant to be included in rates, the plant must be used and useful in the provision of utility service to the customers. Therefore, by definition, only plant currently providing or capable of providing utility service to customers or plant projected to be completed and in service by the end of the FPFTY is eligible to be reflected in rates.

A. Fair Value - Water

I&E separated the rate base fair value for water and wastewater for purposes of this proceeding.

1. Fair Value

I&E is recommending a total fair value for Aqua Water rate base of $3,815,961,707.[19] I&E is not recommending any adjustments to the additions and deductions to the Company's claimed rate base for plant additions and retirements as set forth on Aqua Exh. 1-A through 1-G, Sch. G.[20] I&E is, however, recommending adjustments based on the acquisition of the Borough of Phoenixville water system ("Phoenixville").

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17 *Id.*, p. 4.
18 *Id.*
19 *See* App. A, I&E Table I - Water, col. F, line. 22.
20 I&E St. No. 4, pp. 3-4.

2. Acquisition Adjustment – Water – Phoenixville

I&E recommended that the Phoenixville acquisition adjustment should be denied.[21] This recommendation reduces rate base by $2,315,440 (based on the depreciated original cost at March 31, 2023) and also reduces the annual amortization expense by $121,865.[22]

Aqua is seeking approval of an acquisition adjustment for the recently acquired Phoenixville water system.[23] Aqua acquired the Phoenixville water system on December 4, 2019 pursuant to Section 1327[24] of the Public Utility Code.[25] The Company is seeking a positive acquisition adjustment of $2,437,305 and is proposing to amortize the acquisition adjustment over a period of twenty (20) years.[26]

I&E asserted that the acquisition adjustment for Phoenixville should be denied because Aqua failed to present substantial evidence[27] that the Phoenixville acquisition meets the criteria set forth in Section 1327(a).[28] Aqua attempted to make failed arguments that (1) Section 1327(a) does not apply in this instance; (2) replacing 30% of fire hydrants and 68% non-revenue water shows that Phoenixville was a troubled system; (3) Phoenixville's motivation was to exit the water business outside the borough; and, (4) no system capable of making improvements could ever comply with the Section 1327(a) criteria. I&E refuted each of these failed arguments.[29] Specifically, I&E argued that, (1)

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21 I&E St. No. 3, pp. 6--10; I&E St. No. 3-SR, pp. 3-7.
22 *Id.*
23 I&E St. No. 3, p. 6.
24 66 Pa. C.S. § 1327.
25 I&E St. No. 3, p. 6.
26 *Id.*
27 *See* I&E St. No. 3, pp. 7-9; I&E St. No. 3-SR, pp. 2-7.
28 66 Pa. C.S. § 1327(a).
29 I&E St. No. 3-SR, pp. 4-7.

hydrants are utility plant that require periodic replacement based on known and knowable service life; (2) the Company provided no detail to indicate that there were substantial service issues or failed systems causing the 68% non-revenue water; and, much of this non-revenue water could be due to other end-of-service plant issues that were known or knowable; (3) the motivation of an owner to sell is not listed in the Section 1327(a) criteria; and, (4) small, private water and wastewater systems do not have the ability to increase taxes and issue bonds that municipalities such as Phoenixville have, so not every troubled system has the capability of funding necessary repairs.[30] Therefore, in consideration of the above and the record evidence presented by I&E, I&E recommends that the Phoenixville acquisition adjustment be denied.

3. Annual Amortization Expense – Water – Phoenixville

As stated above, I&E recommended that the Phoenixville acquisition adjustment should be denied.[31] This recommendation reduces rate base by $2,315,440 and also reduces the annual amortization expense by $121,865 which is expressed as a depreciation expense.[32]

As part of the acquisition of the Phoenixville water system, Aqua claimed an additional annual amortization expense in the water operating expenses of $121,865, bringing the total annual amortization expense claim to $530,879.

I&E has asserted above that the Phoenixville acquisition adjustment be denied and, therefore, the resultant Phoenixville annual amortization expense adjustment must be

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[30] *Id.*, pp. 5-6.
[31] I&E St. No. 3, pp. 10-11; I&E St. No. 3-SR, p. 7.
[32] *Id.*; *Id. See also* App. A, I&E Table I, Aqua PA - Water, col. E, line 14.

denied as well. In consideration of the above and the record evidence presented by I&E, I&E recommends that the Company's total annual amortization expense be reduced to $409,015 ($530,879 - $121,865).[33]

B. Fair Value – Wastewater Base

I&E is recommending a total fair value for Aqua Pennsylvania - Wastewater Base rate base of $198,368,990.[34]

C. FTY and FPFTY Reporting - Utility Plant in Service

I&E recommended and continues to recommend that the Company provide the Commission's Bureaus of Technical Utility Services and Investigation and Enforcement with an update to Schedule G-2 of Aqua Exhibits 1-A, 1-B, 1-C, 1-D, 1-E, 1-F, and 1-G, no later than July 1, 2022 which should include actual capital expenditures, plant additions, and retirements by month for the twelve months ending March 31, 2022 and an additional update for actuals for the year ending March 31, 2023, no later than July 1, 2023.[35]

I&E reasoned, through the use of the FPFTY, a utility is allowed to require ratepayers, in essence, to pre-pay a return on a utility's projected investment in future facilities that are not in place and providing service at the time the new rates take effect and are not subject to any guarantee of being completed and placed into service.[36] While the FPFTY provides for such projections, there should be some timely verification of the

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[33] I&E St. No. 3-SR, pp. 3-7.
[34] *See* App. A, I&E Table I, - Wastewater, col. F, line 22.
[35] *Id.*, p. 5; I&E St. No. 4-SR, pp. 1-2.
[36] I&E St. No. 4, p. 5.

projections.[37] Use of the FPFTY has become common practice by Pennsylvania utilities, including Aqua, and the Company agreed to provide such projections as part of its previous base rate case in which it made use of the FPFTY.[38] The Company did not challenge I&E's recommendation to continue to provide the requested updates in this proceeding; therefore, I&E's recommendation should be approved.

V. REVENUES

A. Forfeited Discounts – Water

I&E recommends that the Company's late payment claim under proposed rates be increased by the same percent increase as the overall base rate increase approved by the Commission.[39] And, while the Company argued that it already accounted for the increase to late payment charges for proposed rates in its present rate adjustment, I&E disagrees.[40] To the contrary, I&E asserts the late payment claim under present rates is designed to project the amount of revenue the Company would receive in the FPFTY if its rates were not increased.[41] The claim that the Company already made an adjustment for the increase in late payment revenue that would be generated under proposed rates in its present rate claim is illogical and should be rejected.[42]

Therefore, in consideration of the above and the record evidence presented by I&E, I&E recommends that the Company's late payment claim under proposed rates be

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37 *Id.*
38 *Id.*
39 I&E St. No. 4-SR, p. 5.
40 *Id.*
41 *Id.*
42 *Id.*

increased by the same percent increase as the overall base rate increase approved by the Commission.

B. Forfeited Discounts – Wastewater – Present Rates

Aqua's total claim for Operating Revenue - Late Payment Revenue under present and proposed rates for the FPFTY ending March 31, 2023, is $76,434.[43] The $76,434 is comprised of two parts. The first part is $23,436 from Zones 1-6 and $52,998 from Zones 7-11, however, the Company did not reflect any late payment revenue from Zone 11.[44]

I&E recommended that late payment revenue for Zone 11 – New Garden be increased from $0 to $17,382 under present rates.[45] I&E made this recommendation because the Company did not collect Late Payment Revenue in the HTY, but it is currently collecting and will continue to collect late payment revenue in the FPFTY ending March 31, 2023.[46] Therefore, it is reasonable to reflect Zone 11 - New Garden late payment revenue that the Company will collect in the FPFTY under present rates in this case.[47] The Company agreed with I&E's recommendation.[48]

C. Forfeited Discounts – Wastewater – Proposed Rates

The total Company claim for operating revenue - late payment revenue for wastewater under proposed rates for the FPFTY ending March 31, 2023, is $93,816

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43 I&E St. No. 5, p. 59; I&E St. No. 5-SR, p. 27.
44 *Id.*, p. 59.
45 *Id.*, p. 60.
46 *Id.,* p. 61.
47 *Id.*
48 I&E St. No. 5-SR, p. 27, *citing* Aqua St. No. 2-R, p. 31.

described under present rates ($23,436 + $70,380).[49] In rebuttal, the Company addressed both water and wastewater together and stated "[t]he ratio proposed by [I&E witness] Mr. Cline to increase late payment charges under proposed rates is not necessary as the Company has already adjusted for this under present rates."[50] The Company continues to assert that for wastewater it will receive the same revised $93,816 ($76,434 + $17,382) in late payment revenue under proposed rates for the FPFTY that it reflected under present rates.[51]

Nevertheless, I&E reasoned that since the proposed wastewater rates have changed, and late payment revenue is based upon the overall percentage of the increase, it was necessary for I&E to revise its late payment revenue recommendation in surrebuttal testimony.[52] Therefore, changes in proposed rates in Zones 1 through 6 described herein, cause the overall percentage to increase from 32.2% to 32.5%, which causes the late payment revenue to increase accordingly.[53] Specifically, this change causes late payment revenue to increase from $23,436 to $31,054, which is an increase of $7,618 or 32.5% under proposed rates for the FPFTY.[54] I&E asserts it is reasonable to expect that late payment revenue will increase when a utility's base rates are increased as a result of a base rate proceeding.[55] Since late payment revenue is generally a percentage of a customer's bill, increasing revenue through a rate increase will cause revenues from late

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[49] I&E St. No. 5-SR, p. 28.
[50] Aqua St. No. 2-R, pp. 30-31. *See also* I&E St. No. 5-SR, p. 28.
[51] I&E St. No. 5-SR, p. 28.
[52] *Id.*, p. 29.
[53] *Id.*
[54] *Id.*, p. 29, *citing* I&E Exh. No. 5-SR, Sch 1, p. 1, col. H, line 1.
[55] *Id.*

payments to increase over time.[56] I&E rejects the Company's argument that it already made an adjustment for the increase in late payment revenue.[57]

D. Sales for Resale Contracts – Rider DRS - Water

Initially I&E recommended that each of the several rider contracts be cancelled, and that each customer begin to pay full approved tariff rates when they become effective.[58] The Company continued to provide updated information throughout this proceeding. These contracts were addressed by I&E witness Cline and much of his testimony is proprietary. Therefore, witness Cline's testimony will be summarized into a non-proprietary version to avoid creating a PROPRIETARY version of I&E's Main Brief.

Aqua has sales for resale agreements with eleven different water utilities to supply water at various rates.[59] Additionally, the Company has a tariff provision that describes what is required to grant a contract to a resale customer at less than full tariff rates.[60] Specifically, Aqua's tariff requires proof of the existence of a viable competitive alternative to service from the Company.[61] Further, the issue of the sales for resale contracts had been addressed in previous Aqua proceedings and those issues carry forward to this proceeding.[62] And finally, the Company's discounted rates tariff provision is subject to Commission review during this base rate proceeding filed by Aqua

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56 *Id.*, p. 29. *See also* I&E St. No. 5, p. 63.
57 *Id.*, p. 30.
58 I&E St. No. 4 PROPRIETARY, pp. 8-16; I&E St. No. 4-SR PROPRIETARY, pp. 5-20.
59 I&E St. No 4 PROPRIETARY, p. 8, *citing* Aqua Exh. 5-A, Part I, RS2 Attachment, pp. 5-9.
60 *Id.*, pp. 8-10.
61 *Id.*, p. 9.
62 *See* I&E St. No. 4, *citing Pa. P.U.C. v. Aqua Pennsylvania, Inc.*, Docket No. R-2018-3003558, Joint Petition for Settlement.

as a component of revenue.[63] Based on the information provided, the updated I&E recommendations for the eleven identified sales for resale contracts are as follows:

1. United Water

I&E did not address the United Water contract because it was previously approved by the Commission.[64]

2. Hubbard

I&E will accept the information provided by the Company.[65] Therefore, I&E withdraws its recommendation to cancel the Hubbard contract.[66]

3. Sharpsville

I&E analyzed and does not accept the information provided by the Company.[67] Therefore, I&E continues to recommend that the Sharpsville contract be cancelled and it begin to pay full tariff rates when they go into effect.[68]

4. Schwenksville

I&E analyzed and does not accept the information provided by the Company.[69] Therefore, I&E continues to recommend that the Schwenksville contract be cancelled and it begin to pay full tariff rates when they go into effect.[70]

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63 I&E St. No. 4-SR PROPRIETARY, p. 9.
64 I&E St. No. 4 PROPRIETARY, pp. 9-10.
65 I&E St. No. 4-SR PROPRIETARY, pp. 10-11.
66 *Id.*, p. 11.
67 *Id.*, pp. 11-12.
68 *Id.*, p. 12.
69 *Id.*, pp. 12-13.
70 *Id.*, p. 13.

5. Warwick

I&E will accept the information provided by the Company.[71] I&E withdraws its recommendation to cancel the Warwick contract.[72]

6. Chemung

The Company failed to provide additional information.[73] Further, Chemung is one of the contracts that was specifically listed in the 2018 Settlement as requiring additional documentation.[74] I&E continues to recommend that the Chemung contract be cancelled and it begin to pay full tariff rates when they go into effect.[75]

7. Horsham

Despite a request, the Company (and Horsham) failed to provide additional information regarding Horsham's competitive alternatives.[76] I&E continues to recommend that the Horsham contract be cancelled and it begin to pay full tariff rates when they go into effect.[77]

8. Downingtown

I&E will accept the additional information provided by the Company.[78] I&E withdraws its recommendation to cancel the Downingtown contract.[79]

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[71] *Id.*
[72] *Id.*
[73] *Id.*, p. 14.
[74] *Id.*, pp. 14-15.
[75] *Id.*, p. 15.
[76] *Id.*, pp. 15-16.
[77] *Id.*, p. 16.
[78] I&E St. No. 4-SR, pp. 16-17.
[79] *Id.* p. 17.

9. New Wilmington

Aqua failed to provide sufficient information to support the New Wilmington "wheeling" agreement.[80] As such, New Wilmington is a normal Rate DRS customer. I&E continues to recommend that the New Wilmington contract be cancelled and it begin to pay full tariff rates when they go into effect.[81]

10. Bristol

I&E will accept the additional information provided by the Company.[82] I&E withdraws its recommendation to cancel the Bristol contract.[83]

11. Masury

Aqua failed to provide sufficient substantial evidence to support granting Masury competitive rider rates.[84] I&E continues to recommend that the competitive rider rates granted to Masury be cancelled. There is no Masury rate in the proposed tariff and Masury does not have a water supply contract with Aqua. Masury cannot qualify for Rider DRS.[85] Further, I&E recommends that Masury be billed at full tariff rates until such time in the future that an affiliated interest agreement is approved by the Commission.[86]

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80 *Id.*, pp. 17-18.
81 *Id.*, p. 18.
82 *Id.*, pp. 18-19.
83 *Id.*, p. 19.
84 *Id.*, pp. 19-20.
85 *Id.*
86 *Id.*, p. 20.

As a result of I&E's recommendations to cancel certain of the sales for resale rider contracts and rider rates as set forth above, present rate revenue shall be increased by $3,248,807.[87]

E. Third Party Sales

Aqua has eight third-party sales customers.[88] The present rate revenue from the third-party sales is $1,095,381.[89] The Company proposed to increase rates for all but two (Southdown Homes and East Brandywine) of the third-party customers.[90] The remaining customers will experience a proposed increase in annual bills ranging from 14% to 58.8%.[91]

I&E originally recommended that the Southdown Homes usage rate increase from $0.749 per hundred gallons to $0.9535 per hundred gallons.[92] This equates to an increase of $0.2045 per hundred gallons or approximately 27.3%.[93] I&E also recommended that the East Brandywine customer charge be increased from $351.00 per month to $446.75 per month.[94] This equates to an increase of $95.75 per month or approximately 27.3% (I&E Ex. No. 5, Sch. 9, p. 1, lines 11-15).[95] I&E based its recommendation on the average percentage increase for third-party customers.[96] I&E reasoned, this percentage increase is reasonable considering the higher percentage increase being proposed for

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87 I&E St. No. 4-SR, p. 20, *citing* I&E Exh. No. 4-SR, Sch. 1. *See also*, App. A, I&E Table I - Water, col. E, line 11.
88 I&E St. No. 5, p. 56.
89 *Id.*
90 *Id.*, pp. 56-57.
91 *Id.*, p. 57.
92 *Id.*
93 *Id.*
94 *Id.*
95 *Id.*, *citing* I&E Exh. No. 5, Sch. 9, p. 1, lines 11-15.
96 *Id.*

other third-party customers and the higher percentage increases proposed by Aqua for other wastewater customers.[97] The I&E recommendation results in an overall increase of $113,097 which is $23,484 more than the $89,613 increase proposed by the Company.[98]

In rebuttal, the Company revised the proposed revenue for Southdown Homes.[99] The Company's revised proof of revenue show Southdown Homes paying a usage rate of $1.35 per hundred gallons.[100] I&E accepted this proposed usage rate.[101] I&E continues to recommend that the flat rate for East Brandywine be increased to $446.75 per month as noted above.[102]

VI. EXPENSES

It is well settled that a utility is entitled to recover its reasonably and prudently incurred expenses.[103] Operating and maintenance expenses, if properly and prudently incurred, are allowed as part of the overall rate computation. As such, a public utility is entitled to recover all reasonable and normal operating and maintenance expenses incurred by providing regulated service.[104] To the extent that expenses are not incurred, imprudently incurred, or abnormally overstated during the test year, they should be disallowed and found not recoverable through rates. The public utility requesting a rate increase and seeking to recover expenses has the burden of showing that the rate requested, including all claimed expenses, is just and reasonable.[105]

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97 *Id.*, pp. 57-58.
98 *Id.*, p. 58.
99 *See* I&E St. No. 5-SR, pp. 25-26.
100 *Id.*
101 *Id.*, p. 26.
102 *Id.*
103 *UGI Corp. v. Pa. P.U.C.*, 410 A.2d 923, 932 (Pa. Commw. 1980).
104 *Western Pennsylvania Water Company v. Pa. P.U.C.*, 422 A.2d 906 (Pa. Commw. 1980).
105 66 Pa. C.S. § 315(a); *See also Cup v. Pa. P.U.C.*, 556 A.2d 470 (Pa. Commw. 1989).

A. Rate Case Expense

The Company proposed, and I&E accepted, a 36-month rate case period.[106] The only issue remaining is whether the rate case expense should be normalized or amortized.[107]

I&E asserted, and continues to assert, the Company's rate case expense claim should be normalized instead of amortized because it is an ongoing expense that recurs at irregular intervals, which is the precise circumstance under which normalization treatment of an expense should occur.[108] The Company incorrectly refers to *A Guide to Utility Rate Making*[109] in support of its flawed argument to amortize its rate case expense.[110] But, contrary to the Company's argument, the *Ratemaking Guide* clearly states :

> The Commission's practice is to recognize all prudently-incurred rate case expense and set a normalization period based upon historic filing frequency. So, if Typical Utility's history in the 2018 filed case shows previous base case filings in 2013, 2008, and 2003, then the normalized rate case expense for a case costing Typical Utility a total of $100,000 would be $20,000 per year ($100,000/5 years).[111]

Additionally, recent Commission orders have supported using normalization for rate case expense. In the *Emporium Water Company*[112] base rate case; the *City of*

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[106] I&E St. No. 1, p. 12: I&E St. No. 1-SR, p. 9.
[107] *Id.*, pp. 10-13; *Id.*, pp. 9-12.
[108] *Id.*, pp. 12-13; *Id.*, pp. 9-12.
[109] *A Guide to Utility Ratemaking*, Cawley and Kennard (2018 Edition) (*Ratemaking Guide*).
[110] I&E St. No. 1-SR, pp. 9-11.
[111] *Ratemaking Guide*, p. 112.
[112] *Pa. P.U.C. v. Emporium Water Company*, Docket No. R-2014-2402324, p. 50 (Order Entered January 28, 2015).

DuBois[113] base rate case, and most recently the *Columbia Gas*[114] base rate case the Commission found in favor of I&E's recommendation for a normalization period based on the actual historic filing frequency.[115] There was never a question in any of the three cited cases regarding whether or not the rate case expense should be normalized. The only question was the length of the time period over which the expense should be normalized.

In consideration of the above and the I&E record evidence presented, I&E recommends that Aqua's rate case expense of $2,200,000 be normalized over 36-months for rate making purposes.[116]

B. Insurance Expense

After both the Company and I&E addressed the issue in direct, rebuttal, and surrebuttal testimony, I&E recommends the following amounts for insurance expense:[117]

Water - $4,574,332 or a reduction of $340,945 ($4,915,277 - $4,574,332) to the Company's updated claim.

Wastewater Base - $34,967 or an increase of $18,640 ($34,967 - $16,327) to the Company's updated claim.

Limerick Wastewater - $9,146 or an increase of $3,533 ($9,146 - $5,613) to the Company's updated claim.

East Bradford Wastewater - $2,021 or an increase of $789 ($2,021 - $1,232) to the Company's updated claim.

Cheltenham Wastewater - $16,113 or an increase of $6,299 ($16,113 - $9,814) to the Company's updated claim.

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113 *Pa. P.U.C. v. City of DuBois – Bureau of Water*, Docket No. R-2016-2554150, pp. 65-66 (Order Entered March 28, 2017).

114 *Pa. P.U.C. v. Columbia Gas of Pennsylvania, Inc.,* Docket No. R-2020-3018835, p. 78, Order Entered February 19, 2021.

115 I&E St. No. 1, p. 10; I&E St. No. 1-SR, p. 7.

116 I&E St. No. 1, pp. 11, 12.

117 *See* I&E St. No. 1-SR, p. 15.

East Norriton Wastewater - $6,297 or an increase of $1,382 ($6,297 - $4,915) to the Company's updated claim.

New Garden Wastewater - $1,276 or a decrease of $676 ($1,952 - $1,276) to the Company's updated claim.

The Company first proposed insurance expense claims in its direct testimony and again in rebuttal testimony in response to arguments presented in I&E direct testimony.[118] The Company's claims are summarized in I&E witness Wilson's surrebuttal testimony.[119] I&E noted that Aqua's revised claims for all the wastewater revenue requirements as presented in Company rebuttal decreased from direct testimony to rebuttal testimony with no explanation for that directional change.[120] Furthermore, the Company provided no documentation for the recent 2022 accruals to support the changes in rebuttal testimony.[121] I&E questions the reliability of the amounts stated on the schedules presented by the Company in rebuttal testimony for these reasons and continues to recommend that insurance expense be increased by 4.38% per year from the HTY to the FTY, and 4.38% again from the FTY to the FPFTY based on a three-year average trend.[122] I&E also notes that the Company applied the 4.38% three-year average increase to update the Company's monthly insurance premiums for the last three months of the FPFTY (January through March 2023).[123]

In consideration of the above and the record evidence presented by I&E, I&E continues to recommend the insurance expenses as set forth above.

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[118] I&E St. No. 1-SR, p. 14, *citing* Aqua St. No. 4-R, p. 6.
[119] *Id.*, pp. 14-15.
[120] *Id.*, p. 15.
[121] *Id.*
[122] *Id.*, pp. 13-16.
[123] *Id.*, p. 14 *citing* Aqua St. No. 4-R, p. 7.

C. PURTA

This issue was raised in I&E direct, but withdrawn in I&E surrebuttal.[124]

D. Depreciation - Amortization Expense - Water - Phoenixville

I&E recommended the Phoenixville acquisition adjustment be denied.[125] And, as a result, I&E also recommends that the related annual amortization expense of $121,865 also be denied.[126] *See* Section IV. Rate Base, A. Fair Value - Water, 3. Annual Amortization Expense - Water - Phoenixville *supra* for additional explanation.

E. Purchased Water Expense

I&E recommended that Commission only allow Aqua to reflect water purchases from Aqua Ohio at $0.3449 per hundred gallons.[127] I&E's recommendation was based on the Sales for Resale Contract - Masury Water Company implied rate (calculated composite rate including customer charges) of $0.3449 ($302,907 ÷ 878,333 hundred gallons).[128] If the Commission adopts the I&E recommendation, the Aqua Ohio related purchased water expense would decrease from $297,839 to $131,044 which is an annual savings of $166,795 for Pennsylvania ratepayers.[129]

Aqua argued that I&E was recommending that Aqua change its tariff rate for Aqua Ohio.[130] But that is a mischaracterization of the I&E recommendation. Rather, I&E's recommendation is based on the premise that the cost of purchased water should be the

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124 I&E St. No. 1-SR, p. 19.
125 I&E St. No. 3-SR, pp. 3-7.
126 I&E St. No. 3, pp. 10-11; I&E St. No. 3-SR, p. 7. *See also* App. A, I&E Table I, Aqua PA – Water, col. E, line 14.
127 I&E St. No. 1-SR, p. 19.
128 *See* I&E St. No. 1, p. 19, *citing* AP Exh 5-A, Part II, Sch. 5, p. 23.
129 *See* I&E St. No. 1, pp. 19-20; I&E Exh. No. 1, Sch. 4.
130 Aqua St. No. 2-R, p. 25.

same as the rate Aqua Pennsylvania receives when it sells water to that same affiliate for ratemaking purposes so that Pennsylvania customers are not harmed.[131] To put it another way, the Ohio rate is not guaranteed full recovery when that tariff rate is being claimed by a Pennsylvania affiliate in a Pennsylvania rate filing.[132]

Further, Aqua failed to provide sufficient substantial evidence to support granting Masury competitive rider rates.[133] I&E continues to recommend that the competitive rider rates granted to Masury be cancelled because Masury does not have a water supply contract with Aqua and cannot qualify for Rider DRS.[134] Further, I&E recommends that Masury be billed at full tariff rates until such time in the future that an affiliated interest agreement is approved by the Commission.[135]

In consideration of the above and the record evidence presented by I&E, I&E continues to recommend that Commission only allow Aqua to reflect water purchases from Aqua Ohio at $0.3449 per hundred gallons. Reducing the water purchase rate for Aqua Ohio purchases to $0.3449 per hundred gallons would result in a fair and reasonable decrease from $297,839 to $131,044 which is an annual savings of $166,795 for Pennsylvania ratepayers.[136]

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131 I&E St. No. 1-SR, p. 20.
132 *Id.*
133 I&E St. No. 4-SR PROPRIETARY, pp. 19-20.
134 *Id.*
135 *Id.*, p. 20.
136 I&E St. No. 1, pp. 19-20.

F. Dredging Expense Reserve

I&E recommends that Aqua's dredging expense be normalized and that the Company's proposed use of a reserve account and regulatory liability be rejected.[137] I&E recommends no adjustment to the claimed dollar amount.[138]

The Company stated it plans to dredge once every three years and is requesting to accrue a reserve for dredging at a rate of $400,000 per year.[139] Aqua proposed that actual dredging costs would be charged against the reserve.[140] The reserve would be recorded as a regulatory liability and reevaluated in subsequent base rate cases.[141]

I&E argued, however, that this routine operating expense is more appropriately normalized for ratemaking purposes; and, accrual treatment via a regulatory liability should be rejected because dredging expense is not extraordinary in nature and regulatory liability treatment should not be granted.[142] Further, I&E argued normalized dredging expenses are no different than any other O&M expense in that the Company is given the opportunity to achieve full recovery.[143] Therefore, in consideration of the above and the record evidence presented by I&E, I&E recommends that the dredging expense be normalized and that the Company's proposed use of a reserve account and regulatory liability be rejected.

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137 *Id.*, p. 21; I&E St. No. 1-SR, p. 21.
138 *Id.*
139 Aqua St. No 3, pp. 5-6.
140 *Id.*
141 *Id.*
142 I&E St. No. 1-SR, p. 21.
143 *Id.*

G. Labor Expense

After reviewing Company testimony, exhibits and discovery responses, I&E had determined an appropriate vacancy level would be 2.7% considering an average of quarterly vacancy percentages from March 2019 through September 2021.[144]

However, the Company accepted the OCA recommended full-time vacancy rate of 2.88% in Company rebuttal testimony, I&E withdrew its recommended adjustment for labor expense and also accepted the OCA recommendation.[145]

H. Employee Benefits

I&E originally proposed adjustments to the Company's employee benefits claim.[146] However, I&E withdrew its recommended adjustment to the Company's employee benefits claim as a result of the Company's acceptance of the OCA modified vacancy rate of 2.88% as discussed above in the Labor Expense section.[147]

I. Federal and State Payroll Tax

I&E originally recommended adjustments to the Company's Federal and State payroll tax claim.[148] However, I&E withdrew its recommended adjustment to the Company's Federal and State payroll tax claim as a result of the Company's acceptance of the OCA modified vacancy rate of 2.88% as discussed above in the Labor Expense section.[149]

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144 I&E St. No. 1-SR, pp. 24-26.
145 *Id.*, p. 25.
146 *See* I&E St. No. 1, pp. 25-28; I&E St. No. 1-SR, pp. 26-28.
147 I&E St. No. 1-SR, p. 28.
148 *See* I&E St. No. 1, pp. 28-29; I&E St. No. 1-SR, pp. 28-29.
149 I&E St. No. 1-SR, p. 29.

J. Cash Working Capital

I&E agrees with the Company's use of a lead/lag study to measure how many days exist on average between the midpoint of the service period and the date the payment is received.[150] However, I&E recommended a cash working capital allowance for Water of $1,679,000 which is a reduction of $57,000 from the Company's claimed $1,736,000.[151] I&E did not recommend an adjustment to CWC for Wastewater Base or the other wastewater acquisitions due to a lack of materiality that would result in those adjustments.[152]

Aqua disagrees with the I&E cash working capital allowance based on the Company's ongoing disagreement with I&E's corresponding recommended O&M adjustments.[153]

In consideration of the above and the record evidence presented by I&E, it continues to recommend a cash working capital allowance for Water of $1,679,000 but does not recommend an adjustment to CWC for Wastewater Base or the other wastewater acquisitions. Finally, all adjustments to the Company's claims for revenues, expenses, taxes, and rate base must be continually brought together separately for each operating unit in the Administrative Law Judge's Recommended Decision and again in the Commission's Final Order.[154] This process, known as iteration, effectively prevents the

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150 I&E St. No. 1, p. 30.
151 I&E St. No. 1-SR, p. 31.
152 *Id.*, p. 30.
153 *Id.*, *citing* Aqua St. No. 1-R, p. 11.
154 *Id.*, p. 32.

determination of a precise calculation until all adjustments have been made to the Company's claims.

K. Gas and Electric Expenses

The Company claimed gas and electric O&M expenses. I&E is not recommending adjustments to those O&M expense claims in this proceeding.[155] I&E is, however, recommending that the proposed Energy Cost Adjustment Mechanism ("ECAM") is denied.[156] This issue is discussed in greater detail in Section XI. TARIFF PROPOSALS, B. Energy Cost Adjustment Mechanism, *infra*.

VII. TAXES

A. Federal Tax Adjustment Surcharge

I&E recommended disallowance of the Company's proposed Federal Tax Adjustment Surcharge (FTAS). The reasons are many and were thoroughly discussed by I&E witness Wilson in her direct[157] and surrebuttal[158] testimonies. To summarize, the Company's stated need for the surcharge is pure speculation as the Company cannot say with certainty if or when an increase to the federal corporate income tax rate might be enacted or ever take effect.[159] Furthermore, the Commission and its advisory staff have appropriately responded to changes in tax law as they have recently dealt with this issue in response to the reduction in the federal corporate income tax rate that took effect starting January 1, 2018 because of the Tax Cuts and Jobs Act (TCJA).[160] I&E is

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[155] I&E St. No. 1, p. 50.
[156] I&E St. No. 3, 19-24.
[157] I&E St. No. 1, pp. 28-29.
[158] I&E St. No. 1-SR, pp. 32-46.
[159] *Id.*, pp. 32-33.
[160] *Id.*, p. 32.

confident that the Commission would provide adequate and timely guidance on a statewide basis to affected regulated utilities if such a tax rate change occurs.[161] Accordingly, there is simply no need for the proposed FTAS at this time.

The Company attempted to argue that a federal corporate tax rate increase is not speculative based on the current administration's agenda; Pennsylvania utilities' rates would be affected and may no longer be just and reasonable; the TCJA rate cut was different because it was a decrease not an increase; and, the handling of excess accumulated deferred income taxes (ADIT) is a concern due to potential timing differences and the return of deferred taxes via the ARAM method.[162]

I&E witness Wilson addresses each of Aqua's stated concerns in surrebuttal and I&E continues to recommend that the Company's proposed FTAS be disallowed. Further, with regard to the excess ADIT concerns, deferred taxes require more scrutiny of regulators and statutory parties due to subjectivity in certain circumstances in determining the proper normalization periods, particularly for tax differences associated with non-protected assets that are not subject to the strict requirements of IRS normalization rules.[163] It is important for the Commission to not allow rate adjustments in a surcharge mechanism for excess ADIT changes as the Company has proposed.[164] I&E believes those changes should only be allowed to occur in the Company's future base rate case after any potential future tax rate changes take effect (similar to how TCJA changes were handled in base rate cases due to the absence of instruction on excess ADIT

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[161] *Id.*
[162] *Id.*, pp. 40-41, *citing* Aqua St. No. 8-R, pp. 9-11.
[163] I&E St. No. 1, p.
[164] *Id.*, p. 35; I&E St. No. 1-SR, p. 33.

by the Commission in the Temporary Rates Orders at Docket No. M-2018-2641242 (Orders Entered March 15, 2018 and May 17, 2018)).[165] This is because of the subjectivity of time periods for amortization of non-protected assets and the fact that they are not subject to the same IRS normalization rules as protected assets and that subjectivity is involved in determining periods to use for non-protected assets.[166] Therefore, I&E strongly recommends that the Commission require the Company to await statewide guidance if/when any potential future corporate income tax rate changes occur.[167]

In consideration of the above and all of the record evidence submitted by I&E, I&E recommends that the Company's proposed Federal Tax Adjustment Surcharge be disallowed.

VIII. RATE OF RETURN

A. Introduction - Rate of Return Standards

The Company claimed the following rate of return:

Type of Capital	Ratio	Cost Rate	Weighted Cost
Long-Term Debt	46.05%	4.00%	1.84%
Common Equity	53.95%	10.75%	5.80%
Total	100.00%		7.64%

[165] I&E St. No. 1-SR, p. 33.
[166] *Id.*
[167] *Id.*

I&E agreed with the Company's proposed capital structure and debt cost rate; however, I&E recommended the following reduction to the Company's equity return:[168]

Type of Capital	Ratio	Cost Rate	Weighted Cost
Long-Term Debt	46.05%	4.00%	1.84%
Common Equity	53.95%	8.90%	4.80%
Total	100.00%		6.64%

Rate of return is one of the components of the revenue requirement formula.[169] Specifically, it is the amount of revenue an investment generates in the form of net income and is usually expressed as a percentage of the amount of capital invested over a given period of time.[170] While it is a contested component of the revenue requirement formula, the Commission has clarified its position over the last several years and rate of return is becoming less and less controversial.[171]

A fair and reasonable overall rate of return is one that will allow the utility an *opportunity* to recover those costs prudently incurred by all classes of capital used to finance the rate base during the prospective period in which its rates will be in effect.[172]

The *Bluefield Water Works & Improvements Co. v. Public Service Comm. of West Virginia,* 292 U.S. 679, 692-93 (1923) ("*Bluefield*"), and *Federal Power Commission v. Hope Natural Gas Co.,* 320 U.S. 591, 603 (1944) ("*Hope Natural Gas*") are the seminal

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168 I&E St. No. 2, p. 6; I&E St. No. 2-SR, p. 27.

169 *See* I&E St. No. 2, pp. 2-3. The formula used for calculation of a utility's base rate revenue requirement is RR = E + D + T + (RB x ROR), where RR = Revenue Requirement; E = Operating Expense; D = Depreciation Expense; T = Taxes; RB = Rate Base; and ROR = Overall Rate of Return.

170 *Id.*

171 *See* I&E St. No. 2, pp. 16-17.

172 I&E St. No. 2, p. 3.

cases that present the legal standards applicable to regulators calculating utility rates of return.

In *Bluefield,* the Supreme Court stated:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be too high or too low by changes affecting opportunities for investment, the money market and business conditions generally.[173]

Twenty years later, in *Hope Natural Gas,* the Supreme Court reiterated:

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard the return to equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital.[174]

Bluefield and *Hope Natural Gas* set forth the principles, listed below, that are generally accepted by Pennsylvania and other regulators throughout the country as the appropriate criteria for measuring a fair rate of return.

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[173] *Bluefield*, 262 U.S. at 692-93.
[174] *Hope Natural Gas,* 320 U.S. at 603.

- A utility is entitled to the opportunity of a return similar to that being earned by other enterprises with corresponding risks and uncertainties, but not as high as those earned by highly profitable or speculative ventures;

- A utility is entitled to the opportunity of a return level reasonably sufficient to assure financial soundness;

- A utility is entitled to the opportunity of a return sufficient to maintain and support its credit and raise necessary capital; and,

- A fair return can change (increase or decrease) along with economic conditions and capital markets.[175]

B. Capital Structure.

I&E recommends using the Company's claimed capital structure as it falls within the range of the I&E proxy group's 2020 capital structures, which is the most recent information available at the time of I&E's analysis.[176] The 2019 range consists of long-term debt ratios ranging from 33.18% to 53.48% and equity ratios ranging from 32.78% to 59.01%, with a five-year average of 40.29% for long-term debt and 47.60% for common equity.[177]

C. Cost of Long-Term Debt

I&E recommends using the Company's updated claimed long-term debt cost rate of 4.00% for the FPFTY which results in a weighted cost of debt of 1.84%.[178] The Company's claimed cost rate of long-term debt is reasonable, as it is representative of the

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[175] I&E St. No. 2, pp. 3-4.
[176] I&E St. No. 2, pp. 11-12; I&E St. No. 2-SR, p. 10.
[177] *Id.*, *citing* I&E Exh. No. 2, Sch. 2.
[178] I&E St. No. 2, p. 13; I&E St. No. 2-SR, p. 27.

industry, and it falls within I&E's proxy group's implied long-term debt cost range of 2.69% to 5.67% with an average implied long-term debt cost of 4.04%.[179]

D. Cost of Common Equity

I&E continues to recommend using the Discounted Cash Flow ("DCF") method as the primary method to determine the cost of common equity.[180] Further, I&E recommends using the results of the Capital Asset Pricing Model ("CAPM") as a comparison to the DCF results.[181] I&E's recommendation is consistent with the methodology historically used by the Commission in base rate proceedings, even as recently as 2017, 2018, 2020, and 2021.[182] And, considering the most recent *Columbia Gas*[183] proceeding, this "issue" can now be relegated to the "well settled" category. Although the Company disagrees and continues to rely on other methods to determine an appropriate cost of equity, doing so is in error as the Commission recently noted, in *Columbia*:

> we shall adopt the position of I&E and shall base our determination of the appropriate cost of equity on the results of the DCF method and shall use the CAPM results as a comparison thereto. As I&E noted, the use of the DCF model has historically been our preferred methodology and was

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[179] I&E St. No. 2, p. 13, *citing* I&E Exh. No. 2, Sch. 3.
[180] I&E St. No. 2, p. 16.
[181] *Id.*
[182] *Id.*, p. 16, citing *Pa. P.U.C. v. City of DuBois – Bureau of Water*, Docket No. R-2016-2554150, pp. 96-98 (Order Entered March 28, 2017) (Disposition of Cost Rate Models); *Pa. P.U.C. v. UGI Utilities, Inc. – Electric Division*, Docket No. R-2017-2640058, p. 119 (Order Entered October 25, 2018) (Disposition of Cost of Common Equity); *Pa. P.U.C. v. Wellsboro Electric Company*, Docket No. R-2019-3008208, pp. 80-82 (Order Entered April 29, 2020) (Disposition of Primary Methodology to Determine ROE); *Pa. P.U.C. v. Citizens' Electric Company of Lewisburg, PA*, Docket No. R-2019-3008212, pp. 91-93 (Order Entered April 27, 2020) (Disposition of Cost of Common Equity); *Pa. P.U.C. v. Valley Energy, Inc.*; Docket No. R-2019-3008209, pp. 102-104 (Order Entered April 27, 2020) (Disposition of Methods for Determining the Cost of Common Equity); *Pa. P.U.C. v. Columbia Gas of Pennsylvania, Inc.*, Docket No. R-2020-3018835, p. 131, Order Entered February 19, 2021 (*Columbia Gas*) (Disposition of Methods for Determining the Cost of Common Equity).
[183] *Pa. P.U.C. v. Columbia Gas of Pennsylvania, Inc.,* Docket No. R-2020-3018835, Order entered February 19, 2021 (*Columbia Gas*).

> recently affirmed in *UGI Electric*. Like the ALJ, we find no reason to deviate from the use of this method in the instant case.[184]

The Commission also affirmed its primary reliance on the DCF and rejected giving equal weight to the other methodologies in *UGI Utilities, Inc. – Electric Division*, stating:

> The ALJs adopted the positions of I&E and the OCA that the DCF method should be the primary method used to determine the cost of common equity, and that the results of the CAPM should be used as a comparison to the DCF results. The ALJs found no reason to deviate from these preferred methods in this proceeding. Therefore, the ALJs recommended against the use of the RP and CE methods proffered by UGI. Further, the ALJs noted that the companies analyzed under the CE model are too dissimilar to a regulated public utility company. R.D. at 60, 76, 81-82 …[W]e shall adopt the positions of I&E and the OCA and shall base our determination of the appropriate cost of equity on the results of the DCF method and shall use the CAPM results as a comparison thereto. As both Parties noted, the use of the DCF model has historically been our preferred methodology. This was recently affirmed in *Pa. PUC, et. al v. City of Dubois-Bureau of Water*, Docket No. R-2016-2554150, *et. al.* (Order Entered March 28, 2017). Like the ALJs, we find no reason to deviate from the use of this method in the instant case. Accordingly, we shall deny UGI's Exceptions on this issue.[185]

The result of I&E's DCF analysis is 8.90%[186] while the result of I&E's CAPM analysis is 9.89%;[187] both of which are significantly lower than the Company's claim of 10.75%.[188] However, it is important to note that without Mr. Moul's use of inflated growth rates and his 234 basis point leverage adjustment that will be discussed below, the

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[184] *Id.*, p. 131.
[185] *UGI Utilities, Inc. – Electric Division,* pp. 103-106.
[186] I&E St. No. 2, pp. 6; 23.
[187] *Id.*, p. 27.
[188] *Id.*, p. 6.

Company's DCF would result in a 9.07% cost of equity, which is comparable to I&E's DCF result of 8.90%.[189] The DCF method is the most reliable and is appealing to investors.[190] And while I&E considers the DCF method superior for determining the rate of return for the current economic market because it measures the cost of equity directly,[191] I&E also recognizes that no method can perfectly predict the return on equity, which is why I&E also uses the CAPM as a comparison to the DCF.[192] As a result of I&E's DCF analysis I&E recommends a cost of common equity of 8.90%.[193]

Aqua witness, Mr. Moul, raised various issues relating to the cost of common equity calculations which were addressed and rejected in I&E witness Spadaccio's surrebuttal testimony.[194] Therefore, in consideration of the above and the record evidence presented, I&E continues to recommend a cost of common equity of 8.90%.[195]

E. Management Performance

Although the Company did not quantify what it believes to be an appropriate level of additional basis points for management performance, it argued that additional points should be considered in this proceeding. I&E disagrees and asserts that true strong management performance is earning a higher return through its efficient use of resources and cost cutting measures.[196] The greater net income resulting from cost savings and true efficiency in management and operations is available to be passed on to shareholders.[197]

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189 I&E St. No. 2, pp. 45-46.
190 *Id.*, pp. 16-17; 21-23.
191 *Id.*, p. 17.
192 *Id.*, pp. 17-19; 23-27.
193 I&E St. No. 2, pp. 6; 23, *citing* I&E Exh. No. 2, Sch. 6.
194 I&E St. No. 2-SR, pp. 2-24.
195 *Id.*, p 27.
196 I&E St. No. 2, p. 53; I&E St. No. 2-SR, pp. 25-26.
197 *Id.*

Therefore, Aqua, or any utility, should not be awarded additional rate of return basis points for doing what they are required to do in order to provide adequate, efficient, safe, and reasonable service under 66 Pa. C.S.A. § 1501 and for increasing profits as they are incentivized to do by their board of directors and shareholders.[198]

The Company argues that Aqua has consistently provided its customers with safe and reliable water and wastewater service at reasonable rates.[199] This, they say, is the product of a mission based, dedicated, and knowledgeable workforce that is constantly seeking to improve quality and control costs.[200] Further, Aqua argued it is committed to providing safe and reliable service, the community, and the environment.[201] Aqua noted it continues to accept the challenge of acquiring troubled or weaker water and wastewater systems in an effort to promote the Commission's goal of regionalization.[202] Aqua also argues that it is helping the Commonwealth deal with the problems created by small, troubled or non-viable wastewater systems in its acquisition of Phoenixville Water and by acting as a receiver to three other systems.[203]

I&E rejects the Company's arguments and asserts that, first, many of the arguments presented by Aqua fall within the categories of reliability, customer satisfaction, and safety which are required of every public utility company under 66 Pa. C.S.A. § 1501.[204] Second, the Company passes on capital expenditures to its ratepayers

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198 *Id.*
199 Aqua St. No. 1, pp. 30-31.
200 *Id.*
201 *Id.*
202 *Id.* This altruistic "goal," however, only became desirable after the legislature enacted 66 Pa. C.S. § 1329 allowing public utilities to incorporate the established fair market value of the acquired utility into the acquiring public utilities rate base in the acquiring utilities next base rate case.
203 *Id.*
204 I&E St. No. 2, p. 52.

via base rates and is proposing to pass on the cost of the proposed Universal Service Plan (which would encompass the Helping Hand program) via a reconcilable surcharge mechanism,[205] or it can utilize a DSIC for capital expenditure recovery. Third, if the Company is as effective at controlling operating and maintenance costs as it argues,[206] those savings should flow through to ratepayers and/or investors.[207] Further, the claimed savings to the ratepayers would likely be offset by the addition of basis points for management performance as ratepayers would have to fund the additional costs. This would defeat the purpose of cutting expenses to benefit ratepayers.[208]

Fourth, Aqua's 2008, PPL Electric's 2012, and UGI Electric's 2017 base rate cases that Aqua refers to are distinguishable because 2008 was well over a decade ago and management performance is very specific to each individual utilities frame of reference.[209] Therefore, the prior cases referred to by Aqua should be given no consideration in this proceeding.[210] Further, Aqua argues that the Company decided to select an equity return at the lower end of the calculated range in order to moderate the customer impact of its proposed rate increase.[211] But then turning around and proposing the addition of basis points for management performance is antithetical to the Company's argument that they selected a lower equity return in order to moderate customer impact.[212] Instead, it reveals Aqua strategized that they would select a "lower" equity

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205 *Id.*, *citing* I&E Exh. No. 2, Sch. 12.
206 *Id.*, *citing* Aqua St. No. 1 p. 37.
207 I&E St. No. 2, p. 52.
208 *Id.*
209 *Id.*, p. 52; I&E St. No. 2-SR, p. 26. Note: UGI Electric was given a nominal five basis points in a pre-pandemic world and now Aqua is asking for unwarranted and unidentified additional basis points.
210 *Id.*
211 *Id.*, *citing* Aqua St. No. 7, p. 3.
212 *Id.*, p. 53.

return rate to appear altruistic knowing that in reality they were saving room to add in the requested management performance points.

Finally, the Commission affirmed the Administrative Law Judge's denial of management performance points in *Columbia Gas* referenced *supra*. The Commission summarized the Recommended Decision and stated:

> [The ALJ] agreed with I&E, the OCA, and the OSBA that Columbia failed to provide sufficient evidence to support its proposal for an additional twenty-basis points for "strong management performance." The ALJ reasoned that while effective operating and maintenance cost measures should flow through to ratepayers and/or investors, Columbia's proposal defeats the purpose of cutting expenses to benefit ratepayers, particularly during a pandemic when so many ratepayers have experienced reduced household income from job loss or reduction in hours. Therefore, the ALJ recommended that no upward management effectiveness adjustment be made to the Company's cost of equity.[213]

Therefore, in consideration of the above and the record evidence presented, I&E urges that Aqua should not be awarded additional basis points for doing what they are required to do by the Public Utility Code and Commission regulations in order to provide adequate, efficient, safe, and reasonable service.[214] Management performance points simply pass through as an additional cost to the ratepayers and a benefit to the shareholders.

F. Inflated Growth Rate

I&E recommends that the Company's assertion that DCF growth rates can be determined subjectively and inflated be rejected.[215]

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[213] *Columbia Gas*, p. 134.
[214] I&E St. No. 2, p. 53; I&E St. No. 2-SR, pp. 24-26.
[215] I&E St. No. 2, pp. 36-38; I&E St. No. 2-SR, pp. 7-9.

The Company subjectively "chose" a DCF growth rate of 7.50% even though the average growth rate of the Company's sources is 7.13%.[216]

I&E asserts DCF growth rates should be established by mathematical formulation, and that any alternative method is subjective and introduces additional and unnecessary bias and should be avoided when possible.[217] Further, the Company's use of a higher growth rate than the average of the Company's proxy group ignores the fact that analysts making earnings per share growth forecasts are already aware of the economic conditions and the state of the water utility industry.[218] The reasons the Company has given for choosing 7.50% are factors that are already included in the earnings per share growth forecasts; thus, choosing a growth rate higher than the average of the Company's proxy group would account for the same factors twice.[219]

In summary, since analysts' projected growth forecasts are most often overly optimistic, there is no need to arbitrarily and non-formulaically increase the estimates used in a DCF analysis.[220] Therefore, I&E recommends the Company's proposed subjective and inflated DCF growth rate be rejected.

G. Leverage Adjustment

I&E recommends that the Company's proposed 234-basis point leverage adjustment be rejected because true financial risk is a function of the amount of interest

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[216] *Id.* pp. 36-37.
[217] *Id.*, p. 37; Id. pp. 8-9.
[218] *Id.*; *Id.*
[219] *Id.*; *Id.*
[220] I&E St. No. 2, p. 38.

expense; and, capital structure information provided to investors through Value Line is that of book values, not market values.[221]

The Company proposed to make a 234-basis point leverage adjustment to the result of the Company's results of its DCF analysis to account for applying a market valued cost of equity to a book value capital structure.

I&E asserts that the Company's leverage adjustment is inappropriate for several reasons, including the characterization of financial risk; its inconsistency with Commission precedent; and its actual pass-through burden on ratepayers. I&E argued the Company's position is not supported by any academic journals, textbooks, or other literature.[222] Further, rating agencies assess financial risk based upon a company's booked debt obligations and the ability of its cash flow to cover the interest payments on those obligations.[223] The agencies use a company's financial statements for their analysis, not market capital structure.[224] It is a company's financial statements that affect the market value of the stock, and, therefore, the financial statements and the book value capital structure are relied upon in an analysis such as that done by rating agencies.[225]

Regarding Commission precedent, I&E witness Spadaccio provided a summary of recent Commission orders that rejected proposed leverage adjustments.[226] First, in *Pennsylvania Public Utility Commission v. Aqua Pennsylvania, Inc.*,[227] the Commission

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[221] I&E St. No. 2, p. 44.
[222] *Id.*, 40.
[223] *Id.*, p. 41.
[224] *Id.*
[225] *Id.*
[226] *Id.*, pp. 41-42.
[227] *Pa. P.U.C v. Aqua Pennsylvania, Inc.*, at Docket No. R-00072711 (Order Entered July 31, 2008).

rejected the ALJ's recommendation for a leverage adjustment stating, "[t]he fact that we have granted leverage adjustments in the past does not mean that such adjustments are indicated in all cases."[228]

Second, in *Pennsylvania Public Utility Commission, et al v. City of Lancaster – Bureau of Water*,[229] the Commission agreed with the I&E position and stated, "any adjustment to the results of the market based DCF are unnecessary and will harm ratepayers. Consistent with our determination in *Aqua 2008* there is no need to add a leverage adjustment."[230]

Third, in *Pennsylvania Public Utility Commission, et al v. UGI Utilities, Inc. – Electric Division*,[231] the Commission agreed with the I&E position and stated, "we conclude that an artificial adjustment in this proceeding is unnecessary and contrary to the public interest. Accordingly, we decline to include a leverage adjustment in our calculation of the DCF cost of equity."[232]

Last, in the most recent case of *Pennsylvania Public Utility Commission, et. al v. Columbia Gas of Pennsylvania, Inc*.,[233] the Commission adopted the ALJ's recommendation to use I&E's DCF methodology, which excluded the use of a leverage adjustment.[234]

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228 *Id.*, p. 38.
229 *Pa. P.U.C. v. City of Lancaster – Bureau of Water*, at Docket No. R-2010-2179103 (Order Entered July 14, 2011).
230 *Id.*, p. 79.
231 *Pa. P.U.C. v. UGI Utilities, Inc. – Electric Division*, at Docket No. R-2017-2640058 (Order Entered October 25, 2018).
232 *Id.*, p. 93-94.
233 *See Columbia Gas.*
234 *Id.*, pp. 137-141.

Additionally, if the Commission were to approve the proposed leverage adjustment to the cost of equity, it would force ratepayers to fund the unwarranted and unreasonable additional amount of $68,578,855 annually to cover the increase of the inflated rate of return along with the associated impact resulting from increases to income taxes, gross receipts tax, uncollectibles, and assessments.[235]

Finally, I&E asserts that investors base their decisions on book value debt and equity ratios for the regulated utilities, therefore, no adjustment is needed.[236] The Company's proposed adjustment serves only to manipulate the DCF's market-based methodology and causes substantial harm to ratepayers.[237] Further, I&E notes that without the Company's use of inflated growth rates and a leverage adjustment, his DCF would consist of a dividend yield of 1.94% and an average growth rate of 7.13%, which results in an 9.07% cost of equity.[238] This result is comparable to my DCF result of 8.90% and is much more reasonable than his originally calculated and inappropriately inflated result of 11.78%.[239] Therefore, I&E recommends that the Company's proposed leverage adjustment be rejected in its entirety.

H. Size Adjustment

I&E recommends that the Company's proposal to use a CAPM size adjustment of 102-basis points be disallowed.[240] Further, the Company's proposed size adjustment is unnecessary and unsupported because none of the technical literature the Company cited

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[235] I&E St. No. 2, pp. 43-44.
[236] *Id.*, p. 44.
[237] *Id.*
[238] *Id.*, p. 45.
[239] *Id.*
[240] I&E St. No. 2, pp. 48-51; I&E St. No. 2-SR, pp. 18-21.

in testimony supporting investment adjustments related to the size of a company is specific to the utility industry nor is it relevant in this proceeding.[241]

I&E cites Dr. Annie Wong to support its recommendation to reject the Company's proposal.[242] In her article "Utility Stocks and the Size Effect: An Empirical Analysis," Dr. Wong concludes:

> The objective of this study is to examine if the size effect exists in the utility industry. After controlling for equity values, there is some weak evidence that firm size is a missing factor from the CAPM for the industrial but not for utility stocks. This implies that although the size phenomenon has been strongly documented for the industriales, the findings suggest that there is no need to adjust for the firm size in utility rate regulation.[243]

Aqua presented no evidence to support application of a non-utility study regarding a size adjustment for risk to a utility setting. Additionally, the Commission has recently rejected the application of a size adjustment to the CAPM cost of equity calculation where it agreed that the same literature the Company cites is not specific to the utility industry.[244] Absent any credible article to refute Dr. Wong's findings, the Company's proposed size adjustment to its CAPM results should be rejected.[245]

I. Conclusion - Overall Rate of Return

In consideration of the above and the record evidence presented, I&E recommends that the Company should be afforded the opportunity to earn an overall rate of return of

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[241] I&E St. No. 2, p. 49.
[242] *Id.*
[243] Dr. Annie Wong, "Utility Stocks and the Size Effect: An Empirical Analysis," *Journal of Midwest Finance Association* 1993, pp. 95-101.
[244] *See UGI Utilities, Inc. – Electric Division.*
[245] I&E St. No. 2, p. 49.

6.64%.[246] This recommended overall rate of return is comprised of a weighted average of a 1.84% rate of return on long-term debt and a 4.80% rate of return on common equity.[247]

IX. CUSTOMER PROGRAMS AND MISCELLANEOUS ISSUES

A. Regulatory Asset Treatment for COVID 19 Uncollectible Expense

I&E recommended that the Company be required to track further COVID-19 related reductions to uncollectibles by Water and the individual Wastewater revenue requirements; and, that the balances be claimed in the next base rate filing which the Company anticipates to be 2024.[248] I&E also recommended that the Company propose amortization of the balance, at that time, over a period of years, to be claimed in the next rate proceeding; and, that the Company not be allowed to claim interest or any time value of money component associated with the delay.[249] Further, I&E recommended that the Company not be allowed to claim increases to COVID-19 related uncollectibles beyond the effective date of new rates in this proceeding, particularly since Aqua has expressed that its motivation in delaying the amortization of the balance is to mitigate the impact on ratepayers.[250] Upon the effective date of new rates for this proceeding, the Company will have the information available to have a new uncollectible percentage built into the rate formula that incorporates recent changes due to COVID-19.[251] Additionally, any new increases to the COVID-19 related uncollectibles should not be recoverable in a future

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[246] I&E St. No. 2-SR, p. 27.
[247] *Id.*
[248] I&E St. No. 1-SR, p. 51.
[249] *Id.*
[250] *Id.*
[251] I&E St. No. 1, p. 39; I&E St. No. 1-SR, p. 47.

proceeding.[252] This is Aqua's first base rate case filed since the Commission instructed utilities to track the COVID-19 related uncollectible balance in a regulatory asset and the Company had an opportunity to true up its uncollectible percentage in this proceeding, but it did not.[253]

The I&E recommendation is based on the fact that the Company failed to provide substantial evidence supporting its claimed accumulated balance.[254] The Company failed to provide a breakdown for the requested deferral for all separate revenue requirements in this proceeding (i.e., Water, Wastewater Base, Limerick Wastewater, East Bradford Wastewater, Cheltenham Wastewater, East Norriton Wastewater, and New Garden Wastewater).[255] Further, the breakdown Aqua provided in rebuttal testimony only breaks down the amounts by Water and Wastewater which is not sufficient for I&E, or the Commission, to make a reasoned decision.[256] Therefore, I&E is not recommending that amortization begin at this time.[257] I&E is recommending this delay based on Aqua's assertion that the COVID-19 related uncollectibles are declining since the Company has been permitted to resume collection activities, and that the Company expects this declining trend to continue which would reduce the impact on ratepayers.[258]

Additionally, the recent Commission Order issued in a *Pennsylvania American Water Company* proceeding[259] is not applicable to this proceeding contrary to the

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[252] I&E St. No. 1-SR, p. 47.
[253] *Id.*
[254] *Id.*, p. 46.
[255] *Id.*, p. 49.
[256] *Id.*
[257] *Id.*, p. 50.
[258] *Id.*, *citing* Aqua St. No. 1-R, pp. 7-8.
[259] *Petition of Pennsylvania American Water Company for Authorization to Defer and Record as a Regulatory Asset*, Docket No. P-2020-3022426 (Order Entered Sept.15, 2021).

argument made by Aqua.[260] In PAWC the Commission did not set a hard cutoff date for the accumulation of COVID-19 pandemic-related deferrals, distinguishing the difference between that utility and Aqua.[261] The difference is that PAWC has not yet filed a base rate case since its request for deferral treatment; thus, a cutoff of the effective date of new rates in this proceeding is the appropriate cutoff.[262] Such a cutoff may potentially even be overstated due to the proposed implementation of a Universal Service Plan in this proceeding.[263]

Therefore, in consideration of the above and the record evidence presented by I&E, I&E recommends the Company be required to track further COVID-19 related reductions to uncollectibles by Water and the individual Wastewater revenue requirements; and, that the balances be claimed in the next rate filing, which is anticipated to be filed in 2024. Further, that the Company propose amortization of the balance at that time, amortized over a period of years, to be claimed in the next rate proceeding; and, that the Company be allowed to claim no interest or any time value of money component associated with the delay.[264] Also, I&E recommends that the Company be allowed to claim no increases to COVID-19 related uncollectibles beyond the effective date of new rates in this proceeding, particularly since Aqua has expressed that its motivation in delaying the amortization of the balance is to mitigate the impact on

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[260] *See* I&E St. No. 1, p. 41. *See also* I&E St. No. 1-SR, p. 52.
[261] I&E St. No. 1-SR, p. 47.
[262] *Id.*, pp. 47-48.
[263] *Id.*, p. 48.
[264] I&E St. No. 1-SR, p. 51.

ratepayers.[265] Any new increases to the COVID-19 related uncollectibles should not be recoverable in a future proceeding.

B. Universal Service Programs (USP)

The Company proffered that on January 24, 2020, the Commission issued a comprehensive Order[266] approving the acquisition of the Peoples Companies by Essential Utilities, Inc. (f/k/a Aqua America, Inc.)[267] As part of that settlement agreement approved by the Commission, a provision was included regarding Aqua PA's low-income customer assistance programming.[268] A comprehensive discussion and disposition of the universal service and low-income commitments included in the settlement agreement was set forth in the Commission's Order approving the settlement.[269] Aqua witness Ms. Black also provided a comprehensive description of Aqua's proposed programs and support for universal service and low-income programming that will be utilized to assist Aqua PA water and wastewater customers.[270]

I&E recognized that as part of Aqua America, Inc.'s acquisition of the Peoples Companies,[271] Aqua agreed to propose a universal service plan, and the Commission approved,[272] that includes "(1) a bill payment/customer assistance program; (2) a hardship fund; (3) a water conservation program; (4) a low-income service repair line and

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[265] *Id.*, *citing* Aqua St. No. 1-R, pp. 8-9.
[266] *Joint Application of Aqua America Inc. and Peoples Natural Gas Company, LLC. For Approval of a Change in Control*, Docket Nos. A-2018-3006061, A-2018-3006062, and A-2018-3006063 (Aqua Peoples Acquisition Order) (Order Entered, January 24, 2020).
[267] Aqua St. No. 10, p. 2.
[268] *Id.*, p. 2, *citing* Aqua Peoples Settlement, ¶ 108.
[269] Aqua Peoples Acquisition Order, pp. 135-150.
[270] Aqua St. No. 10, pp. 2-13.
[271] I&E St. No. 1, p. 43.
[272] Aqua Peoples Acquisition Order, pp. 147-150.

replacement program; and (5) a comparable funding mechanism that exists for electric and natural gas utilities in Pennsylvania."[273] I&E recommended acceptance of almost all of Aqua's proposed Universal Service Plan with a few modifications/additions.[274]

First, I&E recommended that the Company be required to perform income verifications to admit participants into the programs to ensure legitimacy of applicants and reduce misuse of the program.[275] Secondly, I&E recommended that the Company be required to demonstrate effort is made to encourage participants to take advantage of the Federal Low-Income Household Water Assistance Program funds made available via the American Rescue Plan.[276] Finally, I&E recommended, consistent with the Motion of Vice Chairman John F. Coleman, Jr. made recently at the October 28, 2021 Public Meeting, that Aqua "… should monitor available federal and state assistance programs and notify customers of all available sources of aid."[277]

Therefore, in consideration of the above and the record evidence presented by I&E, the three I&E recommendations set forth above should be approved.

1. Income Verification

Through responses to I&E discovery requests, Aqua initially stated that it does not plan to verify income to begin participating in the CAP program and that there will be no

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[273] *Id.*, p. 138, 150.
[274] I&E St. No. 1, p. 45.
[275] *Id.*, pp. 45-47.
[276] *Id.,* pp. 47-49.
[277] *Id.*, p. 49, *referencing UGI Utilities, Inc. – Gas Division and UGI Utilities Electric Division*, Petitions for COVID-19 Emergency Relief Programs, Docket Nos. P-2021-3023839, P-2021-3023992, and M-2019-3014966.

recertification requirement.[278] Additionally, Aqua indicated there would be no recertification requirement for the existing Helping Hand program.[279]

However, Aqua updated its position in rejoinder testimony and informed the parties that the Dollar Energy Fund is Aqua's planned provider for administrative services for the proposed CAP.[280] Further, Aqua witness Rita Black stated:

> As we were developing the program, we requested an estimate from Dollar Energy Fund for administrative costs. I contacted Dollar Energy Fund in response to I&E witness Wilson's statement regarding the administrative cost increase that would be expected if our proposal were modified to include an income documentation component. Dollar Energy Fund explained their estimate of the number of agents needed to support the program assumed management of income documentation. Therefore, there would not be a direct cost increase to the administrative estimate by modifying the program to include an income documentation requirement.[281]

I&E had recommended that Aqua be required to perform income verifications to admit participants into the universal service and low-income programs to ensure legitimacy of the applicants and reduce misuse of the programs.[282] I&E reasoned that the program proposed by Aqua is a full-scale Universal Service Plan that would be funded by ratepayers.[283] Further, the program as proposed is based on a specific level of benefits matched to a specific percentage of the federal poverty level.[284] Logic dictates that incomes must be verified in order to properly administer the program benefits. A failure of the Company to perform income verifications would subject the Universal Service

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278 I&E Exhibit No. 1, Sch. 9, pp. 2, 4-5.
279 *Id.*, Sch. 10.
280 Aqua St. No. 10-RJ, p. 2.
281 *Id.*, pp. 2-3.
282 I&E St. No. 1, p. 45.
283 *Id.*, p. 46.
284 Aqua St. No. 10, pp. 7, 10-13.

Plan to potential abuse that would harm the customers that pay their bill. And, as we have now learned through Aqua's rejoinder testimony, Aqua's provider of administrative services, Dollar Energy Fund, already had the cost of income verification built into their proposal.

Additionally, support for income verification can be found in the Public Utility Code and Commission regulations. It can be argued that in enacting Chapter 14, Responsible Utility Customer Protection,[285] the Pennsylvania General Assembly intended to protect responsible bill paying customers from rate increases attributable to other customers' delinquencies. The General Assembly clearly identified these concerns in its declaration of policy, observing that increasing amounts of unpaid bills threaten timely paying customers with higher rates, and that Chapter 14 is intended to provide for greater equity among all customers.[286] Arguably, increasing rates on paying customers through increasing Universal Service costs, as an alternative to collecting rates from those deemed able to pay through income verification, is neither just nor reasonable.[287]

Therefore, in consideration of the above and the record evidence presented by I&E, I&E recommends the Commission require the Company to establish guidelines for income verification consistent with the Peoples Companies' requirements.[288]

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[285] 66 Pa. C.S. §§ 1401-1419.

[286] *See* 66 Pa. C.S. § 1402(1) and (2).

[287] *See* 66 Pa. C.S. § 1301. *See also* 52 Pa. Code § 56.1(a) "This chapter assures adequate provision of residential public utility service … while eliminating opportunities for customers capable of paying to avoid the timely payment of public utility bills and protecting against rate increases for timely paying customers resulting from other customers' delinquencies. … This chapter will be liberally construed to fulfill its purpose and policy and to insure justice for all concerned."

[288] I&E St. No. 1, p. 47.

2. USP Costs Recovery

In its initial filing, Aqua proposed to recover the net costs of the Universal Service Plan through a reconcilable rider similar to the riders used by many of the gas and electric distribution companies.[289] Aqua argued energy utilities in the Commonwealth have a long history of implementing riders, such as the proposed USP rider, to track and recover costs associated with universal service programs.[290] Peoples Natural Gas received approval in its 2010 base rate case to implement such a rider.[291] The rider Aqua PA proposed is very similar in nature to the rider used by Peoples.[292] The proposed funding mechanism is a rider that tracks actual costs for recovery.[293] Aqua added, the use of the USP rider will ensure that ratepayers are only responsible for actual costs of the program, rather than projected costs that may not come to fruition if enrollment is less than expected, for example.[294] I&E did not oppose the Aqua proposal to recover the USP net costs through the proposed USP reconcilable rider.[295]

The OCA, however, argued that the riders in place at the Peoples Companies are not appropriate models upon which to develop cost recovery for Aqua's low-income programs. The OCA argued that Peoples' reconcilable rider is designed in response to specific statutory language that applies only to gas and electric utilities.[296] The OCA reasoned that since Aqua's proposal "is not governed by the statutory edicts of the

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[289] I&E St. No. 1-R, p. 3. *See also* Aqua St. No. 10, pp. 9-12; Aqua St. No. 2, pp. 17-18.
[290] Aqua St. No. 10, p. 10.
[291] *Id.*
[292] *Id.*
[293] *Id.*
[294] *Id.*
[295] I&E St. No. 1-R, p. 3.
[296] *Id.*, p. 2, *citing* OCA St. 5, p. 43.

Competition Acts applicable to Pennsylvania's natural gas and electric utilities", then a rider is inappropriate for Aqua.[297] Instead the OCA recommended net cost recovery via base rates.[298]

I&E strongly opposes OCA's recommendation to recover the USP costs through base rates. Instead, in consideration of the above and the record evidence presented by the parties, I&E recommends that it is preferable that the costs for a full scale universal service plan be recovered via a reconcilable surcharge mechanism like that used by the Peoples Companies that tracks dollar-for-dollar net costs.[299] It is clear from a review of the Aqua Peoples Acquisition Order that the Commission agreed that a "comparable" funding mechanism as those used by the natural gas and electric distribution companies in Pennsylvania is preferable.[300] Further, the use of a rider allows actual costs to be maintained and tracked separately. On the other hand, including projected costs in base rates would allow the costs to be "washed" into base rates regardless of the potential difference between projected and actual costs. The fundamental principles underlying the Competition Acts can and should be instructive in this proceeding.[301]

X. RATE STRUCTURE

A utility's rate structure implements the Commission's approved revenue increase to determine how the overall increase will be allocated among the utility's various rate classes. Once a class revenue allocation is determined, development of a rate design will

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[297] *Id.*, *citing* OCA St. 5, p. 44.
[298] *Id.*, p. 3, *citing* OCA St. 5, pp. 45-46.
[299] *Id.*, p. 5.
[300] Aqua Peoples Acquisition Order, pp. 147-150.
[301] *Id.*, p. 150.

address how the tariffed rates and rate elements will generate the allocated revenues. A properly designed rate structure will not unduly burden one class of ratepayers to the benefit of another. Under the Public Utility Code, "[n]o public utility shall … make or grant any unreasonable preference to any person, corporation … No public utility shall establish or maintain any unreasonable difference as to rates, either as between localities or as between classes of service."[302] Differences in rates charged to different classes are permissible so long as there is reasonable basis for the discrepancy.[303] Generally "public utility rates should enable the utility to recover its cost of providing service and should allocate this cost among the utility's customers in a just, reasonable and nondiscriminatory manner."[304]

A. Cost of Service Study - Water

I&E presented no recommendations regarding the cost of service study for Aqua water operations.

B. Cost of Service Studies - Wastewater

I&E recommends the Company continue to combine Wastewater Zones 1 through 6 in one cost of service study.[305] I&E also recommends the Company combine Wastewater Zones 7 through 11 into one cost of service study in its next base rate case because these zones include systems that were acquired under Section 1329[306] and they represent a unique group of zones and cost recovery requirements.[307] Therefore, I&E

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302 66 Pa. C.S. § 1304.
303 *See generally, Peoples Natural Gas Company v. Pa. P.U.C.*, 409 A.2d 446 (Pa. Commw.1979).
304 *See generally Pa. P.U.C. v. West Penn Power*, 73 Pa. P.U.C. 454, 510, 199 PUR 4th 110 (1990).
305 I&E St. No. 5, p. 66.
306 66 Pa. C.S. § 1329.
307 I&E St. No. 5, p. 66.

recommends these zones should continue to be grouped into one cost of service study in future cases.[308] I&E reasoned that it is important to distinguish the difference between these systems and systems not acquired under Section 1329 because of the generally higher cost of providing service to customers in these systems acquired under Section 1329.[309] Also, future Section 1329 systems acquired subsequent to this rate proceeding should continue to have a separate cost of service study for each system included in Aqua's next base rate proceeding following the acquisition of those systems.[310]

The Company did not address the continuation of separate cost of service studies for the recently acquired Section 1329 systems in Aqua's next base rate case.

C. Rate Zones – Water

Aqua's water customer rate zones are Residential; Commercial; Industrial; Public; Other Utilities; Private Fire; and, Public Fire.[311] The Company proposed a total increase in Water rates of $86.12 million to be applied based on the following percentage increases for each class in the FPFTY:

Residential	17.4%,
Commercial	16.0%,
Industrial	18.5%,
Public	16.0%,
Other Utilities	15.9%,
Private Fire	17.5%,
Public Fire	20.6%.[312]

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308 *Id.*
309 *Id.*
310 *Id.*
311 I&E St. No. 4, p. 17, *citing* Aqua Exh. No. 5-A, Part II, Sch. A.
312 *Id.*

I&E, however, is proposing only a $17.22 million increase to water customers.[313] Therefore, all of the above percentages should be subject to a final scale back on the final approved revenue increase to be applied to the water customers as discussed *infra* in Section X, F, Rate Structure – Water. If I&E proposed $17.22 million increase is approved, the above percentages should be scaled back to 20% of the above values.

D. Rate Zones – Wastewater

I&E notes that Aqua has eleven (11) different Wastewater rate zones, with different subsystems and eight (8) different third-party customers.[314] While a few zones have the same rates, most rates are different.[315] The residential rates vary from a flat rate of $16.09 per month in Zone 1 to $180.00 per month in Zone 5.[316] Since its last base rate case, the Company acquired the Limerick system, the East Bradford system, the Cheltenham system, the East Norriton system, and the New Garden system through separate Section 1329 proceedings.[317] These five systems became Zones 7-11 and the rates and revenues for Zones 7 -11 are shown in Aqua Volume 5, Ex. 5-B, Part II, Sch. LMK, EB, CH, EN and NG.[318]

I&E agreed that given the wide variety of present wastewater rates, Aqua's proposal to continue the various rate zones is reasonable.[319] However, I&E witness

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313 App. A, I&E Table VII – Water – Act 11 Allocation, col. D, line 17.
314 I&E St. No. 5, p. 2, *citing* Aqua Vol. 5, Exh. 5-B, Part II.
315 *Id.*
316 *Id.*, *citing* Aqua Vol. 5, Exh. 5-b, Part II, Sch. WW-5.
317 *Id.*, pp. 2-3.
318 *Id.*, p. 3.
319 *Id.*

Kubas recommended some changes that should be made to the proposed rates as described *infra* in Section X, G. Rate Structure - Wastewater.[320]

First, the Company grouped the various systems in the proposed tariff and each system falls into a zone that determines the rates the customer pays.[321] Since the Company is now proposing the same rates for Zones 1 and 2, the Company merged Zone 2 into Zone 1.[322] The proposed merger of Zone 2 into Zone 1 (which I&E disagrees with *infra*) would mean that each subsequent zone could be reclassified up one. Zone 3 customers would become Zone 2; Zone 4 customers would become Zone 3; Zone 5 customers would become Zone 4; and, Zone 6 customers would become Zone 5.[323]

I&E, however, disagrees and recommends that rates in Zone 2 be increased; and, as a result, Zone 2 cannot be merged into Zone 1 as proposed by the Company.[324] Then, I&E recommends that the Emlenton, Pinecrest, Rivercrest, and White Haven Division (Kidder) systems continue to be listed under Zone 2.[325] Further, if the four identified systems stay in the unmerged Zone 2, then the rest of the Zones should be kept as existing Zones 3 through 6.[326]

Therefore, if the Commission agrees with I&E that Zone 2 rates should be higher than Zone 1 rates, then Zone 2 cannot be combined with Zone 1 and existing Zones 2 through 6 will need to have separate tariff pages.[327]

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320 *Id.*
321 I&E St. No. 5-SR, p. 31.
322 *Id.*
323 *Id.*, *citing* Aqua Vol. 1, Aqua Pa. Wastewater, Inc. Tariff Sewer Pa P.U.C. No. 3, Original pp. 5, 6.
324 *Id.*, p. 32.
325 *See* I&E St. No. 5, p. 65; I&E St. No. 5-SR, p. 32.
326 I&E St. No. 5-SR, p. 32.
327 *See* I&E St. No. 5, p. 65; I&E St. No. 5-SR, p. 32.

E. Revenue Allocation - Generally

Revenue allocation is described as the allocation of revenue responsibility between rate classes.[328] It is routinely accepted that for class revenue allocation purposes, cost of service is the "polestar."[329] Generally, utilities that provide more than one different type of utility service cannot shift costs from one operation to the other.[330] For example, a utility that provides both gas and electric service cannot require its gas customers to pay for plant serving electric customers.[331] There is, however, a statutory exception to this rule.

1. Act 11 Subsidy

Section 1311(c) of the Public Utility Code,[332] more commonly referred to as Act 11, permits utilities that provide both water and wastewater service to combine the revenue requirements by allocating a portion of the wastewater revenue requirement to the water customer base if doing so is in the "public interest.".[333] Section 1311(c), however, does not specify how the Commission should determine rates, nor does it dictate the percent or amount of revenue that should be allocated or shifted, leaving the Commission wide latitude in applying Act 11.[334] In this case, I&E witness Kubas applied his knowledge and experience in rate making design and revenue allocation to craft a rate design with an Act 11 subsidy from Aqua Wastewater to Aqua Water that both respects

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328 *Ratemaking Guide*, p. 138.
329 *Lloyd v. Pa. P.U.C.*, 904 A.2d 1010 (Pa. Commw. 2006).
330 *Ratemaking Guide*, p. 141.
331 *Id.*
332 66 Pa. C.S. § 1311(c).
333 *Id.*
334 *Ratemaking Guide*, p. 141.

cost of service principles and is in the public interest.[335] I&E's final Act 11 subsidy recommendation is $10,439,352.[336] In contrast, the Company is proposing that Aqua's water customers subsidize wastewater customers by $20,839,425.[337]

2. Revenue Allocation – Water - Wastewater

In consideration of all of the above and the record evidence presented by I&E, I&E recommends the revenue allocations, after applying Act 11, as shown on I&E Table VII – Water – Act 11 Allocation on line 15, Proposed Revenues, attached hereto in Appendix A. Further, I&E asserts the Company's proposed revenue allocation is not reasonable and should be rejected.

3. Scale Back of Rates – Water - Wastewater

Water – If the Commission grants an increase less than the amount the Company requested, the Company's proposed rates would be reduced, or scaled back, to produce the revenue requirement allowed by the Commission.[338] Further, the revenue requirements and scale backs of the wastewater operations must be determined prior to the application of a scale back to the water operations rates.[339] I&E reasoned, the Wastewater operations revenue requirement must be set first because that will determine the amount of Act 11 subsidy revenue requirement to be allocated to Water operations.[340] Once the Act 11 wastewater to water subsidy allocation is determined by the Commission, then the full

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335 *See* I&E St. No. 5; I&E St. No. 5-R; and, I&E St. No. 5-SR.
336 App. A, I&E Table VII – Water – Act 11 Allocation, col. D, line 13.
337 *See* I&E St. No. 5-SR, pp. 3-8 for I&E's arguments against the Company's proposed subsidy amount.
338 I&E St. No. 4, p. 16.
339 *Id.*
340 *Id.*

revenue requirement to be placed on Water operations can be determined and those rates can then be scaled back.[341]

Wastewater - I&E recommended that no scale back of wastewater rates should occur until the total Act 11 wastewater subsidy is eliminated.[342] To determine if any subsidy remains, the Company should recalculate the subsidies and determine the total wastewater subsidy after the Commission order is entered.[343] I&E reasoned that it is in the public interest to reduce the Act 11 subsidy being provided to wastewater customers as much as possible. Further, all wastewater customers in all rate zones should contribute to reduce and eliminate the overall wastewater subsidy.[344] The total wastewater subsidy must be considered, rather than the subsidy in the individual zones.[345] This is especially important in Zones 7 through 11 where the Section 1329 Applications stated there would be no short-term harm to existing customers and that the municipalities and the customers in these Zones benefited from the acquisition by Aqua.[346] Therefore, until the total subsidy is eliminated, I&E recommends that wastewater rates should not be scaled back.

The Company agreed with I&E's general recommendation that wastewater rates should not be scaled back until all the wastewater subsidy is eliminated.[347] However, the Company added that any further scale back should be based upon the Company's proposed rate increases.[348]

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[341] *Id.*
[342] I&E St. No. 5, p. 63.
[343] *Id.*
[344] *Id.*
[345] *Id.*, 63-64.
[346] *Id.*, 64.
[347] Aqua St. No. 5-R, p. 25.
[348] *Id.*

I&E added that if the total wastewater subsidy is eliminated, then the Company's originally proposed rates (or the Commission approved rates) can be scaled back because the proposed subsidy will no longer exist, and I&E's proposed higher wastewater rates will no longer be needed.[349]

Finally, it is generally accepted that gradualism is a well-established ratemaking concept that seeks to limit the immediate increases customers receive when rates are increased and instead seeks to implement a necessary significant rate changes on a more gradual basis over time. If the Commission should approve a rate increase, then the Commission has the discretion[350] to apply the concept of gradualism if the Commission determines the rate increase would result in a sudden and excessive increase that would violate the concept of gradualism. For this reason, I&E mentions the concept of gradualism as one of the tools of discretion in the Commissions tool box.

F. Rate Structure - Water

The Company proposed a total revenue increase of $97.684 million across all of the Company's water and wastewater customers. Of that, the Company proposed that $86.12 million would be applied to its water customers.[351]

I&E is proposing a total revenue increase of $33,909,310 million across all water and wastewater customers. Of that, I&E proposes that $17,222,604 million would be applied to its water customers.[352]

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[349] I&E St. No. 5-SR, p. 31.
[350] *See Columbia*, pp. 44-55, Docket No. R-2020- 3018835, Order Entered February 19, 2021 (for a comprehensive discussion of the Commission's discretionary authority).
[351] Aqua Vol. 1, Statement of Specific Reasons for Proposed Rate Increase, p.1.
[352] App. A, I&E Table VII – Water – Act 11 Allocation, col. D, line 17.

Therefore, I&E is only proposing a 20% increase for water customers as compared to the Company's proposal for water customers ($17.22 ÷ $86.12 = 0.20). Therefore, the Company's proposed percentage increases to the water customer classes should all be scaled back to 20% of the Company's original proposed percentage increases.[353]

G. Rate Structure - Wastewater

I&E witness Joseph Kubas details I&E's proposed wastewater rate design in his direct and surrebuttal testimony and accompanying exhibits.[354] Mr. Kubas performed a comprehensive review of the parties direct and rebuttal testimonies and compiled an updated summary of I&E's wastewater revenue recommendation.[355]

But, in order to arrive at a final proposed wastewater rate structure, I&E first had to calculate a final Act 11 subsidy to be shifted to the water customers.[356] Aqua originally proposed a $20,839,425 subsidy from its water operations.[357] I&E reduced that to $5,072,876 in its rate structure proposal in direct testimony.[358]

The Company responded to I&E's Act 11 subsidy proposal in its rebuttal and I&E evaluated the Company's response.[359] In consideration of the above and the record evidence presented by I&E, I&E recommends that the Act 11 subsidy be set at $10,439,352 in this proceeding.[360]

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[353] *See* Section X. C. Rate Zones – Water, *supra*.
[354] I&E St. No. 5-SR, pp. 4-25; I&E Exh. No. 5-SR, Sch. 1.
[355] *Id.*, *Id.*
[356] *Id.*, pp. 4-8.
[357] *Id.,* p. 4, *citing* Aqua Exh. 1-A, Sch. Act 11.
[358] I&E St. No. 5, p. 6, *citing* I&E Exh. No. 5, Sch. 1, p. 4.
[359] I&E St. No. 5-SR, pp. 5-8.
[360] *See* App. A, I&E Table VII – Water – Act 11 Allocation, col. D, line 13.

1. Zones 1 through 6 - Wastewater - Summary

The Company provided one cost of service study for Zones 1-6[361] and the revenue shortfall for Zones 1-6 alone is approximately $13.452 million.[362] I&E calculated, based upon the number of customers in each system, wastewater customers comprise only 8.5% of all Aqua customers, therefore, over 91% of Aqua water customers are not wastewater customers.[363] I&E asserts that placing a large subsidy on the water customers is not reasonable[364] Additionally, I&E noted the Equivalent Dwelling Unit or "EDU" is used to bill some flat rate customers.[365]

I&E's goal for Zones 1 through 6 was to reduce the $13.4 million subsidy needed to operate these wastewater zones.[366] I&E noted that the average bill is lower in Zones 1 and 6 than it is for Zones 2 through 5.[367] Therefore, I&E proposed a larger percentage increase in Zones 1 and 6 as compared to Zones 2 through 4. With respect to Zone 5, I&E accepted the Company's proposed rates.[368] I&E made these recommendations because under one cost of service study for Zones 1 through 6, there is no justification for such a wide variety in rates and corresponding average bills; and, the Company did not rebut this argument.[369] The Act 11 subsidy was reduced but not eliminated because eliminating the entire subsidy would have resulted in very large increases to the monthly customer charges, usage rates, unmetered rates, and average bills for both residential and

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361 *See* Aqua Vol. 5, Exh. 5-B, Part I.
362 *See* Aqua Vol. 5, Exh. 5-A, Part I, Sch. A-WW.
363 I&E St. No. 5, p. 7.
364 *Id.*, pp. 7-8.
365 *Id.*, p. 8.
366 *Id.,* p. 9.
367 *Id.*
368 *Id.*, p. 30.
369 *Id.*, p. 9.

Commercial customers.[370] Instead, I&E recommended monthly customer charges and usage rates that will limit the increase to the average Residential usage customer to less than 53%.[371] Finally, I&E did not object to the OCA proposal to increase revenue in Zones 1-6 by approximately $900,000 more than I&E.[372]

2. Zone 1 – Wastewater

I&E's recommended rates for Zones 1 are shown on I&E Exh. No. 5, Sch. 2 page 1 under columns F and L.[373] The average bills for usage customer under present and proposed rates are shown on I&E Exh. No. 5, Sch. 2 pages 2-4 line 5.[374]
I&E asserts that the Act 11 subsidy needs to be reduced. Therefore, I&E recommended Zone 1 rates should be increased above the Company's average increase of approximately 20%.[375] The rates I&E recommended were established so that the average Zone 1 customer receives an increase of slightly below 40% in this case.[376] I&E asserts the 40% is reasonable given the revenue it will generate and the percentage increases relative to other proposed rates and average bills in this proceeding.[377] And, in order to consolidate rates, Zone 1-A customers will need to experience a slightly larger increase than the average Zone 1 customer to equalize the usage rates.[378] Additionally, in order to consolidate these rates, Zone 1-B customers will need to experience a slightly larger

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370 *Id.*, pp. 9-10.
371 *Id.*, p. 10.
372 *See* I&E St. No. 5-R, p. 4.
373 *See* I&E St. No. 5, pp. 11-16.
374 *Id.*
375 *Id.*, p. 12.
376 *Id.*
377 *Id.*, pp. 12-13.
378 *Id.*, p. 14.

increase than the average Zone 1 customer.[379] Finally, I&E disagreed with the OCA proposal to limit the Zone 1 customer charge to $31.00 per month.[380]

3. Zone 2 – Wastewater

Zone 2 – Main. The I&E recommended rates for Zone 2 – Main customers are set forth on I&E Exh. No. 5, Sch. 3, p. 1, column F.[381] The average present and proposed bill for an average Residential customer in Zone 2 is shown on I&E Exh. No. 5, Sch. 3, p. 2, line 5.[382]

I&E recommends that in order to reduce Aqua's proposed Act 11 subsidy, the Zone 2 rates should be increased.[383] The Zone 2 - Main rates I&E recommends were established so that the average Zone 2 customer receives an increase of slightly below 40% in this case.[384] I&E's recommended increase of almost 40% is above Aqua's proposed average increase of approximately 20%. I&E asserts the 40% is reasonable given the revenue it will generate and the percentage increases relative to other proposed rates and average bills in this proceeding.[385]

Zone 2 – Pinecrest. For Zone 2 -Pinecrest, the Company proposed to keep the rate at the current $3.00 per hundred gallon present and proposed Zone 2 - Pinecrest rate.[386] I&E recommends that the Company's proposed (same as current) rate be approved in this case.[387] Additionally, I&E also recommends that the Company begin to convert these

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379 *Id.*, pp. 15-17.
380 *See* I&E St. No. 5-R, p. 5.
381 I&E St. No. 5, p. 18.
382 *Id.*, p. 19.
383 *Id.*
384 *Id.*
385 *Id.*
386 *Id.*, p. 20.
387 *Id.*, p. 21.

customers to a typical monthly customer charge and usage rate in its next base rate proceeding.[388] I&E reasoned that rather than apply the Zone 2 customer charge all at once, it will be more reasonable to phase-in a customer charge for Zone 2 - Pinecrest customers.[389] I&E advises that an effort be made to make the first step revenue neutral for Zone 2 - Pinecrest.[390] Aqua did not rebut this recommendation.

4. Zone 3 – Wastewater

Zone 3 includes the former Beech Mountain Lakes, Deerfield Knoll, Links at Gettysburg, Stoney Creek, Thornhurst, Willistown Woods, and the Woodloch Springs Divisions.[391] In its proof of revenue, the Company grouped the first seven into "Zone 3 – Main" and maintained a separate page for Woodloch Springs labeled "Zone 3 – Woodloch Springs".[392] The Woodloch Springs division consists of two Commercial customers.[393]

Zone 3 – Main. The I&E recommended rates for Zone 3 - Main customers are listed on I&E Exh. No. 5, Sch. 4, p. 1, col. F, lines 1-4.[394] The present and proposed average bill for an average Residential customer in Zone 3 - Main is shown on I&E Exh. No. 5. Sch. 4, p. 2, line 5.[395] The rates I&E recommended were established so that the average Zone 3 – Main customer receives an increase of slightly below 30% in this case, which is higher than the Company's proposed average increase of approximately 20%.[396]

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388 *Id.*
389 *Id.*
390 *Id.*
391 I&E St. No. 5, pp. 21-22.
392 *Id.*, p. 22.
393 *Id.*
394 *Id.*, p. 23.
395 *Id.*, p. 23-24.
396 *Id.*, p. 24.

Zone 3 – Woodloch Springs. After an investigation and review of the evidence presented by the Company, I&E accepted the proposed rate structure based upon an EDU.[397] However, I&E recommends that Aqua's proposed monthly unmetered charge of $101.03 per month be increased to $109.00 per month to match the other Zone 3 unmetered rate.[398] This $109.00 per EDU is the same $109.00 unmetered charge shown on I&E Exh. No. 5, Sch. 4, col. F, lines 3-4. I&E's revised recommendation produces $2,764 more revenue than I&E originally proposed for Zone 3 – Woodloch Springs.[399] The additional proposed revenue is included in the $5,365,264 proposed commercial revenue.[400]

5. Zone 4 – Wastewater

Zone 4 includes the former Honeycroft Village, Lake Harmony, New Daleville, Peddlers View, Tobyhanna, and Twin Hills divisions.[401] I&E reasoned, in order to reduce the proposed Act 11 subsidy, Zone 4 rates should be increased.[402] The I&E recommended rates for Zone 4 customers are listed on I&E Exh. No. 5, Sch. 4, p. 1, col. F, lines 7-11.[403] The present and proposed bill for an average Residential customer in Zone 4 is shown on I&E Exh. No. 5, Sch. 4, p. 4, line 5.[404] The bill for an average Residential customer in Zone 4 will increase from $102.01 per month to $127.39 per month, which is an increase of $25.38 per month or 24.9%.[405] The 24.9% is reasonable

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397 I&E St. No. 5-SR, p. 12.
398 *Id.*
399 *Id.*
400 *Id.*, *citing* I&E Exh. No. 5-SR, Sch. 1, p. 1 col. H.
401 I&E St. No. 5, p. 26, *citing* Aqua Vol. 5, Exh. 5-B, Part II, Sch. WW-5, p. 10.
402 *Id.*, p. 28.
403 *Id.*, p. 27.
404 *Id.*, p. 28.
405 *Id.*

considering: Zone 4 rates are higher than Zone 1 and Zone 2 rates; the revenue the proposed increase will generate; and, the percentage increases relative to other proposed rates and average bills in this proceeding.[406]

6. Zone 5 – Wastewater

Zone 5 includes the former Avon Grove School, East Bradford - Brandywine, Little Washington, Greens at Penn Oaks, Sage Hill, Plumsock, and Newlin Green Divisions.[407] In its proof of revenue, the Company grouped the first six (6) systems into "Zone 5 – Main" and separated Newlin Green into "Zone 5 – Newlin Green".[408]

Zone 5 – Main. Under the Company's proposed rates, the bill for an average Residential customer in Zone 5 - Main will increase from $115.00 per month to $138.31 per month, which is an increase of $23.31 per month or 20.3%.[409] I&E recommends that the Company's proposed rates for Zone 5 – Main be approved.[410] I&E reasoned that the 20% is reasonable given the Zone 5 rates are higher than Zone 1 and Zone 2 rates; and, the percentage increases are reasonable relative to other proposed rates and average bills in this proceeding.[411]

Zone 5 – Newlin Green. The Company proposed to reduce the bill for an average Residential customer in Zone 5 – Newlin Green by 4.4%.[412] I&E recommends that the Company's proposed rates for Zone 5 – Newlin Green be approved.[413]

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406 *Id.*
407 I&E St. No. 5, p. 29.
408 *Id.*, *citing* Aqua Vol. 5, Exh. 5-B, Part II, Sch. WW-5, p. 11, col. 4.
409 *Id.*, p. 30, citing Aqua Vol. 5, Exh. 5-B, Part II, Sch. WW-7, p. 11.
410 *Id.*, *citing* I&E Exh. No. 5, Sch. 5, p. 1, col. 5.
411 *Id.*
412 *Id.* p. 31.
413 *Id., citing* I&E Exh. No. 5, Sch. 5, p. 1, col. F.

7. Zone 6 – Masthope

The Company proposed to increase the current customer charge, flat rate, and usage rates in Zone 6 – Masthope.[414] Under Aqua's proposed rates, the bill for an average Residential customer in Zone 6 will increase from $45.51 per month to $54.77 per month, which is an increase of $9.27 per month or 20.4%.[415]

I&E recommended rates for Zone 6 customers are set forth on I&E Exh. No. 5, Sch. 5, p. 1, col. F, lines 13-19 and described in I&E witness Kubas direct testimony.[416] Under the I&E proposed rates, the bill for an average Residential customer in Zone 6 will increase from $45.51 per month to $65.82 per month, which is an increase of $20.31 per month or 44.6%.[417] The rates I&E recommended were established so that the average Zone 6 customer receives an increase of slightly below 45% in this case.[418] I&E asserts the 45% is reasonable given the low present bill for an average customer in Zone 6; the revenue the increase it will generate; and, the percentage increase relative to other proposed rates and average bills in this proceeding.[419]

I&E rejected the arguments proffered by the Masthope Mountain Community Association ("MMCA").[420] I&E asserts that MMCA failed to show how the Zone 6 rates that I&E proposed are excessive or overly burdensome when compared to the rates and average bills in other zones, or why Zone 6 rates should not be increased.[421] Further,

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414 I&E St. No. 5, p. 32, *citing* Aqua Vol. 5, Exh. 5-B, Part II, Sch. WW-5, p. 13.
415 *Id.*, p. 33.
416 *Id.*, pp. 33-34.
417 *Id.*, *citing* I&E Exh. No. 5, Sch. 2, p. 2.
418 *Id.*, p. 33.
419 *Id.*
420 I&E St. No. 5-SR, pp. 15-17.
421 *Id.*

MMCA failed to address testimony that rates in Zones 1 through 6 should eventually be consolidated since these zones are included in one cost of service study.[422] Finally, I&E's analysis shows the I&E proposed rates and average bills for Zone 6 customers are reasonable. Therefore, the I&E proposed Zone 6 rates should be approved.

8. Zones 7-11 Summary

Zones 7 through 11 include the recently acquired systems Limerick, East Bradford, Cheltenham, East Norriton, and New Garden. The Limerick system became Zone 7, the East Bradford system became Zone 8, the Cheltenham system became Zone 9, the East Norriton System became Zone 10, and the New Garden System became Zone 11.[423] The Company provided a separate cost of service study for each Zone 7 through 11; and the cost of service studies illustrate the revenue shortfall under the Company's proposed rates.[424] I&E asserts Aqua is unreasonably requesting this revenue shortfall be subsidized by Aqua water customers.[425]

I&E argues that since most Aqua water customers are not wastewater customers, and despite Act 11, it is unreasonable to require water customers to subsidize wastewater customers.[426] I&E maintains that, fundamentally, each type of utility service should recover as much of the cost of providing that service as possible.[427] Therefore, as described below, I&E recommends adjustments to rates in Zone 7 through Zone 11 to reduce the subsidy, simplify the rate structure, and limit the increase to Zone 7 flat rate

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422 *Id.*, pp. 16-17.
423 I&E St. No. 5, pp. 34-38.
424 *Id.*, p.35, *citing* Aqua Vol. 2, Sch. Act 11.
425 *Id.*
426 *Id.*, p. 35-38.
427 *Id.*, pp. 35-36.

customers and certain Zone 11 usage blocks.[428] Overall, I&E recommends reducing the $7,397,967 Zone 7-11 subsidy as shown on I&E Exh. No. 5-SR, Sch. 1, p. 3.

I&E supported its rate structure proposals in Zones 7 through 11 by asserting that, in each acquisition, the municipalities benefited by selling the system and therefore the municipal customers benefited by the sale.[429] As stated in the various acquisitions, examples of these benefits to the municipality and/or customers include gaining the expertise of wastewater professionals, economies of scale, environmental impacts, spreading the cost of improvements over a larger customer base, access to low-income programs, paying off municipal debt, lowering taxes and reducing future tax increases, exiting the ever-increasing difficult utility business, and improving public facilities such as parks and libraries.[430] These benefits more than balance out with the larger than average rate increase customers will experience to recover the cost to Aqua, and its other customers, of acquiring the systems.[431] I&E reasoned that acquiring these systems should not harm existing Aqua customers; therefore, the larger than average increase in rates in Zones 7 through 11 will limit the harm to other Aqua customers by reducing the subsidy paid by other non-Zone 7-11 Aqua customers.[432]

While I&E recognizes that it would be mathematically possible to eliminate the Act 11 subsidy in this proceeding; I&E also recognizes that eliminating the entire subsidy would result in very large increases to the monthly customer charges, usage rates,

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428 *Id.*, pp. 35-38.
429 *Id.*, p. 36.
430 *Id.*
431 *Id.*
432 *Id.*, pp. 36-38.

unmetered rates, and average bills for both residential and Commercial customers in Zones 7 through 11.[433] Therefore, I&E tempered its proposed increases and recommended rates so that the average Residential bill increase is limited to generally less than 100%.[434]

The Company addressed the I&E rate proposal by stating that I&E's proposed wastewater rates constitute "rates shock".[435] In response, I&E reviewed the Company's other proposed rate increases in the filing and determined a good rule of thumb to evaluate the Company's rate shock claim would be to determine the largest percentage increase proposed by the Company and then compare it to I&E's proposed increases. The largest increase the Company proposed in this proceeding is in Zone 7 where the Company proposed the average residential customer receive an increase of 86.9%.[436] Therefore, I&E asserts, that the Company would have to agree that the Company is precluded from arguing that anything within the 86.9% range increase could constitute rate shock.[437]

Finally, each rate Zone 7 through 11 will be addressed individually below.

9. Zone 7 – Limerick

Aqua acquired the Limerick system on July 26, 2018; and in this the first base rate case after acquisition, Aqua proposed that the bill for an average Residential customer in

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[433] *Id.*, pp. 35-38.
[434] *Id.*, p. 38.
[435] Aqua St. No. 5-R, pp. 21-22.
[436] I&E St. No. 5, p. 39, *citing* Aqua Vol. 5, Exh. 5-B, Part II, Sch. WW-7, p. 16.
[437] *Id.*

Zone 7 – Limerick increase from $37.69 per month to $70.43 per month, which is an increase of $32.74 per month or 86.9%. [438]

To reduce the Act 11 subsidy and generate revenue, I&E recommended the rates for Zone 7 customers as set forth on I&E Exh. No. 5, Sch. 6, p. 1, col. F, lines 1-7.[439] Under the I&E rates, the bill for an average Residential customer in Zone 7 will increase from $37.69 per month to $71.32 per month, which is an increase of $33.63 per month or 89.2%.[440]

Additionally, I&E does not object to the OCA proposal to increase revenue in Zone 7 by approximately $2,205,119 more than the $2,982,144 that I&E recommended.[441] Further, I&E does not oppose the OCA proposal to limit the increase in the Zone 7 residential customer charge to $31.00 per month (I&E recommended $39.50) and recommends, if the Commission approves the $31.00 per month residential customer charge it should also apply the $31.00 monthly customer charge to the other classes.[442]

10. Zone 8 – East Bradford – Residential

Aqua acquired the East Bradford system on December 13, 2018. I&E's recommended rates for Zone 8 residential customers are listed on I&E Exh. No. 5, Sch. 6, p. 1, col. F, lines 8-11 and 13.[443] In rebuttal, the Company argued that the I&E proposed

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438 *Id.*
439 *See* I&E St. No. 5, pp. 39-40 for a full discussion.
440 *Id.*, p. 40, *citing* I&E Exh. No. 5, Sch. 6, p. 2, line 5.
441 I&E St. No. 5-R, p. 7.
442 *Id.*, pp. 8-9.
443 *See* I&E St. No. 5, pp. 41-48.

unmetered rate of $100.00 per month for Bingham Township cannot be increased since the rate is established by contract with the Borough of West Chester.[444]

In surrebuttal, I&E acknowledged the Commission Order entered September 20, 2018, at Docket A-2018-3001582, approving the agreement with Bingham Township.[445] However, I&E argues, the Commission is not bound by the previous rates in this proceeding where the wastewater rates are front and center. Therefore, in order to generate revenue and charge all unmetered Zone 8 customers the same rate, I&E continues to recommend that the 19 townhouse customers be billed $100.00 per month.[446]

Additionally, I&E does not oppose the OCA proposal to increase revenue in Zone 8 - Residential by approximately $222,489 more than the $610,765 that I&E proposed.[447] Further, I&E does not oppose the OCA proposal to establish a residential customer charge of $68.09 per month (I&E recommended $55.00) for Zone 8 residential.[448]

11. Zone 8 – East Bradford – Commercial and Public.

I&E's recommended rates for Zone 8 Commercial customers are listed on I&E Exh. No. 5, Sch. 6, p. 1, Column F, lines 12 and 14.[449] I&E accepted the Company's proposed monthly customer charge of $39.10 per month.[450] However, I&E increased the Commercial class usage rate to $1.120 per hundred gallons to match the Residential usage rate.[451] Further, the specific rates I&E recommended result in the average Zone 8

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[444] Aqua St. No. 2-R, p. 22.
[445] I&E St. No. 5-SR, p. 20.
[446] *Id.*, *citing* I&E Exh. No. 5, Sch. 6, p. 1, line 9.
[447] I&E St. No. 5-R, p. 10.
[448] *Id.*, p. 11.
[449] *See* I&E St. No. 5, pp. 44-45.
[450] *Id.*, p. 45.
[451] *See Id.*, pp. 44-45, *citing* I&E Exh. No. 5, Sch. 6, p. 1, lines 12, 14.

Commercial customer receiving an increase of approximately 84.3% in this case.[452] I&E asserts the 84.3% is reasonable given the low present average bill, the revenue the increase will generate, the percentage increases relative to other proposed rates, the other rates and average bill increases in this proceeding, and the benefits to East Bradford customers from the acquisition by Aqua.[453]

In rebuttal, the Company stated that it is against charging different monthly rates for Residential and Commercial customers.[454] However, I&E's reasoning for proposing different rates is to limit the increase to Zone 8 Commercial customers while generating a reasonable amount of additional revenue.[455] As shown on I&E Exh. 5, Sch. 6, page 5, line 9, even with the $39.10 per month commercial customer charge, the average commercial customer bill increase is 84.3%.

12. Zone 9 – Cheltenham

Aqua acquired the Cheltenham system on December 20, 2020. The I&E recommended rates for Zone 9 customers are listed on I&E Exh. No. 5, Sch. 7, p. 1, col. F, lines 1-2.[456] The revenue shortfall for Cheltenham under proposed rates is $515,804.[457] The I&E rates were established so that Zone 9 customers provide a subsidy of approximately 10% of the cost of service to subsidize the other wastewater systems where revenue shortfalls exist.[458]

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452 *Id.*, p. 45.
453 *Id.*
454 Aqua St. No. 2-R, p. 22.
455 I&E St. No. 5, pp. 44-45.
456 *Id.*, pp. 46-48.
457 *Id.*, p. 47, citing Aqua Vol. 2, Act 11, p. 1.
458 *Id.*, p. 47-48.

The OCA argued that it cannot accept I&E's Zone 9 rate proposal because the rates I&E proposed produce revenue that exceeds the cost of providing service to Zone 9.[459] However, the OCA cited to no regulatory requirement that prevents the rates in a Section 1329 system from producing revenue in excess of the cost of providing service to that system.[460] I&E reasoned, each wastewater system should provide as much revenue as reasonably possible to reduce the total wastewater subsidy coming from Aqua Water customers even if the revenue is above the cost of providing service to that zone.[461] I&E witness Kubas argues, this approach is consistent with the socialization of costs and rate consolidation that is pursued for every public utility in Pennsylvania.[462] It is more reasonable to recover the wastewater revenue shortfall from wastewater customers than water customers, in this case since wastewater customers are causing the revenue shortfall.[463] In fact, if the increase and average bill of system is comparable to other systems, like they are for Zone 9, the rates in Zone 9 should be established to reduce the overall wastewater subsidy and reduce the increase to water customers.[464]

I&E analyzed and rejected the OCA proposal for a level of increase in revenue for Zone 9 of $1,007,122 less than the $4,084,833 increase proposed by I&E.[465] I&E also recommends that the OCA customer charge of $28.31 per month be rejected and that the Zone 9 customer charge be $30.00 per month.[466]

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459 *See* I&E St. No. 5-R, pp. 13-16.
460 *Id.*, p. 14.
461 *Id.*
462 *Id.*
463 *Id.*
464 *Id.*, pp. 15-16.
465 *Id.*, p. 14.
466 *Id.*, pp. 15-16.

13. Zone 10 – East Norriton

Aqua acquired the East Norriton system on June 19, 2020. I&E's recommended rates for Zone 10 - East Norriton customers are listed on I&E Exh. No. 5, Sch. 7, p. 1, col. F, lines 3-5.[467] Additionally, I&E does not oppose the OCA's proposal to increase revenue in Zone 10 by approximately $1,259,223 more than I&E to $2,787,619.[468] Further, I&E does not oppose the OCA proposal to limit the increase in the Zone 10 customer charge to $31.00 per month.[469]

14. Zone 10 – Whitpain

Aqua acquired the Whitpain system with the East Norriton system on June 19, 2020. The I&E recommended rates for Zone 10 - Whitpain customers are listed on I&E Exh. No. 5, Sch. 7, p. 1, col. F, lines 6-11.[470] I&E recommended a larger percentage increase for Zone 10- Whitpain for three reasons.[471] First, I&E reasoned, the beginning bill of $31.66 per month is the lowest average bill for all zones.[472] Therefore, to move the average bill closer to other average bills, a larger percentage increase is necessary.[473] Second, the Company's desire to consolidate all Zone 10 rates justifies the higher rates for Zone 10 - Whitpain to move toward matching the Zone - 10 Norriton rates.[474] Third, even with the higher proposed rates causing a higher than average increase for Zone 10 -

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[467] I&E St. No. 5, p. 49.
[468] I&E St. No. 5-R., p. 17.
[469] *See Id.*, pp. 16-19.
[470] I&E St. No. 5, p. 51.
[471] *Id.*, pp. 52-53.
[472] *Id.*, p. 52.
[473] *Id.*
[474] *Id.*

Whitpain, total Zone - 10 operations will still continue to need $1,378,735 of subsidy from water customers.[475]

15. Zone 11 – New Garden

Aqua acquired the New Garden system on December 22, 2020. The I&E recommended rates for Zone 11 – New Garden customers are listed on I&E Exh. No. 5, Sch. 8, p. 1, column F.[476] I&E's recommendation includes the elimination of the Zone 11 usage allowance.[477] As part of the Zone 11 rate proposal, I&E originally proposed a monthly charge of $63.00 per month, which equates to a proposed increase of $25.36 per month or 67.4%.[478]

The OCA, however, recommended a customer charge of $37.64 per month.[479] I&E considered the OCA proposal, changed its recommendation, and lowered the proposed Zone 11 residential customer charge to $43.00 per month.[480] To make up for the lower revenue from lowering its proposed residential customer charge, I&E increased the usage rate for Zone 11 above the level I&E had originally proposed.[481] As a result, the bill for an average Residential customer in Zone 11 – New Garden will increase from $68.48 per month to $124.39 per month, which is an increase of $55.92 per month or 81.7%.[482]

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475 *Id.*, pp. 52-53, *citing* I&E Exh. No. 5, Sch. 1, p. 1, line 13.
476 *See* I&E St. No. 5, pp. 54-55, *citing* I&E Exh. No. 5, Sch. 1, p. 1, line 13.
477 I&E St. No. 5-R, p. 23.
478 I&E St. No. 5, p. 54.
479 I&E St. No. 5-R, p. 21.
480 *Id.*, pp. 21-22.
481 *See Id.*, p. 24, *citing* I&E Exh. No. 5-R, Sch. 2, p. 1, col. F.
482 *Id.*, p. 23.

Upon further consideration of the OCA's proposals, I&E also revised its original recommendation and now recommends that the present commercial charge be increased to $60.20 per month rather than the $88.20 per month I&E recommended in direct testimony.[483] Also, increasing the present commercial Group 1 customer charge is $52.71 per month to the proposed customer charge of $60.20 per month equates to an increase of $7.49 per month or 14.2%.[484] The 14.2% increase is the same percentage increase I&E recommended for the Zone 11 residential customer charge.[485]

Additionally, as stated above, I&E recommended eliminating the usage allowance for several reasons.[486] I&E argued, having an allowance sends the wrong pricing signal by discouraging conservation as customers do not benefit by reducing their usage if their bill includes an allowance.[487] One single usage rate is the simplest rate structure to implement and understand.[488] Additionally, maintaining the usage allowance makes consolidating the usage rates into one usage rate in the future more difficult.[489] Under the I&E proposal, the difference between the proposed usage rates is $0.975 ($2.600 - $1.625) per hundred gallons, while the difference between the usage rates proposed by the Company is $2.6999 ($2.6999 - $0.000) per hundred gallons.[490] A smaller difference in the usage rates in this case will make consolidating the usage rates into one Residential usage rate easier in the next base rate case.[491]

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483 I&E St. No. 5-R, p. 22.
484 *Id.*
485 *Id.*, *citing* I&E Exh. No. 5-R, Sch. 2, p. 1, lines 1-13.
486 I&E St. No. 5, pp. 55-56.
487 *Id.*, p. 55.
488 *Id.*, p. 56.
489 *Id.*
490 *Id.*
491 *Id.*

Finally, I&E does not oppose the OCA proposal to increase revenue in Zone 11 by approximately $412,279 more than I&E resulting in a total increase of $1,795,825.[492]

XI. TARIFF PROPOSALS

A. Purchased Water Adjustment (PWA) Clause

I&E recommended that the proposed PWA clause be rejected.[493] Further, this issue was also discussed in Section VI. C. Purchased Water Expense *supra*.

The Company proposed a tariff provision that would allow it to pass on to tariff rate customers a Purchased Water Adjustment.[494] The PWA would not apply to contract or rider rate customers.[495] The PWA would allow Aqua the ability to recover the difference between the cost of purchased water from suppliers reflected in the most recent base rate, against any future increases or decreases in the purchased water rate of its suppliers.[496]

I&E argued the proposed PWA be rejected because it is not supported by the facts, it circumvents the normal rate case procedure, and purchased water expense is not volatile and is minimal compared to all other expenses.[497] Also, since the proposed PWA would only apply to tariff rate customers and not rider rate customers, the proposed PWA is discriminatory to tariff rate customers as only tariff rate customers would pay for any

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492 I&E St. No. 5-R, p. 20.
493 I&E St. No. 3, p. 14.
494 *Id.*, p. 12, *citing* Aqua St. No. 4, pp. 2-5; Aqua Tariff-Water P.U.C. No. 3, pp. 37-38.
495 *Id.*
496 *Id.*, p. 11.
497 *Id.*, pp. 14-19.

actual increase in purchased water costs, including the cost increase directly related to purchased water delivered to rider rate customers.[498]

I&E argues the Company has unreasonably requested an exception to the normal rate making treatment for purchased water expense by requesting that future increases be automatically recovered through a reconcilable surcharge.[499] In the past, the Commission has only granted surcharge treatment when it has been demonstrated that the expense in question was volatile or unpredictable and the level of the expense is significant when compared to total O&M expenses including depreciation expense.[500] Here, Aqua has not presented any such evidence.[501]

Further, the PWA is discriminatory because the proposed PWA unfairly shifts costs from contract customers to tariff rate customers.[502] The proposed PWA will require tariff rate customers to pay for all increases in the cost of purchased water, when some of that purchased water is being used to supply contract customers, who will not be subject to the proposed PWA.[503]

Therefore, in consideration of the above and the record evidence presented by I&E, I&E recommends that the proposed Purchased Water Adjustment tariff provisions be denied.

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498 *Id.*, pp. 13-14; I&E St. No. 3-SR, p. 8.
499 *Id.*, p. 14.
500 *Id.*
501 *See* I&E St. No. 3, pp. 11-19; I&E St. No. 3-SR, pp. 7-8 for a full discussion of the PWA issue.
502 I&E St. No. 3, p. 17.
503 *Id.*

B. Energy Cost Adjustment Mechanism (ECAM)

I&E recommended that the ECAM reconciling rider for routine O&M expenses be disallowed.[504] I&E asserted in direct and surrebuttal testimony that this ECAM proposal to recover routine O&M expenses via a reconcilable rider is inappropriate and should be rejected in its entirety.[505] This issue was addressed at length by I&E witnesses Wilson[506] and Sakaya.[507]

Aqua attempted to argue that their proposed reconciling rider for recovery of energy costs (gas and electric expenses) would allow for recovery of any shortfalls of expenses previously built into rates and provide for refunding of excess expenses recovered from ratepayers.[508] Also, Aqua made a wholly illogical and unsupported argument that the proposed ECAM is comparable to the purchase/cost recovery mechanisms used by natural gas and electric distribution companies to purchase commodities.[509]

Further, Aqua, failed to clearly explain how its claim for recovery of a routine operating expense through the ECAM mechanism would be appropriate.[510] Aqua ignores the fact that the other utilities to which it referred in direct testimony are energy companies, and those energy costs are pass-through gas and electric commodity costs, not expenses for energy consumed by those utilities during routine operations.[511] If the

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504 I&E St. No. 1, p. 50-51; I&E St. No. 1-SR, p. 68.
505 *Id.*, p. 53, *Id.*, pp. 61-68. *See also* I&E St. No. 3, pp. 19-24; I&E St. No. 3-SR, pp. 8-13.
506 I&E St. No. 1, pp. 49-53; I&E St. No. 1-SR, pp. 61-68.
507 I&E St. No. 3, pp. 19-24; I&E St. No. 3-SR, pp. 8-13.
508 I&E St. No. 1, pp. 49-50.
509 I&E St. No. 1-SR, pp. 61-63.
510 *See* I&E St. No. 3-SR, pp. 9-13.
511 I&E St. No. 1-SR, p. 65.

Commission should approve the proposed ECAM, it will likely be faced with future claims for adjustment mechanisms for additional operating expenses that are subject to normal fluctuations like all expenses that are a part of routine operations for any public utility.[512]

Additionally, since the proposed ECAM would only apply to tariff rate customers and not rider rate customers, the proposed ECAM is discriminatory to tariff rate customers.[513] Furthermore, the Company has not shown that implementing the ECAM will result in the filing of fewer rate cases as it claimed, because the energy cost expense is not significantly volatile, nor is it a large enough expense to represent an extraordinary impact to the Company's operational output.[514] Finally, the Company's arguments that it reports earnings on a quarterly basis negates the single-issue nature of the ECAM fails.[515] The proposed surcharge would benefit Aqua by increasing revenue in lockstep with expense increases for specific individual expenses without allowing the full examination of all expenses and revenues as occurs in a base rate case.[516] The proposed ECAM surcharge should not be permitted as it circumvents the normal rate case process that allows all changes to be evaluated simultaneously.

In consideration of the above and the record evidence presented by I&E, I&E recommends that the isolation of this one type of operating expense for dollar-for-dollar

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512 *Id.*
513 I&E St. No. 3, pp. 23-24; I&E St. No. 3-SR, pp. 11-13.
514 *Id.*, pp 22-23; *Id.*, pp. 9-13.
515 I&E St. No. 3-SR, pp. 10-11.
516 *Id.*, p. 11.

recovery via a reconciling surcharge is inappropriate and the proposed Energy Cost Adjustment Mechanism should be rejected in its entirety.[517]

XII. CONCLUSION

I&E respectfully submits that for all the reasons presented in this I&E Main Brief, Aqua has not met its burden of proof as the record evidence presented by Aqua does not substantiate a revenue increase of $97.6 million. Instead, based on the weight of the record evidence, Your Honor and the Commission should only grant Aqua the I&E recommended revenue increase of $33.9 million in accordance with the record evidence presented by I&E and summarized in this I&E Main Brief and the appended I&E Tables.

Respectfully submitted,

Scott B. Granger
Prosecutor
Bureau of Investigation & Enforcement
PA Attorney ID No. 63641

Dated: January 11, 2022

[517] *Id.*

I&E TABLE I – WATER

TABLE I
Aqua Pennsylvania - Water
INCOME SUMMARY
R-2021-3027385 and R-2021-3027386

	Pro Forma Present Rates (1)	Company Adjustments (1)	Pro Forma Present Rates Adjusted (1)	I&E Adjustments	I&E Pro Forma Present Rates	I&E Revenue Increase	Total Allowable Revenues
	$	$	$	$	$	$	$
Operating Revenue	510,006,687	0	510,006,687	3,248,807	513,255,494	6,783,252	520,038,746
Expenses:							
O & M Expense	116,459,234	0	116,459,234	(507,738)	115,951,496	34,747	115,986,243
Depreciation	122,166,578	0	122,166,578	(121,865)	122,044,713	0	122,044,713
Taxes, Other	12,450,066	0	12,450,066	21,818	12,471,884	45,554	12,517,438
Income Taxes:							
State	5,783,096	0	5,783,096	398,102	6,181,198	669,625	6,850,823
Federal	13,101,742	0	13,101,742	753,251	13,854,993	1,266,998	15,121,991
Deferred Taxes/ITC	(5,862,319)	0	(5,862,319)	0	(5,862,319)	0	(5,862,319)
Total Expenses	264,098,397	0	264,098,397	543,568	264,641,965	2,016,924	266,658,889
Net Inc. Available for Return	245,908,290	0	245,908,290	2,705,239	248,613,529	4,766,328	253,379,857
Rate Base	3,818,456,012	0	3,818,456,012	(2,494,305)	3,815,961,707		3,815,961,707
Rate of Return	6.44%		6.44%		6.52%		6.64%

(1) Company Rebuttal Testimony

I&E TABLE I(A) – WATER

TABLE I(A)
Aqua Pennsylvania - Water
RATE OF RETURN
R-2021-3027385 and R-2021-3027386

	Structure	Cost	After-Tax Weighted Cost	Effective Tax Rate Complement	Pre-Tax Weighted Cost Rate
Total Cost of Debt			1.84000000%		
Long-term Debt	46.05%	4.00%	1.84000000%		1.84%
Short-term Debt	0.00%	0.00%	0.00000000%		
Preferred Stock	0.00%	0.00%	0.00000000%	0.711079	0.00%
Common Equity	53.95%	8.90%	4.80000000%	0.711079	6.75%
	100.00%		6.64000000%		8.59%
Pre-Tax Interest Coverage	4.67				
After-Tax Interest Coverage	3.61				

I&E TABLE I(B) – WATER

TABLE I(B)	
Aqua Pennsylvania - Water	
REVENUE FACTOR	
R-2021-3027385 and R-2021-3027386	
100%	1.00000000
Less:	
Uncollectible Accounts Factor (*)	0.00512240
PUC, OCA, OSBA Assessment Factors (*)	0.00671560
Gross Receipts Tax	0.00000000
Other Tax Factors (adjust for rounding)	0.00000000
	0.98816200
State Income Tax Rate (*)	0.09990000
Effective State Income Tax Rate	0.09871700
Factor After Local and State Taxes	0.88944500
Federal Income Tax Rate (*)	0.21000000
Effective Federal Income Tax Rate	0.18678300
Revenue Factor (100% - Effective Tax Rates)	0.70266200
(*) I&E Surrebuttal	

I&E TABLE II – WATER

TABLE II
Aqua Pennsylvania - Water
SUMMARY OF ADJUSTMENTS
R-2021-3027385 and R-2021-3027386

Adjustments	Rate Base	Revenues	Expenses	Depreciation	Taxes-Other	State Income Tax	Federal Income Tax
	$	$	$	$	$	$	$
RATE BASE:							
CWC:							
Int. & Div. (Table IV)	(IV!B38)						
Taxes (Table V)	(V!P34)						
O & M (Table VI)	(VI!B42)						
Acquis. Adj.-Phoenixville	(2,437,305)						
CWC	(57,000)						
REVENUES:							
Water Contract Revenue		3,248,807			21,818	322,376	609,969
EXPENSES:							
Insurance			(340,945)			34,060	64,446
Purchased Water			(166,795)			16,663	31,528
Depreciation-Phoenixville Amort				(121,865)		12,174	23,035
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
TAXES:							
Interest Synchronization (Table III)						12,829	24,273
TOTALS	(2,494,305)	3,248,807	(507,740)	(121,865)	21,818	398,102	753,251

I&E TABLE III – WATER

TABLE III	
Aqua Pennsylvania - Water	
INTEREST SYNCHRONIZATION	
R-2021-3027385 and R-2021-3027386	
	Amount
Company Rate Base Claim	$ 3,818,456,012
I&E Rate Base Adjustments	(2,494,305)
I&E Rate Base	3,815,961,707
Weighted Cost of Debt	1.84000000%
I&E Interest Expense	70,213,695
Company Claim (1)	70,342,109
Total I&E Adjustment	128,414
Company Adjustment	0
Net I&E Interest Adjustment	128,414
State Income Tax Rate	9.99%
State Income Tax Adjustment	12,829
Net I&E Interest Adjustment	128,414
State Income Tax Adjustment	12,829
Net I&E Adjustment for F.I.T.	115,585
Federal Income Tax Rate	21.00%
Federal Income Tax Adjustment	$ 24,273
(1) Company Rebuttal Testimony	

I&E TABLE IV – WATER

TABLE IV
Aqua Pennsylvania - Water
CASH WORKING CAPITAL - Interest and Dividends
R-2021-3027385 and R-2021-3027386

Accrued Interest			Preferred Stock Dividends	
	Long-Term Debt	Short-Term Debt		
Company Rate Base Claim	$3,818,456,012	$3,818,456,012	Company Rate Base Claim	$3,818,456,012
I&E Rate Base Adjustments	($2,494,305)	($2,494,305)	I&E Rate Base Adjustments	($2,494,305)
I&E Rate Base	$3,815,961,707	$3,815,961,707	I&E Rate Base	$3,815,961,707
Weighted Cost of Debt	1.84000000%	0.00%	Weighted Cost Pref. Stock	0.00000000%
I&E Annual Interest Exp.	$70,213,695	$0	I&E Preferred Dividends	$0
Average Revenue Lag Days	0.0	0.0	Average Revenue Lag Days	0.0
Average Expense Lag Days	0.0	0.0	Average Expense Lag Days	0.0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
Working Capital Adjustment				
I&E Daily Interest Exp.	$192,366	$0	I&E Daily Dividends	$0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
I&E Working Capital	$0	$0		$0
Company Claim (1)	$0	$0	Company Claim (1)	$0
I&E Adjustment	$0	$0		$0
Total Interest & Dividend Adj.	$0			
(1) Company Rebuttal				

I&E TABLE V – WATER

TABLE V
Aqua Pennsylvania - Water
CASH WORKING CAPITAL -TAXES
R-2021-3027385 and R-2021-3027386

Description	Company Proforma Tax Expense Present Rates	ALJ Adjustments	ALJ Pro forma Tax Expense Present Rates	ALJ Allowance	ALJ Adjusted Taxes at Present Rates	Daily Expense	Net Lead/ Lag Days	Accrued Tax Adjustment
PUC Assessment	$0	$0	$0	$45,554	$45,554	$124.81	0.00	$0
Public Utility Realty	$0	$0	$0		$0	$0.00	0.00	$0
Capital Stock Tax	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
State Income Tax	$0	$398,102	$398,102	$669,625	$1,067,727	$2,925.28	0.00	$0
Federal Income Tax	$0	$753,251	$753,251	$1,266,998	$2,020,249	$5,534.93	0.00	$0
	$0	$1,151,353	$1,151,353	$1,982,177	$3,133,530			
						ALJ Allowance		0
						Company Claim (1)		0
						ALJ Adjustment		0

(1) Company Rebuttal

I&E TABLE VI – WATER

TABLE VI
Aqua Pennsylvania - Water
CASH WORKING CAPITAL -- O & M EXPENSE
R-2021-3027385 and R-2021-3027386

Description	Company Pro forma F.T.Y. Expense	ALJ	ALJ Pro forma Expenses	Lag Days	Lag Dollars
Service Company	$0	$0	$0	0.00	$0
Chemicals	$0	$0	$0	0.00	$0
Group Insurance	$0	$0	$0	0.00	$0
Insurance, Other	$0	$0	$0	0.00	$0
Labor	$0	$0	$0	0.00	$0
Leased Equip./Rent	$0	$0	$0	0.00	$0
Leased Vehicles	$0	$0	$0	0.00	$0
Miscellaneous	$0	$0	$0	0.00	$0
Natural Gas	$0	$0	$0	0.00	$0
Power	$0	$0	$0	0.00	$0
Purchased Water	$0	$0	$0	0.00	$0
Telephone	$0	$0	$0	0.00	$0
Waste Disposal	$0	$0	$0	0.00	$0
Post Retirement Benefits	$0	$0	$0	0.00	$0
Pensions	$0	$0	$0	0.00	$0
	$0	$0	$0	#DIV/0!	$0

ALJ Average Revenue Lag	0.0	
Less: ALJ Avg. Expense Lag	#DIV/0!	
Net Difference	#DIV/0!	Days
ALJ Pro forma O & M Expense per Day	$0	
ALJ CWC for O & M	#DIV/0!	
Less: Company Claim (1)	$0	
ALJ Adjustment	#DIV/0!	

(1) Company Rebuttal

I&E TABLE VII – WATER – ACT 11 ALLOCATION

Aqua Pennsylvania, Inc.
Water & Wastewater Revenue Requirement Summary - I&E Recommended
R-2021-3027385 and R-2021-3027386

	Total Company	Water	WW - Base	Limerick	East Bradford	Cheltenham	E Norriton	New Garden
Present Rate Revenue	$550,331,987	$513,255,494	$19,011,761	$ 3,978,573	$ 1,014,569	$ 7,258,740	$ 2,923,770	$2,889,080
Additional Revenue Requirement*	$ 33,909,310	$ 6,783,252	$14,073,406	$ 5,112,610	$ 738,982	$ 2,366,685	$ 2,536,693	$2,297,682
Act 11 Allocation	$ -	$ 10,439,352	$ (7,976,384)	$(2,130,466)	$ (128,217)	$ 1,718,148	$(1,008,297)	$ (914,136)
Proposed Revenues	$584,241,297	$530,478,098	$25,108,783	$ 6,960,717	$ 1,625,334	$11,343,573	$ 4,452,166	$4,272,626
Rate Increase/(Decrease) - $	$ 33,909,310	$ 17,222,604	$ 6,097,022	$ 2,982,144	$ 610,765	$ 4,084,833	$ 1,528,396	$1,383,546
Rate Increase/(Decrease) - %	6.16%	3.36%	32.07%	74.96%	60.20%	56.27%	52.27%	47.89%

I&E TABLE I – WASTEWATER BASE

TABLE I
Aqua Pennsylvania - Wastewater Base
INCOME SUMMARY
R-2021-3027385 and R-2021-3027386

	Pro Forma Present Rates (1)	Company Adjustments (1)	Pro Forma Present Rates Adjusted (1)	I&E Adjustments	I&E Pro Forma Present Rates	I&E Revenue Increase	Total Allowable Revenues
	$	$	$	$	$	$	$
Operating Revenue	19,011,761	0	19,011,761	0	19,011,761	14,073,406	33,085,167
Expenses:							
O & M Expense	9,830,816	0	9,830,816	18,640	9,849,456	168,024	10,017,480
Depreciation	7,780,016	0	7,780,016	0	7,780,016	0	7,780,016
Taxes, Other	303,529	0	303,529	0	303,529	94,511	398,040
Income Taxes:							
State	(1,178,637)	0	(1,178,637)	(1,434)	(1,180,071)	1,379,706	199,635
Federal	(2,225,857)	0	(2,225,857)	(2,713)	(2,228,570)	2,610,545	381,975
Deferred Taxes/ITC	1,136,320	0	1,136,320	0	1,136,320	0	1,136,320
Total Expenses	15,646,187	0	15,646,187	14,493	15,660,680	4,252,786	19,913,466
Net Inc. Available for Return	3,365,574	0	3,365,574	(14,493)	3,351,081	9,820,620	13,171,701
Rate Base	198,368,990	0	198,368,990	0	198,368,990		198,368,990
Rate of Return	1.70%		1.70%		1.69%		6.64%

(1) Company Rebuttal Testimony

I&E TABLE I(A) – WASTEWATER BASE

TABLE I(A)
Aqua Pennsylvania - Wastewater Base
RATE OF RETURN
R-2021-3027385 and R-2021-3027386

	Structure	Cost	After-Tax Weighted Cost	Effective Tax Rate Complement	Pre-Tax Weighted Cost Rate
Total Cost of Debt			1.84000000%		
Long-term Debt	46.05%	4.00%	1.84000000%		1.84%
Short-term Debt	0.00%	0.00%	0.00000000%		
Preferred Stock	0.00%	0.00%	0.00000000%	0.711079	0.00%
Common Equity	53.95%	8.90%	4.80000000%	0.711079	6.75%
	100.00%		6.64000000%		8.59%
Pre-Tax Interest Coverage	4.67				
After-Tax Interest Coverage	3.61				

I&E TABLE I(B) – WASTEWATER BASE

TABLE I(B)	
Aqua Pennsylvania - Wastewater Base	
REVENUE FACTOR	
R-2021-3027385 and R-2021-3027386	
100%	1.00000000
Less:	
Uncollectible Accounts Factor (*)	0.01193910
PUC, OCA, OSBA Assessment Factors (*)	0.00671560
Gross Receipts Tax	0.00000000
Other Tax Factors (adjust for rounding)	0.00000000
	0.98134530
State Income Tax Rate (*)	0.09990000
Effective State Income Tax Rate	0.09803600
Factor After Local and State Taxes	0.88330930
Federal Income Tax Rate (*)	0.21000000
Effective Federal Income Tax Rate	0.18549500
Revenue Factor (100% - Effective Tax Rates)	0.69781400
(*) I&E Surrebuttal	

I&E TABLE II – WASTEWATER BASE

TABLE II
Aqua Pennsylvania - Wastewater Base
SUMMARY OF ADJUSTMENTS
R-2021-3027385 and R-2021-3027386

Adjustments	Rate Base	Revenues	Expenses	Depreciation	Taxes-Other	State Income Tax	Federal Income Tax
	$	$	$	$	$	$	$
RATE BASE:							
CWC:							
Int. & Div. (Table IV)	(IV!B38)						
Taxes (Table V)	(V!P34)						
O & M (Table VI)	(VI!B42)						
REVENUES:							
						0	0
EXPENSES:							
Insurance			18,640			(1,862)	(3,523)
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
TAXES:							
Interest Synchronization (Table III)						428	810
TOTALS	0	0	18,640	0	0	(1,434)	(2,713)

I&E TABLE III – WASTEWATER BASE

TABLE III	
Aqua Pennsylvania - Wastewater Base	
INTEREST SYNCHRONIZATION	
R-2021-3027385 and R-2021-3027386	
	Amount
Company Rate Base Claim	$ 198,368,990
I&E Rate Base Adjustments	0
I&E Rate Base	198,368,990
Weighted Cost of Debt	1.84000000%
I&E Interest Expense	3,649,989
Company Claim (1)	3,654,276
Total I&E Adjustment	4,287
Company Adjustment	0
Net I&E Interest Adjustment	4,287
State Income Tax Rate	9.99%
State Income Tax Adjustment	428
Net I&E Interest Adjustment	4,287
State Income Tax Adjustment	428
Net I&E Adjustment for F.I.T.	3,859
Federal Income Tax Rate	21.00%
Federal Income Tax Adjustment	$ 810
(1) Company Rebuttal Testimony	

I&E TABLE IV – WASTEWATER BASE

TABLE IV				
Aqua Pennsylvania - Wastewater Base				
CASH WORKING CAPITAL - Interest and Dividends				
R-2021-3027385 and R-2021-3027386				
Accrued Interest			Preferred Stock Dividends	
	Long-Term Debt	Short-Term Debt		
Company Rate Base Claim	$198,368,990	$198,368,990	Company Rate Base Claim	$198,368,990
I&E Rate Base Adjustments	$0	$0	I&E Rate Base Adjustments	$0
I&E Rate Base	$198,368,990	$198,368,990	I&E Rate Base	$198,368,990
Weighted Cost of Debt	1.84000000%	0.00%	Weighted Cost Pref. Stock	0.00000000%
I&E Annual Interest Exp.	$3,649,989	$0	I&E Preferred Dividends	$0
Average Revenue Lag Days	0.0	0.0	Average Revenue Lag Days	0.0
Average Expense Lag Days	0.0	0.0	Average Expense Lag Days	0.0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
Working Capital Adjustment				
I&E Daily Interest Exp.	$10,000	$0	I&E Daily Dividends	$0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
I&E Working Capital	$0	$0		$0
Company Claim (1)	$0	$0	Company Claim (1)	$0
I&E Adjustment	$0	$0		$0
Total Interest & Dividend Adj.	$0			
(1) Company Rebuttal				

I&E TABLE V – WASTEWATER BASE

TABLE V
Aqua Pennsylvania - Wastewater Base
CASH WORKING CAPITAL -TAXES
R-2021-3027385 and R-2021-3027386

Description	Company Proforma Tax Expense Present Rates	ALJ Adjustments	ALJ Pro forma Tax Expense Present Rates	ALJ Allowance	ALJ Adjusted Taxes at Present Rates	Daily Expense	Net Lead/ Lag Days	Accrued Tax Adjustment
PUC Assessment	$0	$0	$0	$94,511	$94,511	$258.93	0.00	$0
Public Utility Realty	$0	$0	$0		$0	$0.00	0.00	$0
Capital Stock Tax	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
State Income Tax	$0	($1,434)	($1,434)	$1,379,706	$1,378,272	$3,776.09	0.00	$0
Federal Income Tax	$0	($2,713)	($2,713)	$2,610,545	$2,607,832	$7,144.75	0.00	$0
	$0	($4,147)	($4,147)	$4,084,762	$4,080,615			
						ALJ Allowance		0
						Company Claim (1)		0
						ALJ Adjustment		0

(1) Company Rebuttal

I&E TABLE VI – WASTEWATER BASE

TABLE VI
Aqua Pennsylvania - Wastewater Base
CASH WORKING CAPITAL -- O & M EXPENSE
R-2021-3027385 and R-2021-3027386

Description	Company Pro forma F.T.Y. Expense	ALJ	ALJ Pro forma Expenses	Lag Days	Lag Dollars
Service Company	$0	$0	$0	0.00	$0
Chemicals	$0	$0	$0	0.00	$0
Group Insurance	$0	$0	$0	0.00	$0
Insurance, Other	$0	$0	$0	0.00	$0
Labor	$0	$0	$0	0.00	$0
Leased Equip./Rent	$0	$0	$0	0.00	$0
Leased Vehicles	$0	$0	$0	0.00	$0
Miscellaneous	$0	$0	$0	0.00	$0
Natural Gas	$0	$0	$0	0.00	$0
Power	$0	$0	$0	0.00	$0
Purchased Water	$0	$0	$0	0.00	$0
Telephone	$0	$0	$0	0.00	$0
Waste Disposal	$0	$0	$0	0.00	$0
Post Retirement Benefits	$0	$0	$0	0.00	$0
Pensions	$0	$0	$0	0.00	$0
	$0	$0	$0	#DIV/0!	$0

ALJ Average Revenue Lag	0.0	
Less: ALJ Avg. Expense Lag	#DIV/0!	
Net Difference	#DIV/0!	Days
ALJ Pro forma O & M Expense per Day	$0	
ALJ CWC for O & M	#DIV/0!	
Less: Company Claim (1)	$0	
ALJ Adjustment	#DIV/0!	

(1) Company Rebuttal

I&E TABLE I – WASTEWATER LIMERICK

TABLE I
Aqua Pennsylvania - Wastewater Limerick
INCOME SUMMARY
R-2021-3027385 and R-2021-3027386

	Pro Forma Present Rates (1)	Company Adjustments (1)	Pro Forma Present Rates Adjusted (1)	I&E Adjustments	I&E Pro Forma Present Rates	I&E Revenue Increase	Total Allowable Revenues
	$	$	$	$	$	$	$
Operating Revenue	3,978,573	0	3,978,573	0	3,978,573	5,112,610	9,091,183
Expenses:							
O & M Expense	2,041,053	0	2,041,053	3,533	2,044,586	61,040	2,105,626
Depreciation	1,998,881	0	1,998,881	0	1,998,881	0	1,998,881
Taxes, Other	26,719	0	26,719	0	26,719	34,334	61,053
Income Taxes:							
State	(146,426)	0	(146,426)	(228)	(146,654)	501,222	354,568
Federal	(277,054)	0	(277,054)	(432)	(277,486)	948,363	670,877
Deferred Taxes/ITC	65,919	0	65,919	0	65,919	0	65,919
Total Expenses	3,709,092	0	3,709,092	2,873	3,711,965	1,544,959	5,256,924
Net Inc. Available for Return	269,481	0	269,481	(2,873)	266,608	3,567,651	3,834,259
Rate Base	57,744,861	0	57,744,861	0	57,744,861		57,744,861
Rate of Return	0.47%		0.47%		0.46%		6.64%

(1) Company Rebuttal Testimony

I&E TABLE I(A) – WASTEWATER LIMERICK

TABLE I(A)
Aqua Pennsylvania - Wastewater Limerick
RATE OF RETURN
R-2021-3027385 and R-2021-3027386

	Structure	Cost	After-Tax Weighted Cost	Effective Tax Rate Complement	Pre-Tax Weighted Cost Rate
Total Cost of Debt			1.84000000%		
Long-term Debt	46.05%	4.00%	1.84000000%		1.84%
Short-term Debt	0.00%	0.00%	0.00000000%		
Preferred Stock	0.00%	0.00%	0.00000000%	0.711079	0.00%
Common Equity	53.95%	8.90%	4.80000000%	0.711079	6.75%
	100.00%		6.64000000%		8.59%
Pre-Tax Interest Coverage	4.67				
After-Tax Interest Coverage	3.61				

I&E TABLE I(B) – WASTEWATER LIMERICK

TABLE I(B)	
Aqua Pennsylvania - Wastewater Limerick	
REVENUE FACTOR	
R-2021-3027385 and R-2021-3027386	
100%	1.00000000
Less:	
Uncollectible Accounts Factor (*)	0.01193910
PUC, OCA, OSBA Assessment Factors (*)	0.00671560
Gross Receipts Tax	0.00000000
Other Tax Factors (adjust for rounding)	0.00000000
	0.98134530
State Income Tax Rate (*)	0.09990000
Effective State Income Tax Rate	0.09803600
Factor After Local and State Taxes	0.88330930
Federal Income Tax Rate (*)	0.21000000
Effective Federal Income Tax Rate	0.18549500
Revenue Factor (100% - Effective Tax Rates)	0.69781400
(*) I&E Surrebuttal	

I&E TABLE II – WASTEWATER LIMERICK

TABLE II
Aqua Pennsylvania - Wastewater Limerick
SUMMARY OF ADJUSTMENTS
R-2021-3027385 and R-2021-3027386

Adjustments	Rate Base	Revenues	Expenses	Depreciation	Taxes-Other	State Income Tax	Federal Income Tax
	$	$	$	$	$	$	$
RATE BASE:							
CWC:							
Int. & Div. (Table IV)	(IV!B38)						
Taxes (Table V)	(V!P34)						
O & M (Table VI)	(VI!B42)						
REVENUES:							
						0	0
EXPENSES:							
Insurance			3,533			(353)	(668)
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
TAXES:							
Interest Synchronization (Table III)						125	236
TOTALS	0	0	3,533	0	0	(228)	(432)

I&E TABLE III – WASTEWATER LIMERICK

TABLE III	
Aqua Pennsylvania - Wastewater Limerick	
INTEREST SYNCHRONIZATION	
R-2021-3027385 and R-2021-3027386	
	Amount
Company Rate Base Claim	57,744,861
I&E Rate Base Adjustments	0
I&E Rate Base	57,744,861
Weighted Cost of Debt	1.84000000%
I&E Interest Expense	1,062,505
Company Claim (1)	1,063,753
Total I&E Adjustment	1,248
Company Adjustment	0
Net I&E Interest Adjustment	1,248
State Income Tax Rate	9.99%
State Income Tax Adjustment	125
Net I&E Interest Adjustment	1,248
State Income Tax Adjustment	125
Net I&E Adjustment for F.I.T.	1,123
Federal Income Tax Rate	21.00%
Federal Income Tax Adjustment	236
(1) Company Rebuttal Testimony	

I&E TABLE IV – WASTEWATER LIMERICK

TABLE IV				
Aqua Pennsylvania - Wastewater Limerick				
CASH WORKING CAPITAL - Interest and Dividends				
R-2021-3027385 and R-2021-3027386				
Accrued Interest			Preferred Stock Dividends	
	Long-Term Debt	Short-Term Debt		
Company Rate Base Claim	$57,744,861	$57,744,861	Company Rate Base Claim	$57,744,861
I&E Rate Base Adjustments	$0	$0	I&E Rate Base Adjustments	$0
I&E Rate Base	$57,744,861	$57,744,861	I&E Rate Base	$57,744,861
Weighted Cost of Debt	1.84000000%	0.00%	Weighted Cost Pref. Stock	0.00000000%
I&E Annual Interest Exp.	$1,062,505	$0	I&E Preferred Dividends	$0
Average Revenue Lag Days	0.0	0.0	Average Revenue Lag Days	0.0
Average Expense Lag Days	0.0	0.0	Average Expense Lag Days	0.0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
Working Capital Adjustment				
I&E Daily Interest Exp.	$2,911	$0	I&E Daily Dividends	$0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
I&E Working Capital	$0	$0		$0
Company Claim (1)	$0	$0	Company Claim (1)	$0
I&E Adjustment	$0	$0		$0
Total Interest & Dividend Adj.	$0			
(1) Company Rebuttal				

I&E TABLE V – WASTEWATER LIMERICK

TABLE V
Aqua Pennsylvania - Wastewater Limerick
CASH WORKING CAPITAL -TAXES
R-2021-3027385 and R-2021-3027386

Description	Company Proforma Tax Expense Present Rates	ALJ Adjustments	ALJ Pro forma Tax Expense Present Rates	ALJ Allowance	ALJ Adjusted Taxes at Present Rates	Daily Expense	Net Lead/ Lag Days	Accrued Tax Adjustment
PUC Assessment	$0	$0	$0	$34,334	$34,334	$94.07	0.00	$0
Public Utility Realty	$0	$0	$0		$0	$0.00	0.00	$0
Capital Stock Tax	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
State Income Tax	$0	($228)	($228)	$501,222	$500,994	$1,372.59	0.00	$0
Federal Income Tax	$0	($432)	($432)	$948,363	$947,931	$2,597.07	0.00	$0
	$0	($660)	($660)	$1,483,919	$1,483,259			
						ALJ Allowance		0
						Company Claim (1)		0
						ALJ Adjustment		0

(1) Company Rebuttal

I&E TABLE VI – WASTEWATER LIMERICK

TABLE VI
Aqua Pennsylvania - Wastewater Limerick
CASH WORKING CAPITAL -- O & M EXPENSE
R-2021-3027385 and R-2021-3027386

Description	Company Pro forma F.T.Y. Expense	ALJ	ALJ Pro forma Expenses	Lag Days	Lag Dollars
Service Company	$0	$0	$0	0.00	$0
Chemicals	$0	$0	$0	0.00	$0
Group Insurance	$0	$0	$0	0.00	$0
Insurance, Other	$0	$0	$0	0.00	$0
Labor	$0	$0	$0	0.00	$0
Leased Equip./Rent	$0	$0	$0	0.00	$0
Leased Vehicles	$0	$0	$0	0.00	$0
Miscellaneous	$0	$0	$0	0.00	$0
Natural Gas	$0	$0	$0	0.00	$0
Power	$0	$0	$0	0.00	$0
Purchased Water	$0	$0	$0	0.00	$0
Telephone	$0	$0	$0	0.00	$0
Waste Disposal	$0	$0	$0	0.00	$0
Post Retirement Benefits	$0	$0	$0	0.00	$0
Pensions	$0	$0	$0	0.00	$0
	$0	$0	$0	#DIV/0!	$0

ALJ Average Revenue Lag	0.0	
Less: ALJ Avg. Expense Lag	#DIV/0!	
Net Difference	#DIV/0!	Days
ALJ Pro forma O & M Expense per Day	$0	
ALJ CWC for O & M	#DIV/0!	
Less: Company Claim (1)	$0	
ALJ Adjustment	#DIV/0!	

(1) Company Rebuttal

I&E TABLE I – WASTEWATER EAST BRADFORD

TABLE I
Aqua Pennsylvania - Wastewater East Bradford
INCOME SUMMARY
R-2021-3027385 and R-2021-3027386

	Pro Forma Present Rates (1)	Company Adjustments (1)	Pro Forma Present Rates Adjusted (1)	I&E Adjustments	I&E Pro Forma Present Rates	I&E Revenue Increase	Total Allowable Revenues
	$	$	$	$	$	$	$
Operating Revenue	1,014,569	0	1,014,569	0	1,014,569	738,982	1,753,551
Expenses:							
O & M Expense	1,113,197	0	1,113,197	789	1,113,986	8,823	1,122,809
Depreciation	158,552	0	158,552	0	158,552	0	158,552
Taxes, Other	11,413	0	11,413	0	11,413	4,963	16,376
Income Taxes:							
State	(42,221)	0	(42,221)	(67)	(42,288)	72,447	30,159
Federal	(79,886)	0	(79,886)	(127)	(80,013)	137,076	57,063
Deferred Taxes/ITC	11,546	0	11,546	0	11,546	0	11,546
Total Expenses	1,172,601	0	1,172,601	595	1,173,196	223,309	1,396,505
Net Inc. Available for Return	(158,032)	0	(158,032)	(595)	(158,627)	515,673	357,046
Rate Base	5,377,205	0	5,377,205	0	5,377,205		5,377,205
Rate of Return	-2.94%		-2.94%		-2.95%		6.64%

(1) Company Rebuttal Testimony

I&E TABLE I(A) – WASTEWATER EAST BRADFORD

TABLE I(A)
Aqua Pennsylvania - Wastewater East Bradford
RATE OF RETURN
R-2021-3027385 and R-2021-3027386

	Structure	Cost	After-Tax Weighted Cost	Effective Tax Rate Complement	Pre-Tax Weighted Cost Rate
Total Cost of Debt			1.84000000%		
Long-term Debt	46.05%	4.00%	1.84000000%		1.84%
Short-term Debt	0.00%	0.00%	0.00000000%		
Preferred Stock	0.00%	0.00%	0.00000000%	0.711079	0.00%
Common Equity	53.95%	8.90%	4.80000000%	0.711079	6.75%
	100.00%		6.64000000%		8.59%
Pre-Tax Interest Coverage	4.67				
After-Tax Interest Coverage	3.61				

I&E TABLE I(B) – WASTEWATER EAST BRADFORD

TABLE I(B)	
Aqua Pennsylvania - Wastewater East Bradford	
REVENUE FACTOR	
R-2021-3027385 and R-2021-3027386	
100%	1.00000000
Less:	
Uncollectible Accounts Factor (*)	0.01193910
PUC, OCA, OSBA Assessment Factors (*)	0.00671560
Gross Receipts Tax	0.00000000
Other Tax Factors (adjust for rounding)	0.00000000
	0.98134530
State Income Tax Rate (*)	0.09990000
Effective State Income Tax Rate	0.09803600
Factor After Local and State Taxes	0.88330930
Federal Income Tax Rate (*)	0.21000000
Effective Federal Income Tax Rate	0.18549500
Revenue Factor (100% - Effective Tax Rates)	0.69781400
(*) I&E Surrebuttal	

I&E TABLE II – WASTEWATER EAST BRADFORD

TABLE II
Aqua Pennsylvania - Wastewater East Bradford
SUMMARY OF ADJUSTMENTS
R-2021-3027385 and R-2021-3027386

Adjustments	Rate Base	Revenues	Expenses	Depreciation	Taxes-Other	State Income Tax	Federal Income Tax
	$	$	$	$	$	$	$
RATE BASE:							
CWC:							
Int. & Div. (Table IV)	(IV!B38)						
Taxes (Table V)	(V!P34)						
O & M (Table VI)	(VI!B42)						
REVENUES:							
						0	0
EXPENSES:							
Insurance			789			(79)	(149)
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
TAXES:							
Interest Synchronization (Table III)						12	22
TOTALS	0	0	789	0	0	(67)	(127)

I&E TABLE III – WASTEWATER EAST BRADFORD

TABLE III	
Aqua Pennsylvania - Wastewater East Bradford	
INTEREST SYNCHRONIZATION	
R-2021-3027385 and R-2021-3027386	
	Amount
Company Rate Base Claim	5,377,205
I&E Rate Base Adjustments	0
I&E Rate Base	5,377,205
Weighted Cost of Debt	1.84000000%
I&E Interest Expense	98,941
Company Claim (1)	99,057
Total I&E Adjustment	116
Company Adjustment	0
Net I&E Interest Adjustment	116
State Income Tax Rate	9.99%
State Income Tax Adjustment	12
Net I&E Interest Adjustment	116
State Income Tax Adjustment	12
Net I&E Adjustment for F.I.T.	104
Federal Income Tax Rate	21.00%
Federal Income Tax Adjustment	22
(1) Company Rebuttal Testimony	

I&E TABLE IV – WASTEWATER EAST BRADFORD

TABLE IV				
Aqua Pennsylvania - Wastewater East Bradford				
CASH WORKING CAPITAL - Interest and Dividends				
R-2021-3027385 and R-2021-3027386				
Accrued Interest			Preferred Stock Dividends	
	Long-Term Debt	Short-Term Debt		
Company Rate Base Claim	$5,377,205	$5,377,205	Company Rate Base Claim	$5,377,205
I&E Rate Base Adjustments	$0	$0	I&E Rate Base Adjustments	$0
I&E Rate Base	$5,377,205	$5,377,205	I&E Rate Base	$5,377,205
Weighted Cost of Debt	1.84000000%	0.00%	Weighted Cost Pref. Stock	0.00000000%
I&E Annual Interest Exp.	$98,941	$0	I&E Preferred Dividends	$0
Average Revenue Lag Days	0.0	0.0	Average Revenue Lag Days	0.0
Average Expense Lag Days	0.0	0.0	Average Expense Lag Days	0.0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
Working Capital Adjustment				
I&E Daily Interest Exp.	$271	$0	I&E Daily Dividends	$0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
I&E Working Capital	$0	$0		$0
Company Claim (1)	$0	$0	Company Claim (1)	$0
I&E Adjustment	$0	$0		$0
Total Interest & Dividend Adj.	$0			
(1) Company Rebuttal				

I&E TABLE V – WASTEWATER EAST BRADFORD

TABLE V
Aqua Pennsylvania - Wastewater East Bradford
CASH WORKING CAPITAL -TAXES
R-2021-3027385 and R-2021-3027386

Description	Company Proforma Tax Expense Present Rates	ALJ Adjustments	ALJ Pro forma Tax Expense Present Rates	ALJ Allowance	ALJ Adjusted Taxes at Present Rates	Daily Expense	Net Lead/ Lag Days	Accrued Tax Adjustment
PUC Assessment	$0	$0	$0	$4,963	$4,963	$13.60	0.00	$0
Public Utility Realty	$0	$0	$0		$0	$0.00	0.00	$0
Capital Stock Tax	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
State Income Tax	$0	($67)	($67)	$72,447	$72,380	$198.30	0.00	$0
Federal Income Tax	$0	($127)	($127)	$137,076	$136,949	$375.20	0.00	$0
	$0	($194)	($194)	$214,486	$214,292			
						ALJ Allowance		0
						Company Claim (1)		0
						ALJ Adjustment		0

(1) Company Rebuttal

I&E TABLE VI – WASTEWATER EAST BRADFORD

TABLE VI
Aqua Pennsylvania - Wastewater East Bradford
CASH WORKING CAPITAL -- O & M EXPENSE
R-2021-3027385 and R-2021-3027386

Description	Company Pro forma F.T.Y. Expense	ALJ	ALJ Pro forma Expenses	Lag Days	Lag Dollars
Service Company	$0	$0	$0	0.00	$0
Chemicals	$0	$0	$0	0.00	$0
Group Insurance	$0	$0	$0	0.00	$0
Insurance, Other	$0	$0	$0	0.00	$0
Labor	$0	$0	$0	0.00	$0
Leased Equip./Rent	$0	$0	$0	0.00	$0
Leased Vehicles	$0	$0	$0	0.00	$0
Miscellaneous	$0	$0	$0	0.00	$0
Natural Gas	$0	$0	$0	0.00	$0
Power	$0	$0	$0	0.00	$0
Purchased Water	$0	$0	$0	0.00	$0
Telephone	$0	$0	$0	0.00	$0
Waste Disposal	$0	$0	$0	0.00	$0
Post Retirement Benefits	$0	$0	$0	0.00	$0
Pensions	$0	$0	$0	0.00	$0
	$0	$0	$0	#DIV/0!	$0

ALJ Average Revenue Lag	0.0	
Less: ALJ Avg. Expense Lag	#DIV/0!	
Net Difference	#DIV/0!	Days
ALJ Pro forma O & M Expense per Day	$0	
ALJ CWC for O & M	#DIV/0!	
Less: Company Claim (1)	$0	
ALJ Adjustment	#DIV/0!	

(1) Company Rebuttal

I&E TABLE I – WASTEWATER CHELTENHAM

TABLE I
Aqua Pennsylvania - Wastewater Cheltenham
INCOME SUMMARY
R-2021-3027385 and R-2021-3027386

	Pro Forma Present Rates (1)	Company Adjustments (1)	Pro Forma Present Rates Adjusted (1)	I&E Adjustments	I&E Pro Forma Present Rates	I&E Revenue Increase	Total Allowable Revenues
	$	$	$	$	$	$	$
Operating Revenue	7,258,740	0	7,258,740	0	7,258,740	2,366,685	9,625,425
Expenses:							
O & M Expense	4,552,450	0	4,552,450	6,299	4,558,749	28,256	4,587,005
Depreciation	1,011,770	0	1,011,770	0	1,011,770	0	1,011,770
Taxes, Other	48,747	0	48,747	0	48,747	15,894	64,641
Income Taxes:							
State	(10,260)	0	(10,260)	(527)	(10,787)	232,021	221,234
Federal	(19,413)	0	(19,413)	(998)	(20,411)	439,008	418,597
Deferred Taxes/ITC	184,368	0	184,368	0	184,368	0	184,368
Total Expenses	5,767,662	0	5,767,662	4,774	5,772,436	715,179	6,487,615
Net Inc. Available for Return	1,491,078	0	1,491,078	(4,774)	1,486,304	1,651,506	3,137,810
Rate Base	47,256,177	0	47,256,177	0	47,256,177		47,256,177
Rate of Return	3.16%		3.16%		3.15%		6.64%

(1) Company Rebuttal Testimony

I&E TABLE I(A) – WASTEWATER CHELTENHAM

TABLE I(A)
Aqua Pennsylvania - Wastewater Cheltenham
RATE OF RETURN
R-2021-3027385 and R-2021-3027386

	Structure	Cost	After-Tax Weighted Cost	Effective Tax Rate Complement	Pre-Tax Weighted Cost Rate
Total Cost of Debt			1.84000000%		
Long-term Debt	46.05%	4.00%	1.84000000%		1.84%
Short-term Debt	0.00%	0.00%	0.00000000%		
Preferred Stock	0.00%	0.00%	0.00000000%	0.711079	0.00%
Common Equity	53.95%	8.90%	4.80000000%	0.711079	6.75%
	100.00%		6.64000000%		8.59%
Pre-Tax Interest Coverage	4.67				
After-Tax Interest Coverage	3.61				

I&E TABLE I(B) – WASTEWATER CHELTENHAM

TABLE I(B)	
Aqua Pennsylvania - Wastewater Cheltenham	
REVENUE FACTOR	
R-2021-3027385 and R-2021-3027386	
100%	1.00000000
Less:	
Uncollectible Accounts Factor (*)	0.01193910
PUC, OCA, OSBA Assessment Factors (*)	0.00671560
Gross Receipts Tax	0.00000000
Other Tax Factors (adjust for rounding)	0.00000000
	0.98134530
State Income Tax Rate (*)	0.09990000
Effective State Income Tax Rate	0.09803600
Factor After Local and State Taxes	0.88330930
Federal Income Tax Rate (*)	0.21000000
Effective Federal Income Tax Rate	0.18549500
Revenue Factor (100% - Effective Tax Rates)	0.69781400
(*) I&E Surrebuttal	

I&E TABLE II – WASTEWATER CHELTENHAM

TABLE II
Aqua Pennsylvania - Wastewater Cheltenham
SUMMARY OF ADJUSTMENTS
R-2021-3027385 and R-2021-3027386

Adjustments	Rate Base	Revenues	Expenses	Depreciation	Taxes-Other	State Income Tax	Federal Income Tax
	$	$	$	$	$	$	$
RATE BASE:							
CWC:							
Int. & Div. (Table IV)	(IV!B38)						
Taxes (Table V)	(V!P34)						
O & M (Table VI)	(VI!B42)						
REVENUES:							
						0	0
EXPENSES:							
Insurance			6,299			(629)	(1,191)
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
TAXES:							
Interest Synchronization (Table III)						102	193
TOTALS	0	0	6,299	0	0	(527)	(998)

I&E TABLE III – WASTEWATER CHELTENHAM

TABLE III	
Aqua Pennsylvania - Wastewater Cheltenham	
INTEREST SYNCHRONIZATION	
R-2021-3027385 and R-2021-3027386	
	Amount
Company Rate Base Claim	47,256,177
I&E Rate Base Adjustments	0
I&E Rate Base	47,256,177
Weighted Cost of Debt	1.84000000%
I&E Interest Expense	869,514
Company Claim (1)	870,535
Total I&E Adjustment	1,021
Company Adjustment	0
Net I&E Interest Adjustment	1,021
State Income Tax Rate	9.99%
State Income Tax Adjustment	102
Net I&E Interest Adjustment	1,021
State Income Tax Adjustment	102
Net I&E Adjustment for F.I.T.	919
Federal Income Tax Rate	21.00%
Federal Income Tax Adjustment	193
(1) Company Rebuttal Testimony	

I&E TABLE IV – WASTEWATER CHELTENHAM

TABLE IV				
Aqua Pennsylvania - Wastewater Cheltenham				
CASH WORKING CAPITAL - Interest and Dividends				
R-2021-3027385 and R-2021-3027386				
Accrued Interest			Preferred Stock Dividends	
	Long-Term Debt	Short-Term Debt		
Company Rate Base Claim	$47,256,177	$47,256,177	Company Rate Base Claim	$47,256,177
I&E Rate Base Adjustments	$0	$0	I&E Rate Base Adjustments	$0
I&E Rate Base	$47,256,177	$47,256,177	I&E Rate Base	$47,256,177
Weighted Cost of Debt	1.84000000%	0.00%	Weighted Cost Pref. Stock	0.00000000%
I&E Annual Interest Exp.	$869,514	$0	I&E Preferred Dividends	$0
Average Revenue Lag Days	0.0	0.0	Average Revenue Lag Days	0.0
Average Expense Lag Days	0.0	0.0	Average Expense Lag Days	0.0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
Working Capital Adjustment				
I&E Daily Interest Exp.	$2,382	$0	I&E Daily Dividends	$0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
I&E Working Capital	$0	$0		$0
Company Claim (1)	$0	$0	Company Claim (1)	$0
I&E Adjustment	$0	$0		$0
Total Interest & Dividend Adj.	$0			
(1) Company Rebuttal				

I&E TABLE V – WASTEWATER CHELTENHAM

TABLE V
Aqua Pennsylvania - Wastewater Cheltenham
CASH WORKING CAPITAL -TAXES
R-2021-3027385 and R-2021-3027386

Description	Company Proforma Tax Expense Present Rates	ALJ Adjustments	ALJ Pro forma Tax Expense Present Rates	ALJ Allowance	ALJ Adjusted Taxes at Present Rates	Daily Expense	Net Lead/ Lag Days	Accrued Tax Adjustment
PUC Assessment	$0	$0	$0	$15,894	$15,894	$43.55	0.00	$0
Public Utility Realty	$0	$0	$0		$0	$0.00	0.00	$0
Capital Stock Tax	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
State Income Tax	$0	($527)	($527)	$232,021	$231,494	$634.23	0.00	$0
Federal Income Tax	$0	($998)	($998)	$439,008	$438,010	$1,200.03	0.00	$0
	$0	($1,525)	($1,525)	$686,923	$685,398			
						ALJ Allowance		0
						Company Claim (1)		0
						ALJ Adjustment		0

(1) Company Rebuttal

I&E TABLE VI – WASTEWATER CHELTENHAM

TABLE VI
Aqua Pennsylvania - Wastewater Cheltenham
CASH WORKING CAPITAL -- O & M EXPENSE
R-2021-3027385 and R-2021-3027386

Description	Company Pro forma F.T.Y. Expense	ALJ	ALJ Pro forma Expenses	Lag Days	Lag Dollars
Service Company	$0	$0	$0	0.00	$0
Chemicals	$0	$0	$0	0.00	$0
Group Insurance	$0	$0	$0	0.00	$0
Insurance, Other	$0	$0	$0	0.00	$0
Labor	$0	$0	$0	0.00	$0
Leased Equip./Rent	$0	$0	$0	0.00	$0
Leased Vehicles	$0	$0	$0	0.00	$0
Miscellaneous	$0	$0	$0	0.00	$0
Natural Gas	$0	$0	$0	0.00	$0
Power	$0	$0	$0	0.00	$0
Purchased Water	$0	$0	$0	0.00	$0
Telephone	$0	$0	$0	0.00	$0
Waste Disposal	$0	$0	$0	0.00	$0
Post Retirement Benefits	$0	$0	$0	0.00	$0
Pensions	$0	$0	$0	0.00	$0
	$0	$0	$0	#DIV/0!	$0

ALJ Average Revenue Lag	0.0	
Less: ALJ Avg. Expense Lag	#DIV/0!	
Net Difference	#DIV/0!	Days
ALJ Pro forma O & M Expense per Day	$0	
ALJ CWC for O & M	#DIV/0!	
Less: Company Claim (1)	$0	
ALJ Adjustment	#DIV/0!	

(1) Company Rebuttal

I&E TABLE I – WASTEWATER EAST NORRITON

TABLE I
Aqua Pennsylvania - Wastewater East Norriton
INCOME SUMMARY
R-2021-3027385 and R-2021-3027386

	Pro Forma Present Rates (1)	Company Adjustments (1)	Pro Forma Present Rates Adjusted (1)	I&E Adjustments	I&E Pro Forma Present Rates	I&E Revenue Increase	Total Allowable Revenues
	$	$	$	$	$	$	$
Operating Revenue	2,923,770	0	2,923,770	0	2,923,770	2,536,693	5,460,463
Expenses:							
O & M Expense	2,271,778	0	2,271,778	1,382	2,273,160	30,286	2,303,446
Depreciation	952,641	0	952,641	0	952,641	0	952,641
Taxes, Other	19,635	0	19,635	0	19,635	17,035	36,670
Income Taxes:							
State	(84,197)	0	(84,197)	(83)	(84,280)	248,688	164,408
Federal	(159,309)	0	(159,309)	(158)	(159,467)	470,544	311,077
Deferred Taxes/ITC	11,829	0	11,829	0	11,829	0	11,829
Total Expenses	3,012,377	0	3,012,377	1,141	3,013,518	766,553	3,780,071
Net Inc. Available for Return	(88,607)	0	(88,607)	(1,141)	(89,748)	1,770,140	1,680,392
Rate Base	25,307,104	0	25,307,104	0	25,307,104		25,307,104
Rate of Return	-0.35%		-0.35%		-0.35%		6.64%

(1) Company Rebuttal Testimony

I&E TABLE I(A) – WASTEWATER EAST NORRITON

TABLE I(A)
Aqua Pennsylvania - Wastewater East Norriton
RATE OF RETURN
R-2021-3027385 and R-2021-3027386

	Structure	Cost	After-Tax Weighted Cost	Effective Tax Rate Complement	Pre-Tax Weighted Cost Rate
Total Cost of Debt			1.84000000%		
Long-term Debt	46.05%	4.00%	1.84000000%		1.84%
Short-term Debt	0.00%	0.00%	0.00000000%		
Preferred Stock	0.00%	0.00%	0.00000000%	0.711079	0.00%
Common Equity	53.95%	8.90%	4.80000000%	0.711079	6.75%
	100.00%		6.64000000%		8.59%
Pre-Tax Interest Coverage	4.67				
After-Tax Interest Coverage	3.61				

I&E TABLE I(B) – WASTEWATER EAST NORRITON

TABLE I(B)	
Aqua Pennsylvania - Wastewater East Norriton	
REVENUE FACTOR	
R-2021-3027385 and R-2021-3027386	
100%	1.00000000
Less:	
Uncollectible Accounts Factor (*)	0.01193910
PUC, OCA, OSBA Assessment Factors (*)	0.00671560
Gross Receipts Tax	0.00000000
Other Tax Factors (adjust for rounding)	0.00000000
	0.98134530
State Income Tax Rate (*)	0.09990000
Effective State Income Tax Rate	0.09803600
Factor After Local and State Taxes	0.88330930
Federal Income Tax Rate (*)	0.21000000
Effective Federal Income Tax Rate	0.18549500
Revenue Factor (100% - Effective Tax Rates)	0.69781400
(*) I&E Surrebuttal	

I&E TABLE II – WASTEWATER EAST NORRITON

TABLE II
Aqua Pennsylvania - Wastewater East Norriton
SUMMARY OF ADJUSTMENTS
R-2021-3027385 and R-2021-3027386

Adjustments	Rate Base	Revenues	Expenses	Depreciation	Taxes-Other	State Income Tax	Federal Income Tax
	$	$	$	$	$	$	$
RATE BASE:							
CWC:							
Int. & Div. (Table IV)	(IV!B38)						
Taxes (Table V)	(V!P34)						
O & M (Table VI)	(VI!B42)						
REVENUES:							
						0	0
EXPENSES:							
Insurance			1,382			(138)	(261)
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
TAXES:							
Interest Synchronization (Table III)						55	103
TOTALS	0	0	1,382	0	0	(83)	(158)

I&E TABLE III – WASTEWATER EAST NORRITON

TABLE III	
Aqua Pennsylvania - Wastewater East Norriton	
INTEREST SYNCHRONIZATION	
R-2021-3027385 and R-2021-3027386	
	Amount
Company Rate Base Claim	25,307,104
I&E Rate Base Adjustments	0
I&E Rate Base	25,307,104
Weighted Cost of Debt	1.84000000%
I&E Interest Expense	465,651
Company Claim (1)	466,198
Total I&E Adjustment	547
Company Adjustment	0
Net I&E Interest Adjustment	547
State Income Tax Rate	9.99%
State Income Tax Adjustment	55
Net I&E Interest Adjustment	547
State Income Tax Adjustment	55
Net I&E Adjustment for F.I.T.	492
Federal Income Tax Rate	21.00%
Federal Income Tax Adjustment	103
(1) Company Rebuttal Testimony	

I&E TABLE IV – WASTEWATER EAST NORRITON

TABLE IV				
Aqua Pennsylvania - Wastewater East Norriton				
CASH WORKING CAPITAL - Interest and Dividends				
R-2021-3027385 and R-2021-3027386				
Accrued Interest			Preferred Stock Dividends	
	Long-Term Debt	Short-Term Debt		
Company Rate Base Claim	$25,307,104	$25,307,104	Company Rate Base Claim	$25,307,104
I&E Rate Base Adjustments	$0	$0	I&E Rate Base Adjustments	$0
I&E Rate Base	$25,307,104	$25,307,104	I&E Rate Base	$25,307,104
Weighted Cost of Debt	1.84000000%	0.00%	Weighted Cost Pref. Stock	0.00000000%
I&E Annual Interest Exp.	$465,651	$0	I&E Preferred Dividends	$0
Average Revenue Lag Days	0.0	0.0	Average Revenue Lag Days	0.0
Average Expense Lag Days	0.0	0.0	Average Expense Lag Days	0.0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
Working Capital Adjustment				
I&E Daily Interest Exp.	$1,276	$0	I&E Daily Dividends	$0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
I&E Working Capital	$0	$0		$0
Company Claim (1)	$0	$0	Company Claim (1)	$0
I&E Adjustment	$0	$0		$0
Total Interest & Dividend Adj.	$0			
(1) Company Rebuttal				

I&E TABLE V – WASTEWATER EAST NORRITON

TABLE V
Aqua Pennsylvania - Wastewater East Norriton
CASH WORKING CAPITAL -TAXES
R-2021-3027385 and R-2021-3027386

Description	Company Proforma Tax Expense Present Rates	ALJ Adjustments	ALJ Pro forma Tax Expense Present Rates	ALJ Allowance	ALJ Adjusted Taxes at Present Rates	Daily Expense	Net Lead/ Lag Days	Accrued Tax Adjustment
PUC Assessment	$0	$0	$0	$17,035	$17,035	$46.67	0.00	$0
Public Utility Realty	$0	$0	$0		$0	$0.00	0.00	$0
Capital Stock Tax	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
State Income Tax	$0	($83)	($83)	$248,688	$248,605	$681.11	0.00	$0
Federal Income Tax	$0	($158)	($158)	$470,544	$470,386	$1,288.73	0.00	$0
	$0	($241)	($241)	$736,267	$736,026			
						ALJ Allowance		0
						Company Claim (1)		0
						ALJ Adjustment		0

(1) Company Rebuttal

I&E TABLE VI – WASTEWATER EAST NORRITON

TABLE VI
Aqua Pennsylvania - Wastewater East Norriton
CASH WORKING CAPITAL -- O & M EXPENSE
R-2021-3027385 and R-2021-3027386

Description	Company Pro forma F.T.Y. Expense	ALJ	ALJ Pro forma Expenses	Lag Days	Lag Dollars
Service Company	$0	$0	$0	0.00	$0
Chemicals	$0	$0	$0	0.00	$0
Group Insurance	$0	$0	$0	0.00	$0
Insurance, Other	$0	$0	$0	0.00	$0
Labor	$0	$0	$0	0.00	$0
Leased Equip./Rent	$0	$0	$0	0.00	$0
Leased Vehicles	$0	$0	$0	0.00	$0
Miscellaneous	$0	$0	$0	0.00	$0
Natural Gas	$0	$0	$0	0.00	$0
Power	$0	$0	$0	0.00	$0
Purchased Water	$0	$0	$0	0.00	$0
Telephone	$0	$0	$0	0.00	$0
Waste Disposal	$0	$0	$0	0.00	$0
Post Retirement Benefits	$0	$0	$0	0.00	$0
Pensions	$0	$0	$0	0.00	$0
	$0	$0	$0	#DIV/0!	$0

ALJ Average Revenue Lag	0.0	
Less: ALJ Avg. Expense Lag	#DIV/0!	
Net Difference	#DIV/0!	Days
ALJ Pro forma O & M Expense per Day	$0	
ALJ CWC for O & M	#DIV/0!	
Less: Company Claim (1)	$0	
ALJ Adjustment	#DIV/0!	

(1) Company Rebuttal

I&E TABLE I – WASTEWATER NEW GARDEN

TABLE I
Aqua Pennsylvania - Wastewater New Garden
INCOME SUMMARY
R-2021-3027385 and R-2021-3027386

	Pro Forma Present Rates (1)	Company Adjustments (1)	Pro Forma Present Rates Adjusted (1)	I&E Adjustments	I&E Pro Forma Present Rates	I&E Revenue Increase	Total Allowable Revenues
	$	$	$	$	$	$	$
Operating Revenue	2,889,080	0	2,889,080	0	2,889,080	2,297,682	5,186,762
Expenses:							
O & M Expense	1,845,024	0	1,845,024	(674)	1,844,350	27,432	1,871,782
Depreciation	735,834	0	735,834	0	735,834	0	735,834
Taxes, Other	19,402	0	19,402	0	19,402	15,430	34,832
Income Taxes:							
State	(75,351)	0	(75,351)	133	(75,218)	225,257	150,039
Federal	(142,571)	0	(142,571)	251	(142,320)	426,208	283,888
Deferred Taxes/ITC	102,038	0	102,038	0	102,038	0	102,038
Total Expenses	2,484,376	0	2,484,376	(290)	2,484,086	694,327	3,178,413
Net Inc. Available for Return	404,704	0	404,704	290	404,994	1,603,355	2,008,349
Rate Base	30,246,226	0	30,246,226	0	30,246,226		30,246,226
Rate of Return	1.34%		1.34%		1.34%		6.64%

(1) Company Rebuttal Testimony

I&E TABLE I(A) – WASTEWATER NEW GARDEN

TABLE I(A)
Aqua Pennsylvania - Wastewater New Garden
RATE OF RETURN
R-2021-3027385 and R-2021-3027386

	Structure	Cost	After-Tax Weighted Cost	Effective Tax Rate Complement	Pre-Tax Weighted Cost Rate
Total Cost of Debt			1.84000000%		
Long-term Debt	46.05%	4.00%	1.84000000%		1.84%
Short-term Debt	0.00%	0.00%	0.00000000%		
Preferred Stock	0.00%	0.00%	0.00000000%	0.711079	0.00%
Common Equity	53.95%	8.90%	4.80000000%	0.711079	6.75%
	100.00%		6.64000000%		8.59%
Pre-Tax Interest Coverage	4.67				
After-Tax Interest Coverage	3.61				

I&E TABLE I(B) – WASTEWATER NEW GARDEN

TABLE I(B)	
Aqua Pennsylvania - Wastewater New Garden	
REVENUE FACTOR	
R-2021-3027385 and R-2021-3027386	
100%	1.00000000
Less:	
Uncollectible Accounts Factor (*)	0.01193910
PUC, OCA, OSBA Assessment Factors (*)	0.00671560
Gross Receipts Tax	0.00000000
Other Tax Factors (adjust for rounding)	0.00000000
	0.98134530
State Income Tax Rate (*)	0.09990000
Effective State Income Tax Rate	0.09803600
Factor After Local and State Taxes	0.88330930
Federal Income Tax Rate (*)	0.21000000
Effective Federal Income Tax Rate	0.18549500
Revenue Factor (100% - Effective Tax Rates)	0.69781400
(*) I&E Surrebuttal	

I&E TABLE II – WASTEWATER NEW GARDEN

TABLE II
Aqua Pennsylvania - Wastewater New Garden
SUMMARY OF ADJUSTMENTS
R-2021-3027385 and R-2021-3027386

Adjustments	Rate Base	Revenues	Expenses	Depreciation	Taxes-Other	State Income Tax	Federal Income Tax
	$	$	$	$	$	$	$
RATE BASE:							
CWC:							
Int. & Div. (Table IV)	(IV!B38)						
Taxes (Table V)	(V!P34)						
O & M (Table VI)	(VI!B42)						
REVENUES:							
						0	0
EXPENSES:							
Insurance			(676)			68	128
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
						0	0
TAXES:							
Interest Synchronization (Table III)						65	124
TOTALS	0	0	(676)	0	0	133	252

I&E TABLE III – WASTEWATER NEW GARDEN

TABLE III	
Aqua Pennsylvania - Wastewater New Garden	
INTEREST SYNCHRONIZATION	
R-2021-3027385 and R-2021-3027386	
	Amount
Company Rate Base Claim	30,246,226
I&E Rate Base Adjustments	0
I&E Rate Base	30,246,226
Weighted Cost of Debt	1.84000000%
I&E Interest Expense	556,531
Company Claim (1)	557,184
Total I&E Adjustment	653
Company Adjustment	0
Net I&E Interest Adjustment	653
State Income Tax Rate	9.99%
State Income Tax Adjustment	65
Net I&E Interest Adjustment	653
State Income Tax Adjustment	65
Net I&E Adjustment for F.I.T.	588
Federal Income Tax Rate	21.00%
Federal Income Tax Adjustment	124
(1) Company Rebuttal Testimony	

I&E TABLE IV – WASTEWATER NEW GARDEN

TABLE IV				
Aqua Pennsylvania - Wastewater New Garden				
CASH WORKING CAPITAL - Interest and Dividends				
R-2021-3027385 and R-2021-3027386				
Accrued Interest			Preferred Stock Dividends	
	Long-Term Debt	Short-Term Debt		
Company Rate Base Claim	$30,246,226	$30,246,226	Company Rate Base Claim	$30,246,226
I&E Rate Base Adjustments	$0	$0	I&E Rate Base Adjustments	$0
I&E Rate Base	$30,246,226	$30,246,226	I&E Rate Base	$30,246,226
Weighted Cost of Debt	1.84000000%	0.00%	Weighted Cost Pref. Stock	0.00000000%
I&E Annual Interest Exp.	$556,531	$0	I&E Preferred Dividends	$0
Average Revenue Lag Days	0.0	0.0	Average Revenue Lag Days	0.0
Average Expense Lag Days	0.0	0.0	Average Expense Lag Days	0.0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
Working Capital Adjustment				
I&E Daily Interest Exp.	$1,525	$0	I&E Daily Dividends	$0
Net Lag Days	0.0	0.0	Net Lag Days	0.0
I&E Working Capital	$0	$0		$0
Company Claim (1)	$0	$0	Company Claim (1)	$0
I&E Adjustment	$0	$0		$0
Total Interest & Dividend Adj.	$0			
(1) Company Rebuttal				

I&E TABLE V – WASTEWATER NEW GARDEN

TABLE V
Aqua Pennsylvania - Wastewater New Garden
CASH WORKING CAPITAL -TAXES
R-2021-3027385 and R-2021-3027386

Description	Company Proforma Tax Expense Present Rates	ALJ Adjustments	ALJ Pro forma Tax Expense Present Rates	ALJ Allowance	ALJ Adjusted Taxes at Present Rates	Daily Expense	Net Lead/ Lag Days	Accrued Tax Adjustment
PUC Assessment	$0	$0	$0	$15,430	$15,430	$42.27	0.00	$0
Public Utility Realty	$0	$0	$0		$0	$0.00	0.00	$0
Capital Stock Tax	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
	$0	$0	$0		$0	$0.00	0.00	$0
State Income Tax	$0	$133	$133	$225,257	$225,390	$617.51	0.00	$0
Federal Income Tax	$0	$252	$252	$426,208	$426,460	$1,168.38	0.00	$0
	$0	$385	$385	$666,895	$667,280			
						ALJ Allowance		0
						Company Claim (1)		0
						ALJ Adjustment		0

(1) Company Rebuttal

I&E TABLE VI – WASTEWATER NEW GARDEN

TABLE VI
Aqua Pennsylvania - Wastewater New Garden
CASH WORKING CAPITAL -- O & M EXPENSE
R-2021-3027385 and R-2021-3027386

Description	Company Pro forma F.T.Y. Expense	ALJ	ALJ Pro forma Expenses	Lag Days	Lag Dollars
Service Company	$0	$0	$0	0.00	$0
Chemicals	$0	$0	$0	0.00	$0
Group Insurance	$0	$0	$0	0.00	$0
Insurance, Other	$0	$0	$0	0.00	$0
Labor	$0	$0	$0	0.00	$0
Leased Equip./Rent	$0	$0	$0	0.00	$0
Leased Vehicles	$0	$0	$0	0.00	$0
Miscellaneous	$0	$0	$0	0.00	$0
Natural Gas	$0	$0	$0	0.00	$0
Power	$0	$0	$0	0.00	$0
Purchased Water	$0	$0	$0	0.00	$0
Telephone	$0	$0	$0	0.00	$0
Waste Disposal	$0	$0	$0	0.00	$0
Post Retirement Benefits	$0	$0	$0	0.00	$0
Pensions	$0	$0	$0	0.00	$0
	$0	$0	$0	#DIV/0!	$0

ALJ Average Revenue Lag	0.0	
Less: ALJ Avg. Expense Lag	#DIV/0!	
Net Difference	#DIV/0!	Days
ALJ Pro forma O & M Expense per Day	$0	
ALJ CWC for O & M	#DIV/0!	
Less: Company Claim (1)	$0	
ALJ Adjustment	#DIV/0!	

(1) Company Rebuttal

Proposed Impact on Average Monthly Customer Bills in Dollars and Percentage of Increase Based on I&E's Proposed Revenue Increases and Customer Charges for All Water and Wastewater Rate Zones [518]

		Aqua Pennsylvania, Inc				
		R-2021-3027385				
		Present and Proposed Monthly WATER BILLS By Class				
					I&E	
		Average				
		Division	**Usage**	Present	**Increase**	**Proposed**	**Increase**
		(A)	(B)	(C)	(D)	(E)	(F)
1		Main - Residential	3,700	$65.29	$1.75	$67.03	2.7%
2		Main - Commercial	33,900	$395.01	$8.69	$403.70	2.2%
3		Main - Industrial	201,400	$1,976.42	$43.85	$2,020.27	2.2%
4		Main - Public	33,900	$414.68	$9.12	$423.80	2.2%
5		Eagle Rock - Residential	3,700	$65.29	$1.75	$67.03	2.7%
6		Eagle Rock - Commercial	14,100	$193.36	$4.21	$197.57	2.2%
7		Bensalem - Residential	3,700	$65.29	$1.75	$67.03	2.7%
8		Bensalem - Commercial	33,900	$395.01	$8.69	$403.70	2.2%
9		Bensalem - Industrial	201,400	$1,976.42	$43.85	$2,020.27	2.2%
10		Bensalem - Public	33,900	$414.68	$9.12	$423.80	2.2%
11		Chalfont - Residential	3,700	$61.71	$5.33	$67.03	8.6%
12		Chalfont - Commercial	6,000	$88.04	$10.12	$98.16	11.5%
13		Chalfont - Industrial	201,400	$2,324.91	-$304.64	$2,020.27	-13.1%
14							
14		Oakland - Residential	4,000	$69.35	$1.89	$71.24	2.7%
15		Oakland - Commercial	14,100	$204.11	$3.46	$207.57	1.7%
16		Oakland - Industrial	36,800	$459.23	$9.12	$468.35	2.0%
17		Masthope - Residential	4,000	$69.35	$1.89	$71.24	2.7%
18		Masthope - Commercial	14,100	$204.11	$3.46	$207.57	1.7%

[518] The I&E proposed bill impact tables are based on the I&E proposed revenue increases as set forth in the I&E Tables in Appendix A *supra* and the customer charges detailed in I&E witness testimony and exhibits entered into the record.

19		Country Club - Residential	3,700	$53.16	$13.87	$67.03	26.1%
20		Country Club - Commercial	32,100	$340.27	$46.27	$386.54	13.6%
21		Clarendon - Residential	3,700	$65.29	$1.75	$67.03	2.7%
22		Clarendon - Commercial	33,900	$395.01	$8.69	$403.70	2.2%
23		Kratzerville - Residential	3,700	$65.29	$1.75	$67.03	2.7%
24		Kratzerville - Commercial	33,900	$395.01	$8.69	$403.70	2.2%
25		Honesdale - Residential	3,700	$65.29	$1.75	$67.03	2.7%
26		Honesdale - Commercial	33,900	$395.01	$8.69	$403.70	2.2%
27		Honesdale - Industrial	201,400	$1,976.42	$43.85	$2,020.27	2.2%

Aqua Pennsylvania, Inc

R-2021-3027385

Present and Proposed Monthly WATER BILLS By Class

					I&E	
	Division	Average **Usage**	Present	**Increase**	**Proposed**	**Increase**
	(A)	(B)	(C)	(D)	(E)	(F)
28	Sand Springs - Residential	3,700	$53.16	$13.87	$67.03	26.1%
29	Sand Springs - Commercial	32,100	$169.31	$38.59	$207.91	22.8%
30	Mifflin - Residential	3,700	$51.17	$15.86	$67.03	31.0%
31	Mifflin - Commercial	16,000	$156.95	$62.44	$219.39	39.8%
32	Beech Mountain - Residential	3,700	$32.73	$9.75	$42.48	29.8%
33	Beech Mountain - Commercial	42,500	$384.85	$100.81	$485.66	26.2%
34	Treasure Lake - Residential	3,700	$40.95	$12.81	$53.75	31.3%
35	Treasure Lake - Commercial	33,500	$214.90	$113.14	$328.03	52.6%
36	Concord Park - Residential	110,000	$1,506.03	$45.56	$1,551.59	3.0%
37	Concord Park - Commercial	434,800	$3,277.12	$1,830.98	$5,108.10	55.9%
38	Bristol Twp - Residential	3,700	$39.24	$12.19	$51.43	31.1%
39	Bristol Twp - Commercial	11,400	$125.97	$40.58	$166.55	32.2%
40	Mt Jewett - Residential	3,700	$61.71	$5.33	$67.03	8.6%
41	Mt Jewett- Commercial	33,900	$395.01	$8.69	$403.70	2.2%
42	Mt Jewett - Industrial	201,400	$1,976.42	$43.85	$2,020.27	2.2%
43	Bunker Hill - Residential	3,700	$26.50	$9.94	$36.44	37.5%
44	Robin Hood Lakes - Residential	3,700	$53.56	$13.48	$67.03	25.2%
45	Sun Valley - Residential	3,700	$20.96	$15.54	$36.50	74.1%
46	Superior - Residential	3,700	$65.29	$1.75	$67.03	2.7%
47	Superior - Commercial	6,000	$96.11	$2.05	$98.16	2.1%
48	Phoenixville - Residential	3,700	$15.52	$5.81	$21.33	37.5%
49	Phoenixville - Commercial	19,100	$66.67	$25.08	$91.75	37.6%
50	Phoenixville - Industrial	3,600	$19.71	$7.39	$27.10	37.5%

Aqua Pennsylvania, Inc

R-2021-3027386

Present and Proposed Monthly WASTEWATER BILLS By Class

	Division	Average Usage	Present	Increase	I&E Proposed	I&E Increase
	(A)	(B)	(C)	(D)	(E)	(F)
1	RZ 1 - Media Division Residential	3,700	$62.08	$24.70	$86.77	39.8%
2	RZ 1 - Media Division - Commercial	16,300	$168.21	$59.11	$227.32	35.1%
3	RZ 1 - Media Division - Industrial	3,700	$62.08	$24.70	$86.77	39.8%
4	RZ 1 - Bridlewood - Residential	3,700	$62.08	$24.70	$86.77	39.8%
5	RZ 1 - Eagle Rock - Residential	3,700	$62.08	$24.70	$86.77	39.8%
6	RZ 1 - Eagle Rock - Commercial	6,100	$81.23	$32.32	$113.54	39.8%
7	RZ 1A - Treasure Lake - Residential	3,700	$57.03	$29.75	$86.77	52.2%
8	RZ 1A - Treasure Lake - Commercial	34,300	$259.44	$168.67	$428.11	65.0%
9	RZ 1A -Bunker Hill - Residential	3,700	$57.03	$29.75	$86.77	52.2%
10	RZ 1A -Village at Valley Forge Residential	3,700	$57.03	$29.75	$86.77	52.2%
11	RZ 1A - Valley Forge - Commercial	194,500	$1,612.12	$1,012.50	$2,624.62	62.8%
12	RZ 1B - Penn Township -Residential	3,700	$60.90	$25.87	$86.77	42.5%
13	RZ 1B - Penn Township - Commercial	78,400	$894.08	$25.96	$920.04	2.9%
14	RZ 2 - White Haven - Residential	3,700	$69.27	$27.49	$96.76	39.7%
15	RZ 2 - White Haven - Commercial	5,300	$82.88	$32.89	$115.76	39.7%
16	RZ 2 - Rivercrest - Residential	3,700	$69.27	$27.49	$96.76	39.7%
17	RZ 2 - Rivercrest - Commercial	13,900	$156.02	$61.91	$217.93	39.7%
18	RZ 2 - Emlenton - Residential	3,700	$69.27	$27.49	$96.76	39.7%
19	RZ 2 - Emlenton - Commercial	3,700	$69.27	$27.49	$96.76	39.7%
20	RZ 2 - Pinecrest 2 - Residential	3,700	$69.27	$27.49	$96.76	39.7%
21	RZ 2 - Pinecrest 2 - Commercial	30,400	$957.60	-$45.60	$912.00	-4.8%
22	RZ 3 - Thornhurst - Residential	3,700	$81.32	$24.25	$105.57	29.8%
23	RZ 3 - Laurel Lakes - Residential	3,700	$81.32	$24.25	$105.57	29.8%
24	RZ 3 - Deerfield Knoll - Residential	3,700	$81.32	$24.25	$105.57	29.8%
25	RZ 3 - Stony Creek - Residential	3,700	$81.32	$24.25	$105.57	29.8%
26	RZ 3 - Beech Mountain Lakes - Residential	3,700	$81.32	$24.25	$105.57	29.8%
27	RZ 3 - Beech Mountain Lakes - Commercial	3,700	$81.32	$24.25	$105.57	29.8%
28	RZ 3 - Woodloch Springs - Commercial Going to	70,433	$385.07	-$276.07	$109.00	-71.7%
29	RZ 3 - Willistown Woods - Residential	3,700	$81.32	$24.25	$105.57	29.8%
30	RZ 3 - Willistown Woods - Commercial	3,400	$78.65	$23.45	$102.09	29.8%
31	RZ 3 - Links at Gettysburg - Residential	3,700	$81.32	$24.25	$105.57	29.8%
32	RZ 3 - Links at Gettysburg - Commercial	14,400	$176.82	$52.72	$229.54	29.8%

Aqua Pennsylvania, Inc

R-2021-3027386

Present and Proposed Monthly WASTEWATER BILLS By Class

					I&E		
		Average					
	Division	**Usage**	Present		**Increase**	**Proposed**	**Increase**
	(A)	(B)	(C)		(D)	(E)	(F)
1	RZ 4 - Lake Harmony - Flat Residential		$100.00		$31.00	$131.00	31.0%
2	RZ 4 - Honeycroft - Residential Flat		$100.00		$31.00	$131.00	31.0%
3	RZ 4 - Honeycroft - Commercial	63,714	$700.65		$174.35	$875.00	24.9%
4	RZ 4 - New Daleville - Flat		$100.00		$31.00	$131.00	31.0%
5	RZ 4 - New Daleville - Flat Residential		$100.00		$31.00	$131.00	31.0%
6	RZ 4 - Tobyhanna - Flat Residential		$100.00		$31.00	$131.00	31.0%
7	RZ 4 - Tobyhanna - Commercial	11,600	$180.81		$44.99	$225.80	24.9%
8	RZ 4 - Twin Hills - Residential	3,700	$102.01		$25.38	$127.39	24.9%
9	RZ 4 - Peddlers View - Residential	3,700	$102.01		$25.38	$127.39	24.9%
10	RZ 5 - Plumsock - Residential	6,200	$140.20		$28.42	$168.61	20.3%
11	RZ 5 - Little Washington - Residential	3,700	$115.00		$23.31	$138.31	20.3%
12	RZ 5 - Greens at Penn Oak - Residential	3,700	$115.00		$23.31	$138.31	20.3%
13	RZ 5 - Greens at Penn Oaks - Commercial	39,900	$479.89		$97.27	$577.16	20.3%
14	RZ 5 - East Bradford - Residential	3,700	$115.00		$23.31	$138.31	20.3%
15	RZ 5 - Newlin Green 5 - Residential	7,200	$172.20		$8.54	$180.74	5.0%
16	RZ 5 - Flat - Residential		$112.40		$29.54	$141.94	26.3%
17	RZ 5 - Sage Hill - Flat Residential		$180.00		-$38.06	$141.94	-21.1%
18	RZ 5 - Avon Grove School		$8,281.25		$2,222.46	$10,503.71	26.8%
19	RZ 6 - Masthope Division - Residential	3,700	$45.51		$20.31	$65.82	44.6%
20	RZ 6 - Masthope - Commercial	63,647	$108.45		$113.23	$221.68	104.4%
21	RZ 7 - Limerick - Residential	3,700	$37.69		$33.63	$71.32	89.2%
22	RZ 7 - Limerick - Commercial	5,800	$51.94		$37.44	$89.38	72.1%
23	RZ 8 - Single Family - Residential	Flat	$71.49		$28.51	$100.00	39.9%
24	RZ 8 - Townhouse - Residential	Flat	$68.09		$31.91	$100.00	46.9%
25	RZ 8 - East Bradford - Residential	3,700	$55.36		$41.08	$96.44	74.2%
26	RZ 8 - East Bradford - Commercial	44,500	$335.21		$202.29	$537.50	60.3%
27	RZ 9 - Cheltenham - Residential	4,200	$37.31		$21.25	$58.56	56.9%
28	RZ 9 - Cheltenham - Commercial	3,200	$33.40		$18.36	$51.76	55.0%
29	RZ 9 - Cheltenham - Industrial	1,300	$25.97		$12.87	$38.84	49.5%
30	RZ 10 - East Norriton - Residential	3,600	$35.91		$26.45	$62.36	73.7%
31	RZ 10 - East Norriton - Commercial	24,500	$172.59		$48.61	$221.20	28.2%
32	RZ 10 - Whitpain - Residential	3,600	$31.66		$30.70	$62.36	97.0%
33	RZ 10 - Whipain - Commercial	0	$56.00		-$19.30	$36.70	-34.5%
34	RZ 11 - New Garden - Residential	5,100	$90.17		$65.99	$156.16	73.2%
35	RZ 11 - New Garden - Commercial	4,000	$107.54		$69.31	$176.85	64.5%

Appendix C

Findings of Fact

1. Aqua Pennsylvania, Inc. ("Aqua Water") provides water service to approximately 450,000 customers in portions of more than 200 municipalities throughout 32 Pennsylvania counties. Aqua St. No. 1, p. 7.

2. Aqua Pennsylvania Wastewater, Inc ("Aqua Wastewater") provides wastewater service to approximately 40,000 customers in portions of more than 40 municipalities throughout 15 Pennsylvania counties. Aqua St. No. 1, p. 7.

3. On August 20, 2021, Aqua Pennsylvania, Inc., filed, respectively, Original Tariff Water - PA P.U.C. No. 3 ("Tariff Water No. 3") to become effective on October 19, 2021.

4. On August 20, 2021, Aqua Pennsylvania, Inc., on behalf of its wholly-owned subsidiary Aqua Pennsylvania Wastewater, Inc., filed, Original Tariff Sewer - PA P.U.C. No. 3 ("Tariff Sewer No. 3") to become effective on October 19, 2021.

5. The Bureau of Investigation & Enforcement is the prosecutory bureau for purposes of representing the public interest in ratemaking and service matters before the Office of Administrative Law Judge. *Implementation of Act 129 of 2008 Organization of Bureau and Offices*, Docket No. M-2008-20071852 (Order entered August 11, 2011).

6. The Office of Consumer Advocate is authorized to represent the interests of consumers before the Commission. Act 161 of 1976, 71 P.S. § 309-2.

7. The Office of Small Business Advocate is authorized and directed to represent the interest of small business consumers of utility service in Pennsylvania under the provisions of the Small Business Advocate Act, Act 181 of 1988, 73 P.S. §§ 399.41-399.50.

8. Aqua failed to present substantial credible record evidence to support its request for a $97.68 million revenue requirement increase.

9. The record evidence presented supports only a total revenue increase of $33.91 million inclusive of both Water and Wastewater. I&E St. No. 1-SR, p. 6. *See also* I&E MB, App. A, I&E Table VII – Water – Act 11 Allocation.

10. The record evidence presented supports only a total revenue increase of $6.78 million for Aqua Water. I&E St. No. 1-SR, p. 3, Table I. *See also* I&E MB, App. A, I&E Table VII – Water – Act 11 Allocation.

11. The record evidence presented supports only a total revenue increase of $27.13 million for Aqua Wastewater. I&E MB, App. A, I&E Table VII – Water – Act 11 Allocation.

12. The record evidence presented supports a total rate base fair value finding of $3,815,961,707 for Water. I&E St. No. 4, p. 4.

13. The record evidence presented supports a total rate base fair value finding of $198,368,990 for Wastewater. I&E MB, App. A, I&E Table I – Wastewater.

14. Aqua failed to collect late payment revenue for Zone 11 – New Garden in the Historic Test Year. I&E St. No. 5, p. 60.

15. Aqua has sales for resale agreements with eleven different water utilities to supply water at various rates. I&E St. No. 4 PROPRIETARY, pp. 8-16.

16. Aqua's Tariff has a provision that describes the requirements to be met in order to grant a contract to a resale customer at less than full Tariff rate. I&E St. No. 4 PROPRIETARY, pp. 8-10; I&E St. No. 4-SR, pp. 5-7.

17. Aqua's Tariff requires proof of the existence of a viable competitive alternative to water service from the Company. I&E St. No. 4 PROPRIETARY, p. 9; I&E St. No. 4-SR, p. 6.

18. The anticipated increases in usage for Aqua new service under the New Wilmington sale for resale contract never materialized. Aqua St. No. 2-R, p. 24.

18. There is no Masury rate provision in Aqua's proposed tariff. I&E St. No. 4 PROPRIETARY, pp. 19-20.

19. Aqua and Masury have not entered into a water supply contract and there is no approved Affiliated Interest Agreement approved by the Commission. I&E St. No. 4 PROPRIETARY, pp. 19-20; I&E St. No. 4-SR, pp. 19-20.

20. A contract (affiliated interest agreement) between Masury (Aqua Ohio) and Aqua was signed on August 12, 2021 but only filed for Commission approval on November 30, 2021. I&E St. No. 4-SR, pp. 19-20.

21. Aqua's insurance expense has increased 4.38% from the Historic Test Year to the Future Test Year, and 4.38% again from the Future Test year to the Fully Projected Future Test Year based on a three-year average trend. I&E St. No. 1-SR, pp. 13-16.

22. Aqua's dredging expense is an ordinary routine operating expense. I&E St. No. 1-SR. p. 21.

23. Aqua's full-time vacancy rate is 2.88% for purposes of calculating labor expense, employee benefits, and federal and state payroll tax is appropriate in this instance. I&E St. No. 1-SR, p. 25.

24. Aqua's use of a lead/lag study for purposes of calculating cash working capital is appropriate in this instance. I&E St. No. 1-SR, p. 29.

25. There has been no increase or decrease in the federal corporate tax rate since January 1, 2021. I&E St. No. 1, pp. 28-29; I&E St. No. 1-SR, pp. 32-46.

26. I&E's calculated rate of return on equity using the Discounted Cash Flow method is 8.90%. I&E St. No. 2, p. 23.

27. I&E's calculated overall rate of return is 6.64%. I&E St. No. 2, p. 27.

Conclusions of Law

1. Every rate made, demanded, or received by any public utility, or by any two or more public utilities jointly, shall be just and reasonable, and in conformity with regulations or orders of the commission. 66 Pa. C.S. § 1301.

2. No public utility shall … make or grant any unreasonable preference to any person, corporation … No public utility shall establish or maintain any unreasonable difference as to rates, either as between localities or as between classes of service. 66 Pa. C.S. § 1304.

3. The burden of proving the justness and reasonableness of every element of the utility's rate increase rests solely upon the public utility. 66 Pa. C.S. § 315(a); *Lower Frederick Twp. v. Pa. Pub. Util. Comm.*, 409 A.2d 505 (Pa. Commw. Ct. 1980).

4. Aqua Pennsylvania, as the base rate filer, must satisfy its burden of proof by a preponderance of evidence. *Samuel J. Lansberry, Inc. v. Pennsylvania Public Utility Commission*, 578 A.2d 600 (Pa. Commw. 1990).

5. A preponderance of evidence is such evidence that is more convincing, by even the smallest amount, than that presented by another party. *Se-Ling Hosiery v. Margulies*, 70 A.2d 854 (Pa. 1950).

6. The burden of proof is comprised of two distinct burdens: the burden of production and the burden of persuasion. The burden of production tells the adjudicator which party must come forward with evidence to support a particular position. *In re: Loudenslager's Estate,* 430 Pa. 33, 240 A.2d 477 (1968). The burden of persuasion determines which party must produce sufficient evidence to convince a judge that a fact has been established, and it never leaves the party on whom it is originally cast. *Reidel v. County of Allegheny,* 633 A.2d 1325, 1329 n. 11 (Pa. Commw. 1993).

7. The Commission must ensure that any adjudication is supported by substantial evidence. "Substantial evidence" is such relevant evidence that a reasonable mind might accept as adequate to support a conclusion. *Norfolk & Western Ry. Co. v. Pennsylvania Public Utility Commission,* 413 A.2d 1037 (Pa. 1980).

8. While the burden of proof remains with the public utility throughout the rate proceeding, the Commission has stated that where a party proposes an adjustment to a ratemaking claim of a utility, the proposing party bears the burden of presenting some evidence or analysis tending to demonstrate the reasonableness of the adjustment. *Pa. Pub. Util. Comm. v. Aqua Pennsylvania, Inc*., Docket No. R-00072711 (Opinion and Order entered July 17, 2008).

9. The Commission must consider the efficiency, effectiveness and adequacy of service of each utility when determining just and reasonable rates in exchange for customers paying rates for service, which include the cost of utility plant in service and a rate of return. 66 Pa. C.S. § 523.

10. In exchange for the utility's provision of safe, adequate and reasonable service, the ratepayers are obligated to pay rates which cover the cost of service which includes reasonable operation and maintenance expenses, depreciation, taxes and a fair rate of return for the utility's investors. *Pa. Pub. Util. Comm. v. Pennsylvania Gas & Water Co.,* 61 Pa. PUC 409, 415-16 (1986); 66 Pa. C.S. § 1501.

11 The Commission has the discretionary authority to deny a proposed rate increase, in whole or in part, if the Commission finds that the service rendered by the public utility is inadequate. 66 Pa. C.S. § 526(a); *PA PUC v. Columbia Gas of Pennsylvania Inc.,* Docket No. R-2020-3018835, Order entered February 19, 2021.

12. A Commission decision is adequate where, on each of the issues raised, the Commission was merely presented with a choice of actions, each fully developed in the record, and its choice on each issue amounted to an implicit acceptance of one party's thesis and rejection of the other party's contention. *Popowsky, et al. v. Pa. Pub. Util. Comm.*, 550 Pa. 449, 706 A.2d 1197 (1997).

13. The standard formula for determining a utility's base rate revenue requirement is:

RR = E + D + T + (RB x ROR)

RR: Revenue Requirement

E: Operating Expense

D: Depreciation Expense

T: Taxes

RB: Rate Base

ROR: Overall Rate of Return

14. A utility is entitled to recover its reasonably incurred expenses. *UGI Corp. v. Pa. Pub. Util. Comm'n,* 410 A.2d 923 (Pa. Commw. 1980). Expenses include such items as the cost of operations and maintenance (labor, fuel and administrative costs, e.g.), depreciation and taxes. *Pennsylvania Power Company v. Pa. Pub. Util. Comm.,* 561 A.2d 43, 47 (Pa. Commw. 1989).

15. The public utility requesting a rate increase and seeking to recover expenses has the burden of showing that the rate requested, including all claimed expenses, is just and reasonable. 66 Pa. C.S. § 315(a); *See also Cup v. Pa. P.U.C.*, 556 A.2d 470 (Pa. Commw. 1989).

16. To the extent that expenses are not reasonably incurred, imprudently incurred, or abnormally overstated during the test year, they should be disallowed and found not recoverable through rates. *Cup v. Pa. P.U.C.*, 556 A.2d 470 (Pa. Commw. 1989).

17. It is the historical filings, not the actual intentions of the utility, which will guide the determination of the normalization period. *Pa. Pub. Util. Comm. v. City of Lancaster,* R-2010-2179103, et al. (Opinion and Order entered July 14, 2011), 2011 Pa. PUC LEXIS 1685; *Pa. Pub. Utility Comm. v. Metropolitan Edison Company,* R-2006-00061366, et al. (Opinion and Order entered January 4, 2007), 2007 Pa. PUC LEXIS 5.

18. The rate of return should be reasonably sufficient to assure confidence in the financial soundness of the utility, and should be adequate, under efficient and economical management…to raise the money necessary for the proper discharge of public duties. *Bluefield Waterworks & Improvement Co. v. Public Service Comm. of West Virginia,* 262 U.S. 679 (1923).

19. Establishment of a rate structure is an administrative function peculiarly within the expertise of the Commission. *Emporium Water Company v. Pa. Pub. Util. Comm.,* 955 A.2d 456, 461 (Pa. Commw. 2008); *City of Lancaster v. Pa. Pub. Util. Comm.*, 769 A.2d 567, 571-72 (Pa. Commw. 2001). The question of reasonableness of rates and the difference between rates in their respective classes is an administrative question for the Commission to decide. *Pennsylvania Power & Light Co. v. Pa. Pub. Util. Comm.,* 516 A.2d 426 (Pa. Commw. 1986); *Park Towne v. Pa. Pub. Util. Comm.,* 43 A.2d 610 (1981). 20. The basic factor in allocating revenue is to have the rates reflect the cost of service. *Lloyd v. Pa. Pub. Util. Comm.,* 904 A.2d 1010, 1020 (Pa. Commw. 2006).

21. Section 1311(c) of the Public Utility Code, more commonly referred to as Act 11, permits utilities that provide both water and wastewater service to combine the revenue requirements by allocating a portion of the wastewater revenue requirement to the water customer base if doing so is in the "public interest.". 66 Pa. C.S. § 1311.

22. Section 1311(c) of the Public Utility Code does not specify how the Commission should determine rates, nor does it dictate the percent or amount of revenue that should be allocated or shifted, leaving the Commission wide latitude in applying Act 11. 66 Pa. C.S. § 1311(c).

23. "Iteration" is an accepted ratemaking process that must be applied to the final calculation of rates as all adjustments are finalized.

24. A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. *Bluefield Water Works & Improvements Co. v. Public Service Comm. of West Virginia,* 292 U.S. 679, 692-93 (1923).

25. The Commission shall base its determination of the appropriate cost of equity on the results of the DCF method and shall use the CAPM results as a comparison thereto. The use of the DCF model has historically been our preferred methodology, the Commission should find no reason to deviate from the use of this method in the instant case. *PA PUC v. Columbia Gas of Pennsylvania Inc.,* Docket No. R-2020-3018835, Order entered February 19, 2021.

26. The Company's proposed Federal Tax Adjustment Surcharge is based on pure speculation and in violation of the Public Utility Code. 66 Pa. C.C. § 1308.

27. The Company's proposed Purchased Water Adjustment Clause is discriminatory and in violation of the Public Utility Code. 66 Pa. C. S. § 1304.

28. The Company's proposed Energy Cost Adjustment Mechanism is discriminatory and in violation of the Public Utility Code. 66 Pa. C. S. § 1304.

29. "Scale back" of rates is an accepted rate making process that is applied to the final rate structure after the Commission approves the Company's new total revenue requirement.

30. Aqua Pennsylvania Water/Wastewater did not meet its burden of proof.

Ordering Paragraphs

1. That Aqua Water shall not place into effect the rules, rates and regulations contained in proposed Aqua Original Tariff Water – PA. P.U.C. No. 3 …

2. That Aqua Wastewater shall not place into effect the rules, rates and regulations contained in proposed Aqua Original Tariff Sewer – PA P.U.C. No. 3 …

3. That I&E's proposed total revenue increase for Aqua Water and Wastewater combined of $33,909,310 is approved.

4. That I&E's proposed revenue increase for Aqua Wastewater of $27,126,058 (before subtracting the Act 11 subsidy) is approved.

5. That I&E's proposed Act 11 subsidy of $10,439,352 is approved.

6. That I&E's proposed revenue increase for Aqua Water of $6,783,252 (before adding the Act 11 subsidy) is approved.

7. That I&E's proposed total revenue increase for Aqua Water of $17,222,604 ($10,439,352 + $6,783,252) is approved.

8. That the Company's proposed acquisition adjustment arising out of the purchase of the Borough of Phoenixville water system is denied in its entirety.

9. That the Company's proposed annual amortization expense (depreciation adjustment) arising out of the acquisition of the Borough of Phoenixville water system is disallowed in its entirety.

10. That I&E's proposed utility plant in service reporting update requirement for the Future Test Year and Fully Projected Future Test Year are approved.

11. That I&E's proposed forfeited discounts adjustments for Aqua Water be approved.

12. That I&E's recommended updated treatment of the Company's sales for resale contracts be approved.

13. That the Company's Sharpsville sales for resale contract be cancelled and full tariff rates go into effect.

14. That the Company's Schwenksville sales for resale contract be cancelled and full tariff rates go into effect.

15. That the Company's Chemung sales for resale contract be cancelled and full tariff rates go into effect.

16. That the Company's Horsham sales for resale contract be cancelled and full tariff rates go into effect.

17. That the Company's New Wilmington sales for resale contract are cancelled and full tariff rates go into effect.

18. That the competitive rider rates granted to Masury are cancelled and full tariff rates go into effect.

19. That I&E's recommended adjustments to the East Brandywine third-party sales customers are approved.

20. That I&E's adjustment to Aqua's operating revenue – late payment revenue under present rates is approved.

21. That I&E's adjustment to Aqua's operating revenue – late payment revenue for proposed rates is approved.

22. That I&E's expense adjustments summarized in the seven tables on pages 3-6 in I&E St. No. 1-SR are accepted.

23. That Aqua's approved rate case expense will be normalized.

24. That I&E's proposed adjustments to Aqua's expense for insurance expense for Aqua Water; Wastewater Base; Limerick Wastewater; East Bradford Wastewater; Cheltenham Wastewater; East Norriton Wastewater; and, New Garden Wastewater are approved.

25. That I&E's purchased water expense adjustment is approved.

26. That I&E's recommendation that Aqua's dredging expense be normalized is approved.

27. That Aqua's proposal to use a reserve account and regulatory liability to recover dredging expenses is denied in its entirety.

28. That Aqua's use of a lead/lag study for calculating cash working capital be approved.

29. That I&E's calculated allowance for cash working capital is approved.

30. That the Company's proposed Federal Tax Adjustment Surcharge ("FTAS") rider is rejected in its entirety.

31. That I&E's recommended return on equity of 8.90% is accepted.

32. That I&E's recommended overall rate of return of 6.64% is accepted.

33. That the Company's requested for management performance points to be added to the overall rate of return is denied in its entirety.

34. That the Company's request for an inflated growth rate is denied in its entirety.

35. That the Company's request for a leverage adjustment is denied in its entirety.

36. That the Company's request for a CAPM size adjustment is denied in its entirety.

37. That the Company's capital structure is accepted.

38. That the Company's claimed cost of long-term debt is approved.

39. That I&E's recommendation for treatment of the Company's COVID-19 uncollectible expense is approved.

40. That any claimed increases to the Company's COVID-19 related uncollectibles going forward shall not be recoverable in a future proceeding.

41. That the Company's proposed Universal Service Plan is accepted with the I&E modifications applied.

42. That I&E's income verification proposal for the Company's universal service plan and low-income programs is accepted.

43. That the Company's proposed reconcilable surcharge mechanism for its Universal Service Plan cost recovery is approved.

44. That I&E's recommendation to continue to combine wastewater Zones 1 through 6 in one cost of service study is approved.

45. That I&E's recommendation to combine wastewater Zones 7 through 11 into one cost of service study in the Company's next base rate case is approved.

46. That the Company's Water rate zones receive a scaled back rate increase based on the revenue increase approved by the Commission as applied to the Company's proposed percentage increase for each rate zone.

47. That the Company's Wastewater rate zones receive the rate increases as proposed by I&E applying the after Act 11 subsidy effective revenue increase of $16,686,706.

48. That the Company's proposed Purchased Water Adjustment ("PWA") Clause is denied in its entirety.

49. That the Company's proposed Energy Cost Adjustment Mechanism ("ECAM") is rejected in its entirety.

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket Nos.: R-2021-3027385
	:	R-2021-3027386
Aqua Pennsylvania, Inc. and	:	
Aqua Pennsylvania Wastewater, Inc.	:	

CERTIFICATE OF SERVICE

I hereby certify that I am serving the foregoing **Main Brief** dated January 11, 2022, in the manner and upon the persons listed below:

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