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February 9, 2016

VIA ELECTRONIC FILING

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

**RE: Petition of Duquesne Light Company for Approval of its Act 129 Phase III Energy Efficiency and Conservation Plan
Docket No. M-2015-2515375**

Dear Secretary Chiavetta:

Enclosed for filing please find the Joint Stipulation for Admission of Testimony and Exhibits in the above-captioned matter. Attached to the Joint Stipulation are copies of the Testimony and accompanying Exhibits which the parties are requesting to be admitted into the record, as set forth below:

Attachment A: Duquesne Light Statement No. 1 (Direct Testimony of David Defide).

Attachment B: Duquesne Light Statement No.2 (Direct Testimony of William V. Pfrommer), and accompanying Exhibits WVP-1 through WVP-4.

Attachment C: OCA Statement No. 1 (Direct Testimony of Stacy L. Sherwood) and accompanying Attachment A.

Attachment D: OCA Statement No. 2 (Direct Testimony of Roger D. Colton) and accompanying Schedules RDC-1, RDC-2 and RDC-3.

Attachment E: CAUSE-PA Statement 1 (Direct Testimony of Mitchell Miller) and accompanying Attachments A through H.

Copies of this filing have been served in accordance with the attached Certificate of Service.

STEVENS & LEE
LAWYERS & CONSULTANTS

Secretary Chiavetta
February 9, 2016
Page 2

Thank you for your attention to this matter, and if you have any questions, please feel free to contact me.

Sincerely,

STEVENS & LEE



Michael A. Gruhn

Enclosures

cc: Certificate of Service
Administrative Law Judge Katrina Dunderdale (via email and Federal Express)
Cheryl Walker-Davis, Director, Office of Special Assistants (via email and First Class U.S. Mail)
Mr. Jonathan Nase, Office of Special Assistants (via email and First Class U.S. Mail)

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Duquesne Light Company for Approval	:	
of its Act 129 Phase III Energy Efficiency and	:	Docket No. M-2015-2515375
Conservation Plan	:	
	:	
	:	

**JOINT STIPULATION FOR ADMISSION
OF TESTIMONY AND EXHIBITS INTO THE EVIDENTIARY RECORD**

TO THE HONORABLE KATRINA DUNDERDALE, ADMINISTRATIVE LAW JUDGE:

I. INTRODUCTION

This Joint Stipulation for Admission of Testimony and Exhibits into the Evidentiary Record (“Joint Stipulation”) is entered into by Duquesne Light Company (“Duquesne Light”), the Office of Consumer Advocate (“OCA”), the Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania (“CAUSE-PA”), the Office of Small Business Advocate (“OSBA”), Citizen Power, and the Duquesne Industrial Intervenors (“DII”), parties to the above-captioned proceeding (hereinafter collectively referred to as the “Joint Petitioners”), by their respective counsel. The Joint Petitioners respectfully request that Administrative Law Judge Katrina Dunderdale admit into the evidentiary record of this proceeding the previously distributed written testimony and exhibits prepared by the witnesses of Duquesne Light, the OCA, and CAUSE-PA, as identified below. In support of this request, the Joint Petitioners aver and state as follows:

II. BACKGROUND

1. Duquesne Light is a public utility as the term is defined under Section 102 of the Public Utility Code, 66 Pa.C.S. § 102, certificated by the Commission to provide electric service

in the City of Pittsburgh and in Allegheny and Beaver Counties in Pennsylvania. Duquesne Light is also an electric distribution company (“EDC”) and a default service provider as those terms are defined under Section 2803 of the Public Utility Code. 66 Pa.C.S. § 2803.

2. On November 25, 2015, pursuant to Act 129 of 2008 (“Act 129”), Duquesne Light filed the above-captioned Petition with the Commission, requesting approval of its Phase III Energy Efficiency and Conservation (“EE&C”) Plan. Act 129, which became effective on October 15, 2008, created, *inter alia*, an energy efficiency and conservation program, codified in the Pennsylvania Public Utility Code, 66 Pa.C.S. §§ 2806.1, 2806.2. This program required each EDC with at least 100,000 customers to adopt and implement a Commission-approved EE&C Plan. EE&C Plans are programs designed to achieve the Act 129 conservation and peak load reduction requirements, by specified dates, within the specified cost cap.

3. Duquesne Light’s Phase III Plan was filed pursuant to the Commission’s *Phase III Implementation Order*¹ and *Phase III Clarification Order*².

4. In conjunction with the filing of its Phase III EE&C Plan, Duquesne Light filed the Direct Testimony of David Defide (Duquesne Light Statement No. 1) explaining the methodology employed to analyze, develop, and implement Duquesne Light’s Phase III plan; and the Direct Testimony of William V. Pfrommer (Duquesne Light Statement No. 2) detailing Duquesne Light’s proposed cost recovery mechanism.

5. On December 10, 2015, the OCA filed its Notice of Intervention and Public Statement in this proceeding.

¹ *Energy Efficiency and Conservation Program*, Docket No. M-2014- 2424864, (Implementation Order entered on June 11, 2015) (“*Phase III Implementation Order*”)

² *Energy Efficiency and Conservation Program*, Docket No. M-2014- 2424864, (Clarification Order entered on August 20, 2015)

6. On December 17, 2015, CAUSE-PA filed a Petition to Intervene in this proceeding.

7. On November 18, 2015, the OSBA filed its Notice of Intervention and Public Statement in this proceeding.

8. On December 30, 2015, CAUSE-PA filed its Comments to the Company's Phase III EE&C Plan.

9. On December 31, 2015, Wal-Mart Stores East, L.P. and Sam's East, Inc. (collectively "Walmart") filed a Petition to Intervene in this proceeding.

10. On January 4, 2016, the OCA and Energy Efficiency for All ("EEFA") filed Comments to the Company's Phase III EE&C Plan. Also on January 4, 2016, Citizen Power and DII filed Petitions to Intervene in this proceeding, and DII filed its Comments to the Company's Phase III EE&C Plan.

11. The Prehearing Conference was held on January 6, 2016, and counsel for all of the active parties to the proceeding participated in the Conference. On January 7, 2016, ALJ Dunderdale issued a Scheduling Order which granted the Petitions to Intervene that were filed prior to the Prehearing Conference and established a litigation schedule for the proceeding. On January 11, 2016 a Revised Prehearing Order was issued, to revise the litigation schedule.

12. In accordance with the litigation schedule, on January 13, 2016 the OCA and CAUSE-PA served written Direct Testimony on the active parties to the proceeding. Specifically, CAUSE-PA served the Direct Testimony of Mitchell Miller (CAUSE-PA Statement 1) and the OCA served the Direct Testimony of Stacy L. Sherwood (OCA Statement No.1) and the Direct Testimony of Roger D. Colton (OCA Statement No. 2).

13. On January 21, 2016, the parties informed ALJ Dunderdale of the achievement of a full settlement, and on January 22, 2016 ALJ Dunderdale issued a second Prehearing Order which suspended the litigation schedule, cancelled the evidentiary hearing, and authorized the submission of evidence and testimony via Stipulation and Affidavit.

14. In support of the Settlement, each Joint Petitioner will submit, as an appendix to the Joint Petition, individual Statements in Support of the Settlement.

15. In order to further support the Settlement, the Joint Petitioners hereby stipulate to the admission into the evidentiary record of the following Testimony and Exhibits:

- a. Duquesne Light Statement No. 1 (Direct Testimony of David Defide).
- b. Duquesne Light Statement No.2 (Direct Testimony of William V. Pfrommer), and accompanying Exhibits WVP-1 through WVP-4.
- c. CAUSE-PA Statement 1 (Direct Testimony of Mitchell Miller) and accompanying Attachments A through H.
- d. OCA Statement No. 1 (Direct Testimony of Stacy L. Sherwood) and accompanying Attachment A.
- e. OCA Statement No. 2 (Direct Testimony of Roger D. Colton) and accompanying Schedules RDC-1, RDC-2 and RDC-3.

16. Full copies of each of the aforementioned Statements are attached hereto for filing with the Commission, accompanied by signed Affidavits.

17. This Joint Stipulation may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument.

NOW, THEREFORE, desiring to enter into this Joint Stipulation and intending to be bound hereby, the Joint Petitioners agree and stipulate to the following with respect to this proceeding:

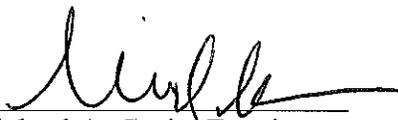
That, the testimony and exhibits set forth in paragraph 15 shall be deemed to be made a part of the official evidentiary record of this proceeding and may be used for all proper and legal purposes in support of the Settlement and Joint Petition as if hearings had been conducted in this matter; and

By entering into this Joint Stipulation, no Joint Petitioner makes any precedential concession or admission as to the sufficiency of the law, facts, positions or assumptions upon which the other Joint Petitioners' testimony statements or exhibits in this matter may be based. In addition, the Joint Petitioners agree that this Joint Stipulation may not be cited as precedent in any future proceeding, except to the extent required to implement and enforce the Joint Stipulation.

By their signatures below, the Joint Petitioners agree to the terms of this Joint Stipulation and represent that they are authorized to execute this Joint Stipulation on behalf of their respective clients/offices.

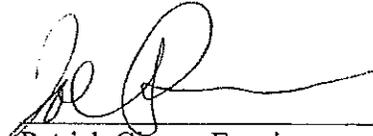
Respectfully submitted,

For: Duquesne Light Company



Michael A. Gruin, Esquire
Linda R. Evers, Esquire
Elizabeth Ware, Esquire
Stevens & Lee, P.C.
17 North Second Street, 16th Floor
Harrisburg, PA 17101

For: CAUSE-PA



Patrick Cicero, Esquire
Joline Price, Esquire
CAUSE-PA
118 Locust Street
Harrisburg, PA 17101

Date: 2/8/2016

For: Office of Consumer Advocate

Lauren Burge, Esquire
Darryl Lawrence, Esquire
Office of Consumer Advocate
555 Walnut Street
5th Floor, Forum Place
Harrisburg, PA 17101

Date: _____

For: Office of Small Business Advocate

Elizabeth Rose Triscari, Esquire
Office of Small Business Advocate
Suite 1102 Commerce Building
300 North Second Street
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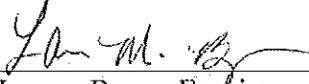
Date: _____

For: CAUSE-PA

Patrick Cicero, Esquire
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Date: _____

For: Office of Consumer Advocate



Lauren Burge, Esquire
Darryl Lawrence, Esquire
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555 Walnut Street
5th Floor, Forum Place
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Date: 2/5/16

For: Office of Small Business Advocate

Elizabeth Rose Triscari, Esquire
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Suite 1102 Commerce Building
300 North Second Street
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Date: _____

For: CAUSE-PA

Patrick Cicero, Esquire
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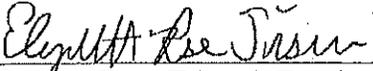
Date: _____

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Lauren Burge, Esquire
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Date: _____

For: Office of Small Business Advocate


Elizabeth Rose Triscari, Esquire
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Harrisburg, PA 17101

Date: 7/8/16

For: Duquesne Industrial Intervenors

Alessandra L. Hylander

Pamela C. Polacek, Esquire
Alessandra L. Hylander, Esquire
McNees, Wallace & Nurick
100 Pine St.
PO Box 1166
Harrisburg, PA 17108

Date: *February 8, 2016*

For: Citizen Power

Theodore S. Robinson, Esquire
Citizen Power
2121 Murray Ave.
Pittsburgh, PA 15217

Date: _____

For: Duquesne Industrial Intervenors

Pamela C. Polacek, Esquire
Allesandra L. Hylander, Esquire
McNees, Wallace & Nurick
100 Pine St.
PO Box 1166
Harrisburg, PA 17108

Date: _____

For: Citizen Power



Theodore S. Robinson, Esquire
Citizen Power
2121 Murray Ave.
Pittsburgh, PA 15217

Date: 2/8/16

LIST OF ATTACHMENTS

ATTACHMENT A Duquesne Light Company Statement No. 1
ATTACHMENT B Duquesne Light Company Statement No. 2
ATTACHMENT C OCA Statement No. 1
ATTACHMENT D OCA Statement No. 2
ATTACHMENT E CAUSE-PA Statement 1

ATTACHMENT A

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PETITION OF DUQUESNE LIGHT COMPANY
FOR APPROVAL OF ITS ENERGY EFFICIENCY AND CONSERVATION PLAN
PHASE III**

Docket No. M-2015-2515375

Direct Testimony

Witness: David Defide

Subject: EE&C Phase III Plan Development

DIRECT TESTIMONY OF DAVID DEFIDE

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Q. Please state your full name and business address.

A. My name is David Defide. My business address is 411 Seventh Avenue, Pittsburgh Pennsylvania 15219.

Q. By whom are you employed and in what capacity?

A. I am employed by Duquesne Light Company (“Duquesne Light” or the “Company”) as the Manager of Customer Programs.

Q. What are your current responsibilities as the Manager of Customer Programs?

A. As the Manager of Customer Programs, I am responsible for the development and implementation of Duquesne Light’s energy efficiency, conservation and demand response programs, known as “Watt Choices.” I also assist with the implementation of related customer programs such as smart meter deployment.

Q. Please state your educational and professional qualifications.

A. I received a Bachelor of Arts degree in Administration and Management in 1994 from LaRoche College. In 1997, I received a Master of Business Administration degree from Robert Morris University. I have been working for Duquesne Light Company since August 2009 as the Manager of Customer Programs. In that position, I currently manage a staff of three professionals. Prior to my work with Duquesne Light, for ten years I was the Chief Finance/Operating Officer for Conservation Consultants, Inc. Prior to working for Conservation Consultants, I was the Finance Director and Special Assistant to the

1 Executive Director for the Housing Authority City of Pittsburgh. Prior to this position, I
2 worked for National City Bank as an Operations Supervisor.

3
4 **Q. What is the purpose of your direct testimony?**

5 A. The purpose of my testimony is two-fold. First, I will briefly explain Duquesne Light's
6 energy efficiency plan requirements pursuant to Act 129 of 2008 ("Act 129") and the
7 Public Utility Commission ("Commission") Implementation Order issued June 11, 2015
8 at Docket No. M-2014-2424864 as well as the Clarification Order issued August 20,
9 2015 under same docket. Second, I will explain the methodology used to design, develop,
10 analyze, and implement Duquesne Light's Energy Efficiency and Conservation Phase III
11 Plan ("EE&C Phase III Plan").

12
13 **Q. Are you sponsoring any exhibits as part of your direct testimony?**

14 A. Yes. Duquesne Light's Energy Efficiency and Conservation Phase III Plan is attached to
15 the Company's Petition and has been marked as Exhibit 1.

16
17 **Q. Have you previously testified before the Pennsylvania Public Utility Commission?**

18 A. Yes. I provided direct testimony on behalf of Duquesne Light in *Petition of PECO*
19 *Energy for an Evidentiary Hearing on the Energy Efficiency Benchmarks*, at Docket No.
20 P-2012-2320334, in support of Duquesne Light's Energy Efficiency and Conservation
21 Phase II Plan at Docket No. M-2012- 2334399, and in support of Duquesne Light's
22 Energy Efficiency and Conservation Petition for Approval of Modifications to its
23 Demand Response Programs at Docket No. M-2009-2093217.

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I. BACKGROUND

Q. Please explain the Company’s energy efficiency conservation and demand response obligations under Act 129 of 2008 (“Act 129”).

A. Pursuant to Act 129 of 2008 (“Act 129”) Electric Distribution Companies (“EDCs”) with at least 100,000 customers are required to achieve consumption reductions of at least one percent (1%) by May 31, 2011, and at least three percent (3%) by May 31, 2013. 66 Pa.C.S. §§2806.1(c)(1),(2). Additionally, pursuant to section §2806.1(d), EDCs are required to achieve a four and one-half (4.5%) percent peak demand reduction of the one hundred (100) highest hours by May 31, 2013. These energy consumption and demand response targets applied to Phase I of the EEC&DR Program. Act 129 further required the Commission to evaluate the cost and benefits of the EE&C plans by November 30, 2013, and implement additional incremental consumption and peak demand reductions only if the benefits of the EE&C plans exceed the costs. 66 Pa.C.S. § 2806.1(c)(3). The energy consumption reduction target for the Phase II three-year energy efficiency consumption was 276,722 MWh. The Phase III five-year energy efficiency consumption target is 440,916 MWh and the demand reduction target is 42 MW. In compliance with the requirements of Act 129 and the Commission’s Orders implementing Phase III, Duquesne has used the energy consumption and demand reductions established by the Commission to develop its energy efficiency and conservation plan, which is submitted herewith.

1 **Q. Did the Commission order EDCs to develop and implement a plan to achieve**
2 **additional energy efficiency conservation and demand response targets beyond**
3 **those required by Act 129 for Phase II?**

4 A. Yes. Having found the Phase I program to be cost effective, on August 3, 2012, the
5 Commission entered its Energy Efficiency and Conservation Phase II Implementation
6 Order ("*Phase II Implementation Order*"). The Commission's EE&C Phase II Order
7 provided that Duquesne Light was required to achieve a 2.0% energy consumption target,
8 or 276,722 MWhs, over a three year period spanning June 1, 2013 through May 31, 2016
9 ("*Phase II*"). *Phase II Implementation Order* at p. 24. The Statewide Evaluator (SWE)
10 was directed by the Commission to provide a Demand Response (DR) Potential Study to
11 analyze the cost effectiveness of the legislative peak demand reduction requirements and
12 of potential improvements to the peak demand reduction program. In addition, SWE was
13 tasked with performing an Energy Efficiency (EE) Potential Study to determine the cost
14 effective consumption reduction potential in the Commonwealth. After issuing a
15 Tentative Order and receiving Comments and Reply Comments from a number of
16 interested parties, the Commission issued its Energy Efficiency and Conservation Phase
17 III Implementation Order ("*Phase III Implementation Order*") on June 11, 2015. The
18 Commission subsequently issued a Clarification Order on August 20, 2015, to clarify
19 certain aspects of the *Phase III Implementation Order*.

20
21 **Q. Please summarize the Phase III consumption reduction and demand reductions that**
22 **the Commission adopted for Duquesne Light.**

1 A. The Commission has adopted for Duquesne Light a consumption reduction for the
2 five year Phase III period of 440,916 MWh and demand reduction target of 42 MW.

3
4 **Q. Does Act 129 provide guidance on EDCs' allowable spending levels for their EE&C**
5 **Plans ?**

6 A. Yes. Act 129 provides that "[t]he total cost of any plan required under this section shall
7 not exceed 2% of the electric distribution company's total annual revenue as of December
8 31, 2006." An EDC's total annual revenue is defined as "[a]mounts paid to the electric
9 distribution company for generation, transmission, distribution and surcharges by retail
10 customers." The Commission has interpreted this to include amounts paid to the EDC for
11 generation service, including generation revenues collected by an EDC for an electric
12 generation supplier that uses consolidated billing.

13
14 **Q. Has the Commission provided further guidance on the definition of "EDC total**
15 **annual revenue?"**

16 A. Yes. On January 16, 2009, the Commission issued its EEC&DR Phase I Implementation
17 Order at Docket No. M-2008-2069887 ("*Phase I Order*"). On pages 34-35 of the *Phase*
18 *I Order*, the Commission stated:

19 "...[T]he Commission interprets "amounts paid to the [EDC] for
20 generation, transmission, distribution and surcharges by retail customer,"
21 set forth as the definition of EDC total annual revenue in 66 Pa. C.S. §
22 2806.1(m), **to include all amounts paid to the EDC for generation**
23 **service, including generation revenues collected by an EDC for an**
24 **EGS that uses consolidated billing.** This result will bring Duquesne's
25 program budget closer to a level of parity with the other EDCs, and ensure
26 that it has a more meaningful opportunity to comply with the EE&C
27 provisions of Act 129."

1 The Commission retained its interpretation of EDC total annual revenues provided in
2 Phase I, for Phase II and for Phase III.

3
4 **Q. What is Duquesne Light's budget for its Phase III EE&C Plan?**

5 A. Duquesne Light's total 2006 annual revenues were \$723,299,451. EGS total generation
6 and transmission revenues in Duquesne Light's service territory in December 2006 were
7 \$253,998,128. Combined, Duquesne Light and EGS 2006 annual revenues totaled
8 \$977,297,579. Applying simple arithmetic, 2% of \$977,297,579 equals \$19,545,951.58.
9 Therefore, Duquesne Light's annual budget is \$19,545,951.58, and the total five year
10 program spending cap is \$97,739,968.

11
12 **II. EE&C PHASE III PLAN DEVELOPMENT**

13 **Q. How will Duquesne Light measure energy savings for the programs it proposes to
14 implement?**

15 A. Under Act 129, the Commission was required to implement an energy efficiency program
16 that includes a process to monitor and verify data collection and plan results. In the Phase
17 I Order, the Commission adopted the *Energy Efficiency and DSM Rules for
18 Pennsylvania's Alternative Energy Portfolio Standard, Technical Reference Manual*
19 (*"TRM"*) as a component of the EE&C Program evaluation process. The Commission
20 continued its use of the TRM for the Phase II and will do the same for Phase III
21 programs. The TRM in Phase I and Phase II was updated annually and used to measure
22 and verify applicable energy efficiency measures used by EDCs to meet the Act 129
23 consumption reduction targets. For Phase III the Implementation Order at page 97 states

1 that the Commission will apply the 2016 TRM for the entirety of Phase III but reserves
2 the right to implement a mid-phase update if deemed necessary. Duquesne Light used the
3 2016 TRM to design and develop its EE&C Phase III Plan. The expected savings
4 discussed later in this testimony are based on the 2016 TRM.
5

6 **Q. Duquesne Light’s EE&C Phase III Plan must be cost effective. How did Duquesne**
7 **Light determine if its EE&C Phase III plan is cost effective?**

8 **A.** Under Act 129, the Commission is required to use a Total Resource Cost (“TRC”) test to
9 analyze the costs and benefits of EDC energy efficiency and conservation plans. Act 129
10 defines the TRC as “a standard test that is met if, over the effective life of each plan not
11 to exceed 15 years, the net present value of the avoided monetary cost of supplying
12 electricity is greater than the net present value of the monetary cost of energy efficiency
13 conservation measures.” Under Act 129, EDCs must demonstrate that its Phase III EE&C
14 Plan is cost effective using the TRC test. Use of the TRC test was specified in a series of
15 four (4) Commission TRC Orders, issued sequentially, each partially modifying its
16 predecessor.

- 17 1. *TRC Test Order*, June 18, 2009 Docket No. M-2009-2108601
- 18 2. *TRC Test Order*, July 28, 2011, Docket No. M-2009-2108601
- 19 3. *TRC Test Order*, August 20, 2012, Docket No. M-2012-2300653, M-2009-
20 2108601
- 21 4. *TRC Test Order*, June 11, 2015, Docket No. M-2015-2468992

22
23 Duquesne Light measured the cost effectiveness of its EE&C Phase III Plan based on all
24 of the applicable provisions of all of these TRC Test Orders. The results of the TRC are
25 expressed as the net present value and benefit/cost (“B/C”) ratio. Consistent with the

1 aforementioned TRC Test Orders, a B/C ratio greater than one indicates that the program
2 is beneficial to the utility and its ratepayers on a total resource cost basis. Duquesne
3 Light's proposed EE&C Phase III Plan overall B/C score is 1.9. Accordingly, the Plan is
4 cost effective as a whole.

5
6 **Q. Please describe the process used to develop Duquesne Light's EE&C Phase III**
7 **Plan?**

8 **A.** The Company's EE&C Phase III Plan development was primarily guided by its initial
9 benchmarking study completed and provided in Phase I; experiences with Phase I and
10 Phase II programs and measures, particularly in program years 6 and 7; stakeholder input;
11 and best practices in energy efficiency. The Company reviewed the Statewide Evaluator's
12 ("SWE") reports on Electric Energy Efficiency Potential for Pennsylvania, the
13 Pennsylvania Saturation Studies for residential, commercial and industrial customers and
14 the Demand Response Potential Study performed by SWE.

15 The Company conducted an extensive review of the performance of Phase I and
16 Phase II programs and measures. Current EE&C Phase II programs were reviewed for
17 cost effectiveness, energy savings, customer participation and interest. Based on the
18 review, particular measures were selected for each customer segment for the Phase III
19 Plan. As previously discussed, the savings expected from the programs selected were
20 updated to reflect changes contained in the 2016 TRM. The Company also considered
21 input received from stakeholders.

22 Finally, the Company cross referenced the information gathered against the
23 requirements detailed in the Phase III Implementation Order and Clarification Order.

1 The Company added new programs and modified existing programs to ensure
2 compliance with the Commission's final EE&C Phase III Plan requirements.

3
4 **Q. You mentioned that the Company considered stakeholder input. Please describe the
5 process used to gather stakeholder input on the Company's EE&C Phase III Plan.**

6 A. In preparation for Phase III, a series of stakeholder meetings were held during the
7 summer and fall to solicit input into the design of the Phase III Plan. Duquesne held ten
8 sessions to solicit input with regard to what has worked well and what could be approved
9 upon or modified in future Watt Choices programs. The sessions held were with the
10 Commission Staff, Office of Consumer Advocate, Office of Small Business Advocate,
11 CAUSE-PA, gas distributions companies, Hospital Association of Pennsylvania,
12 universal services partners, and conservation service providers in the Commonwealth¹.
13 Subsequent stakeholders' meetings/discussions will continue throughout Phase III
14 implementation.

15
16 **Q. Did the stakeholder meetings influence the Company's EE&C Phase III Plan
17 development?**

18 A. Yes. As noted above multiple meetings were held during which robust discussions
19 occurred leading to modifications to the draft plan.

20
21 **Q. Will stakeholders have continued opportunities to influence the Company's EE&C
22 Phase III Plan implementation?**

¹ The Duquesne Light Industrial Intervenors were also invited to attend stakeholder meetings.

1 A. Yes. Duquesne's Phase III Plan proposes bi-annual stakeholders meetings during Phase
2 III. In addition, at the Company's discretion additional stakeholders' meetings may occur
3 during this phase.
4

5 **III. EE&C PHASE III PLAN PROGRAMS**

6 **Q. What programs are proposed in the Company's EE&C Phase III Plan?**

7 A. Generally, Duquesne Light's proposed EE&C Phase III Plan is designed to educate
8 customers about energy efficiency and conservation and lower customer energy
9 consumption. The Phase III Plan is largely comprised of home energy audits, building
10 retrofits, lighting programs, appliance recycling and rebates program that have been
11 customized to meet the needs of specific customer segments within Duquesne Light's
12 service territory. The programs are organized to facilitate participation by three broad
13 customer sectors: residential, commercial and industrial customers. Additionally, each of
14 the three customer sectors are offered additional programs tailored to meet the specific
15 needs of certain customer segments, such as low income customers, and
16 governmental/educational/non-profit institutions.
17

18 **Q. Please describe the Residential Energy Efficiency program ("REEP").**

19 A. The REEP includes six (6) programs: 1) REEP Rebate Program; 2) Residential Whole
20 House Retrofit Program ("WHRP"); 3) Residential Home Energy Reports ("HER"); 4)
21 Residential Appliance Recycling Program ("RARP"); 5) Savings by Design New
22 Constructions Program ("SBD"); and 6) the Residential Low Income Energy Efficiency

1 Program (“LIEEP”). These programs are explained in detail in Section 3 of the
2 Company’s Phase III EE&C Plan, but I will provide a brief summary:

3 **REEP Rebate Program**
4

5 The REEP rebate program encourages customers to make an energy efficient
6 choice when purchasing and installing household appliances and equipment by
7 offering educational materials on energy efficiency options and rebate incentives.
8 Program educational materials and rebates are provided in conjunction with the
9 Duquesne Light on-line home energy audit.
10

11 **Residential Whole House Retrofit Program (“WHRP”)**
12

13 The WHRP provides resources to residential customers to encourage a
14 comprehensive residential home energy audit, installation of conservation
15 measures, and rebates for a range of eligible measures (Figure 13 in the Plan). The
16 program provides up to a \$250 home energy credit for installation of audit
17 recommended measures. Direct installation measures are provided at no cost. The
18 program also provides home energy use education, as well as information about
19 available rebates and other program options.
20

21 **Residential Home Energy Reports (“HER”)**
22

23 The HER program sends, via direct mail, home energy use reports that compare
24 recipient customer’s energy use to the use of 100 customers with similar home
25 type and size. The HER provides for comparison the last two months of energy
26 consumption by 1) the most efficient, top 20%, of the peer group, 2) the HER
27 recipient, and 3) the entire peer group. The reports generate verifiable savings
28 ranging from 1.5%-3.5% of total home energy use.
29

30 **Residential Appliance Recycling Program (“RARP”)**
31

32 The Residential Appliance Recycling Program encourages residential customers
33 in Duquesne Light’s service territory to turn in their older refrigerators and
34 freezers to be recycled. To encourage participation in this program, this program
35 provides a check up to \$50 for the removal of the old refrigerator or freezer.
36

37 **Savings by Design Residential New Construction Program (“SBD”)**
38

39 The purpose of the Duquesne Light Savings by Design residential new
40 construction program is to improve efficiency of newly constructed homes in
41 Duquesne Light’s service territory. The program objectives are to contribute
42 toward achievement of Duquesne Light’s energy savings goals and to influence
43 residential new construction practices in Duquesne Light’s service territory. The

1 program seeks to help advance improved building science and energy efficiency
2 design/build practices in the region.
3

4 **Residential Low Income Energy Efficiency Program (“LIEEP”)**
5

6 LIEEP is an income-qualified program providing services designed to assist low-
7 income households to conserve energy and reduce electricity costs. LIEEP relies
8 on several, low income segment-specific, contributing programs to achieve
9 projected savings impacts and program cost-effectiveness. The Company intends
10 to achieve the mandated 5.5% of its energy consumption reduction savings from
11 this program.
12

13 **Q. What are the projected consumption savings for the residential programs?**

14 A. The Company expects to achieve 85,894,931 kWhs from the REEP rebate program;
15 8,815,961 kWhs from the Residential Appliance Recycling program; 24,146,105 kWhs
16 from the Residential HER program; 1,750,916 kWhs from the WHRP; 409,000 kWhs
17 from the SBD; and 16,550,885 kWhs from LIEEP.
18

19 **Q. Are the residential energy efficiency programs described herein cost effective?**

20 A. Yes. The residential programs offered are collectively cost-effective. Except for the
21 Savings by Design and LIEEP, each program achieved a TRC score above 1.
22 Specifically, the REEP rebate program B/C score is 1.6; the Residential Appliance
23 Recycling program B/C score is 2.5; the Residential HER program B/C score is 1.4; and
24 the WHRP B/C score is 1.4. The Savings by Design B/C is 0.3 and the LIEEP B/C score
25 is 0.9. The overall residential energy efficiency B/C score in aggregate is 1.5.
26

27 **Q. Are any of the residential customer programs currently in operation as part of**
28 **Duquesne Light’s Phase II programs?**

1 A. Yes. Programs currently in place as part of Duquesne Light's Phase II program include:
2 REEP Rebate Program; Residential HER; Residential Appliance Recycling Program;
3 Whole House Retrofit Program, and the Residential LIEEP.

4
5 **Q. Please describe the energy consumption reduction programs available for Small**
6 **Commercial and Industrial customers.**

7 A. Customers served under this sector are commercial and industrial customers having
8 annual maximum monthly demand less than 300 kW. They will have the opportunity to
9 participate in four (4) programs: Express Efficiency Program; Small Non-Residential
10 Upstream Lighting Program; Small Commercial Direct-Install Program; and Multifamily
11 Housing Retrofit Program. These programs are explained in detail in Section 3 of the
12 Company's Phase III EE&C Plan, but I will provide a brief summary:

13 **Express Efficiency ("EXP")**
14

15 The Express Efficiency Program ("EXP") provides rebates to offset the higher
16 cost of high-efficiency equipment when compared to standard efficiency
17 equipment. The Program promotes customer indifference to the higher cost of
18 high-efficiency equipment and customer adoption of high-efficiency equipment.
19 Customers served under this sector are commercial and industrial customers
20 having annual maximum monthly demand less than 300 kW.

21 **Small Non-Residential Upstream Lighting**
22
23

24 The Small Non-Residential Upstream Lighting Program will result in increased
25 uptake of energy efficient lighting technologies by C&I end-use customers.
26 Successes of residential upstream lighting programs demonstrate "instant rebates"
27 are an effective means to promote energy efficiency lighting products. For time-
28 strapped C&I business customers, onerous rebate application requirements and
29 lengthy rebate processing lead times present significant and growing barriers to
30 energy efficiency program participation.

1 Providing rebates, or customer incentives, directly to manufacturers and
2 distributors addresses these significant barriers. The program will put in place
3 processes required to satisfy C&I program documentary requirements to extend
4 upstream lighting programs into the C&I sector.

5
6 **Small Commercial Direct Install Program (“SCDI”)**
7

8 By providing for the direct-installation of energy efficient equipment retrofits to
9 small and business customers, the Small Commercial Direct Install Program will
10 produce cost-effective, long-term peak demand and energy savings. The program
11 will be delivered in a staged delivery approach to provide program services in
12 specific geographic areas at different time periods. This approach will allow for
13 concentrated, directed, and service area wide program.
14

15
16 **Multifamily Housing Retrofit Program**

17 Program services include the administration of energy efficiency audits, technical
18 assistance for measure level project review and bundling, property aggregation,
19 contractor negotiation and equipment bulk purchasing. The multifamily market
20 manager will integrate funding sources to include program and agency co-
21 funding, performance contracting, grant funding and available financing options.
22 Services also include processing rebate applications and other funding source
23 documentary requirements as well as applicable project TRC screening.
24

25 **Q. What are the projected energy consumption savings expected from the small
26 commercial and industrial programs?**

27 A. The Express Efficiency Program is projected to achieve 35,147,555 kWhs of energy
28 savings. The Small Non-Residential Upstream Lighting Program is projected to achieve
29 19,464,329 kWhs of energy savings. The Small Commercial Direct Install Program is
30 expected to achieve 10,934,231 kWhs of energy savings. The Multifamily Housing
31 Retrofit Program is expected to achieve 8,912,014 kWhs of electric savings.
32

33 **Q. Are the energy efficiency programs available under the small commercial and
34 industrial sector cost effective?**

1 A. Yes. All of the programs proposed score above 1 on the Commission's TRC test.
2 The Express Efficiency Program B/C score is 2.2; the Small Non-Residential Upstream
3 Lighting B/C score 2.2; the Small Commercial Direct Install Program B/C score is 1.8;
4 and the Multifamily Housing Retrofit B/C score is 1.9. In total this sector has a B/C
5 score of 2.1.

6
7 **Q. Are any of the commercial programs currently in operation as part of Duquesne**
8 **Light's Phase II programs?**

9 A. Yes. The Small Commercial Direct-Install Program was introduced and successfully
10 operated in Phase II. The Multifamily Housing Retrofit Program was introduced and
11 successfully operated in Phase II.

12
13 **Q. Please describe the energy reduction programs available under the large**
14 **commercial and industrial efficiency program.**

15 A. Customers served under this sector are commercial and industrial customers having
16 annual maximum demand equal to or greater than 300 kW. They will have the
17 opportunity to participate in three (3) programs: Commercial Efficiency Program; Large
18 Non-Residential Upstream Lighting; and Industrial Efficiency. These programs are
19 explained in detail in Section 3 of the Company's Phase III EE&C Plan, but I will
20 provide a brief summary:

21 **Commercial Efficiency Program ("CEP")**

22 The CEP helps commercial customers to assess the potential for energy efficiency
23 project implementation, cost and energy savings. Program services include project
24 implementation oversight and savings impact measurement and verification.
25 Program components include auditing of energy use, provision of targeted
26

1 financing and incentives, project management; training, and technical assistance.
2 Energy audits provide business customers a readily available, objective source of
3 information about their energy use and ways to save energy that, when
4 implemented, will result in energy savings, reduced operating costs, lowered
5 carbon emissions, and improved air quality.

6
7 **Industrial Efficiency Program (“IEP”)**
8

9 The IEP helps industrial customers assess the potential for energy efficiency
10 project implementation, cost and energy savings. Program services include project
11 implementation oversight and savings impact measurement and verification.
12 Program components include auditing of energy use, provision of targeted
13 financing and incentives, project management training, and technical assistance.
14 Energy audits provide business customers a readily available, objective source of
15 information about their energy use and ways to save energy that, when
16 implemented, will result in energy savings, reduced operating costs, lowered
17 carbon emissions, and improved air quality.

18 **Large Non-Residential Upstream Lighting Program**
19

20 The program will provide incentives for efficient lighting products directly to
21 lighting technology distributors to offset the higher cost, and thereby drive uptake
22 of, the most efficient lighting equipment options. The program is delivered by a
23 single contractor that provides program outreach to multiple commercial and
24 industrial segment suppliers.
25
26

27 **Q. What are the projected energy consumption reductions expected from the large
28 commercial and industrial efficiency program?**

29 **A.** The Commercial Efficiency Program is projected to achieve 50,575,285 kWhs of energy
30 savings. The Large Non-Residential Upstream Lighting Program is projected to achieve
31 46,966,828 kWhs of energy savings. The Industrial Efficiency Program is projected to
32 achieve 84,021,466 kWhs of energy savings.
33

34 **Q. Are the energy efficiency programs proposed under the industrial sector cost
35 effective?**

1 A. Yes. All of the programs proposed within the industrial sector score above 1 on the
2 Commission's TRC. The Commercial Efficiency Program B/C score is 1.9; the Large
3 Non-Residential Upstream Lighting B/C score 2.2; and the Industrial Efficiency Program
4 B/C score is 1.9. In total this sector has a B/C score of 2.0.

5
6 **Q. Are any of the industrial programs currently in operation part of Duquesne Light's**
7 **Phase II programs?**

8 A. Yes. The Commercial Efficiency Program and the Industrial Efficiency Program are an
9 evolution of Phase II programs serving the office buildings sectors, retail stores segment,
10 primary metals, chemical products and other mixed industrial segments. Phase III
11 programs will retain segment-specific market outreach approaches and simplify overall
12 implementation management.

13
14 **Q. Earlier you indicated that the Company is required to achieve 3.5% of its energy**
15 **consumption reduction savings from the governmental/educational/nonprofit sector.**
16 **How will the Company achieve this target?**

17 A. To achieve the governmental/educational/nonprofit specific targets, the Company has
18 developed specific programs for these customers including the Public Agency Partnership
19 Program and the Community Education Energy Efficiency Program. These programs
20 supplement the other commercial programs in the Phase II EE&C Plan and are intended
21 to meet the needs of this subset of customers. These programs are explained in detail in
22 Section 3 of the Company's Phase III EE&C Plan, but I will provide a brief summary:

23
24

1 **Public Agency Partnership Program (“PAPP”)**
2

3 Through the PAPP, partnerships are established between Duquesne and selected
4 local governmental agencies through the execution of a Memorandum of
5 Understanding (MOU). The MOU establishes working groups comprised of
6 Duquesne and agency representatives that identify project areas within agency
7 departments (and jurisdictional agencies). Working groups define project scopes
8 of service and establish project agreements to co-fund agreed to projects.
9

10 **Community Education Energy Efficiency Program (“CEEP”)**

11 The Community Education Energy Efficiency Program is designed to help middle
12 and high schools assess the potential for energy-efficiency project
13 implementation, cost and energy savings, and potentially install measures and
14 verifies savings. Program components include auditing of energy use, provision of
15 targeted financing and incentives, project management and installation of retrofit
16 measures, training, and technical assistance.
17

18 The governmental/educational/nonprofit program is anticipated to have results of
19 56,144,813 kWhs of energy savings which is more than adequate to achieve the 3.5%
20 governmental/educational/nonprofit consumption reduction target.
21

22 **Q. Are the programs proposed under the governmental/educational/nonprofit sector**
23 **cost effective?**

24 **A.** Yes. All of the programs proposed within the governmental/educational/nonprofit sector
25 score above 1 using the Commission’s TRC cost-effectiveness scoring methodology. The
26 Public Agency Partnership Program B/C score is 1.9 and the Community Education
27 Energy Efficiency Program B/C score is 1.3. In total this sector has a B/C score of 1.8.
28
29
30

1 **IV. PHASE III DEMAND REDUCTION PROGRAM**

2 **Q. Is Duquesne Light proposing to operate a demand response program in its Phase III**
3 **EE&C Plan?**

4 A. Yes. Duquesne Light as part of its Phase III energy efficiency and conservation plan
5 proposes a Demand Management Program (DMP) that will include two sub programs: 1)
6 a direct load control program for residential and/or small commercial and industrial
7 customers; and 2) a large C & I customer curtailment component, in order to achieve the
8 required reduction of 42 MW.

9
10 **Q. What are the projected system peak demand reductions associated with the two DMP**
11 **program components?**

12 A. The direct load control DMP program component for residential and/or small commercial
13 and industrial customers is projected to reduce system peak demand by 2.2 MW. The
14 large C & I customer curtailment DMP program component is projected to reduce system
15 peak demand by 41.9 MW. Together the program components are projected to reduce
16 system peak demand by 44.1 MW, approximately 105% of the mandated 42 MW of peak
17 demand reduction from the DMP.

18
19 **Q. What are the projected program costs associated with implementing the DMP**
20 **components?**

21 A. The direct load control DMP component for residential and/or small commercial and
22 industrial customers projected implementation cost is \$1,460,933. The large C & I

1 customer curtailment DMP component projected implementation cost is \$8,278,786.
2 Together the program components are projected to cost \$9,739,719 to implement.
3

4 **Q. Are the DMP sub-programs available under the Phase III proposed Plan cost-**
5 **effective?**

6 **A.** The DMP component for residential and/or small commercial and industrial customers is
7 projected to have discounted lifetime costs of \$1,051,180 producing \$721,358 in
8 discounted lifetime benefits, resulting in a Total Resource Cost (TRC) of 0.7. The large
9 C & I customer curtailment DMP component is projected to have discounted lifetime
10 costs of \$5,951,821 producing \$13,705,795 in discounted lifetime benefits, resulting in a
11 Total Resource Cost (TRC) of 2.3. Together the both program components are projected
12 to have discounted lifetime costs of \$7,003,000 and produce \$14,427,153 in discounted
13 lifetime benefits, resulting in a Total Resource Cost (TRC) of 2.1. Accordingly, the
14 proposed DR program is cost-effective.
15

16 **Q. Is there any other information you would like to provide describing the DMP**
17 **program discussed above?**

18
19 **A.** Yes. Consistent with the *Phase III Implementation Order*, Duquesne Light will select a
20 Conservation Service Provider (“CSP”) to implement the demand response (DR) program
21 by a competitive solicitation process. The results of the solicitation may include
22 variations in program parameters that are not known at the time of the Plan filing and the
23 writing of this testimony. For example, the winning bidder may develop a DR program

1 having only one of the two aforementioned program components (direct load control
2 and/or a large C&I curtailment program).

3 Consistent with the *Phase III Implementation Order*, the proposed Phase III DR
4 program(s) will impose provisions that participants with dual enrollment in both PA Act
5 129 DR programs and PJM Emergency Load Response Program (ELRP) shall have any
6 applicable Act 129 DR incentives discounted 50%. Per the Order, this is imposed to
7 “mitigate concerns about accounts receiving revenues from Act 129 for dispatch that
8 were already mandated to reduce load under PJM’s ELRP.”²

9 Consistent with the *Phase III Implementation Order* the proposed DMP shall limit
10 curtailment events called during the months on June through September, for the first six
11 days that peak hour of PJM’s day-ahead forecast for the PJM RTO is greater than 96% of
12 the PJM RTO summer peak demand forecast. Each curtailment even shall last four hours
13 and once six curtailment events have been called, the program will be suspended.

14 The timeline for implementing these programs can be found in Section 12 of the
15 proposed EE&C Plan. DMP budgets, subject to the outcome of the competitive bidding
16 process, are estimated at \$9,739,719 in alignment with the *Phase III Implementation*
17 *Order* budgetary allocation of 10% of each EDC’s budget for peak demand reduction
18 programs.

19
20
21
22

² Phase III Implementation Order, Section B.2. Additional Reductions in Peak Demand,
page 43.

1 **V. PROGRAM COST**

2 **Q. What is the Company's Phase III spending cap?**

3 A. As I discussed previously, Duquesne Light's Phase III annual budget is \$19,545,951.58,
4 and the total five year program spending cap is \$97,739,968.

5
6 **Q. What is the cumulative cost of the Company's proposed EE&C Phase III Plan and
7 what is the implementation strategy to acquire at least 15% of the consumption
8 reduction target in each program year as directed by the Commission?**

9 A. The Company's EE&C Phase III Plan has a budget cap of \$97,739,968. This Plan
10 includes programs that are being continued as previously implemented, modified based
11 on previous years' experiences, plus newly added programs. The forecast ramp-rates by
12 projected saving impacts across the five year period are found in the proposed plan in
13 Figure 1 which provides for acquiring at least 15% of the consumption target in each of
14 the Phase III program years.

15
16 **Q. Please provide an overview of the EE&C Phase III Plan cost by customer sector.**

17 A. As provided in Figure 4 of the EE&C Phase III Plan, residential energy efficiency
18 programs comprise 30.2% of the plan cost, or \$26,587,748. Commercial energy
19 efficiency programs comprise 52.4% of the plan cost, or \$46,070,976. Finally, industrial
20 energy efficiency programs comprise 17.4% of the plan cost, or \$15,254,418. These
21 percentages exclude the demand response programs expenditures which are \$9,739,719.

22 Mr. Pfrommer describes how the Company will ensure that the programs are funded by

1 the customer sector that most benefits from the programs and measures offered in the
2 Plan.

3

4 **Q. Does this conclude your testimony?**

5 A. Yes.

6

7

ATTACHMENT B

Duquesne Light Company Statement No. 2

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PETITION OF DUQUESNE LIGHT COMPANY
FOR APPROVAL OF ITS ENERGY EFFICIENCY AND CONSERVATION PLAN
PHASE III

Docket No. M-2015-2515375

Direct Testimony

Witness: William V. Pfrommer

Subject: Energy Efficiency and Conservation Phase III Plan Cost Recovery

Direct Testimony of William V. Pfrommer

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I. INTRODUCTION

Q. Please state your full name and business address.

A. My name is William V. Pfrommer. My business address is 411 7th Avenue, Pittsburgh, PA 15219.

Q. By whom are you employed and in what capacity?

A. I am Senior Manager, Rates & Tariff Services, for Duquesne Light Company (“Duquesne Light” or “Company”).

Q. What are your qualifications, work experience and educational background?

A. I received a Bachelor of Science Degree in Mechanical Engineering from Grove City College in 1978 and a Masters in Business Administration from the University of Pittsburgh in 1989. I began my career at the Company in 1982 as a Project Engineer in the Engineering and Construction Division at the Beaver Valley Power Station. Over the last 30 years, I have held staff, supervisory and managerial positions in engineering, nuclear construction, customer technical services, marketing and rates. In my current role as Senior Manager of Rates and Tariff Services, I am responsible for overseeing the Company’s retail rates and wholesale transmission rates. In addition, it is my responsibility to ensure the rates are properly applied to customer bills.

1 **Q. Have you previously testified before the Pennsylvania Public Utility Commission**
2 **("Commission") or other regulatory bodies?**

3 A. Yes. I have testified on rate design matters before the Pennsylvania Public Utility
4 Commission ("Commission") and Federal Energy Regulatory Commission ("FERC"). A
5 list of proceedings in which I have submitted testimony is provided in Appendix A. Of
6 note, I testified in the Company's initial Energy Efficiency and Conservation and
7 Demand Response Program Plan proceeding at Docket No. M-2009-2093217 as well as
8 in the Company's Energy Efficiency and Conservation Phase II Plan proceeding at
9 Docket No. M-2012-2289411.

10

11 **Q. What is the purpose of your testimony?**

12 A. The purpose of my testimony is three-fold. First, I will provide an overview of the
13 Company's current Energy Efficiency and Conservation ("EEC") Phase II Plan
14 Surcharge ("EEC Surcharge"). Second, I will describe the proposed changes to the EEC
15 Surcharge to implement Duquesne Light's proposed Phase III EEC Plan. Third, I will
16 summarize the costs that Duquesne Light anticipates it will recover through the EEC
17 Surcharge to implement the Company's Phase III EEC Plan and provide an estimate of
18 the surcharges for each customer group.

19

20 **Q. Are you sponsoring any exhibits?**

21 A. Yes. I am sponsoring the following exhibits:

22 Exhibit WVP-1 – Proposed Tariff Supplement (Clean)

23 Exhibit WVP-2 – Proposed Tariff Supplement (Redline)

1 Exhibit WVP-3 – EEC Plan Cost for Planning Years 2016-2021

2 Exhibit WVP-4 – EEC Plan Surcharge Calculation Example

3
4 **II. COST RECOVERY MECHANISM**

5 **Q. Does Act 129 provide guidance on how the costs of providing EEC programs are to**
6 **be recovered by the Company?**

7 A. Yes. Act 129 of 2008 (“Act”) permits electric distribution companies (“EDCs”) to fully
8 recover the costs of implementing its EEC Plan. The Act permits affected EDCs to
9 recover on a full and current basis from customers, through a reconcilable adjustment
10 clause under 66 Pa. C.S. § 1307, (“Section 1307”), all reasonable and prudent costs
11 incurred in the provision or management of its plan. 66 Pa. C.S. § 2806.1(k)(1).

12
13 **Q. Please summarize the methodology used by Duquesne Light in the development of**
14 **its EEC Phase I Surcharge.**

15 A. The Act required that each EDC's plan include a Section 1307 cost-recovery tariff
16 mechanism in its EEC Plan in order to fund all reasonable and prudent costs incurred in
17 the provision and management of its EEC Plan. To that end, on July 1, 2009, the
18 Company filed its Phase I EEC Plan with the Commission pursuant to the requirements
19 of Act 129. The EEC Plan proposed five surcharges to recover costs as close as
20 reasonably possible to the customer class receiving the benefit. The five surcharges
21 associated with the customer classes were: residential, small and medium commercial,
22 small and medium industrial, large commercial and large industrial. The Company
23 designed the EEC Surcharge and reconciliation mechanism in a manner that recovered

1 the cost of the Phase I EEC Plan via a non-bypassable charge recovered from all of the
2 Company's customers.
3

4 **Q. Please describe the Phase I Surcharge as approved by the Commission.**

5 A. Pursuant to the Commission's order entered October 27, 2009 at Docket No. M-2009-
6 2093217, Duquesne Light submitted a Compliance Filing on November 9, 2009
7 establishing Rider No. 15 in the Company's tariff, "Energy Efficiency and Conservation
8 and Demand Response Surcharge," effective December 1, 2009, that contained the five
9 surcharges described above. The residential, small and medium commercial and small
10 and medium industrial surcharges were designed to recover costs on a cents per kilowatt-
11 hour ("kWh") basis and the large commercial and large industrial surcharges were
12 designed to recover administrative costs through a fixed monthly charge and recover
13 incentive costs through a variable demand charge based on the customer's Peak Load
14 Contribution ("PLC").
15

16 **Q. Is the Phase I Surcharge currently in effect?**

17 A. No. The Phase I Surcharge ended December 2014 and was completely reconciled
18 through May 31, 2015. The residual over collection was included in the e-factor
19 component of the Phase II rate that went into effect on September 1, 2015.
20

21 **Q. How does the Company assign customers to the customer classes stated in the EEC**
22 **Surcharges?**

1 A. The commercial or industrial classification is based on the North American Industry
2 Classification System (“NAICS”) code or the Standard Industrial Classification (“SIC”)
3 code provided by the customer for their business. The small, medium and large
4 commercial and industrial (“C&I”) customer classification is based on the customer’s
5 peak monthly metered demand. Small and medium C&I customers are those customers
6 with monthly metered demand 300 kW and less. Large C&I customers are those
7 customers with monthly metered demand greater than 300 kW. This segmentation of
8 customers is appropriate because it aligns programs and program costs with the current
9 tariff and with the tariff charges for distribution, transmission and default service supply.
10 This segmentation has worked successfully in the Company’s Phase I Plan and in the
11 current EEC Phase II Plan.

12
13 **Q. Please describe the Phase II surcharge as approved by the Commission.**

14 A. On March 14, 2013 at Docket No. M-2012-2334399, the Commission issued an Opinion
15 and Order approving the Company’s EEC Phase II Plan. Duquesne Light submitted a
16 filing on April 2, 2013 establishing Rider No. 15a in the Company’s tariff, “Phase II
17 Energy Efficiency and Conservation Surcharge,” effective June 1, 2013. Having both a
18 Phase I and Phase II surcharge in the tariff ensured that expense recovery was kept
19 separate for each phase. The EEC Phase II Surcharge is essentially identical to the EEC
20 Phase I surcharge except for clarifying language to explain the reconciliation process at
21 the end of each Plan period.

22
23 **Q. Please describe how the Company currently prepares its EEC Phase II Surcharge.**

1 A. On or about July 1 of each year, the Company submits a filing to the Commission to
2 reconcile and update the EEC Phase II Surcharge effective September 1 of that year. The
3 Company uses the program budgets, approved by the Commission, for the Phase II EEC
4 Plan year, June 1 to May 31. Costs are assigned to each customer class for cost recovery
5 purposes to ensure the customer class that receives the benefits is the same customer class
6 financing the programs. For the large commercial and large industrial classes, the budget
7 is separated into administrative costs and incentive costs. The program budgets are then
8 divided by the applicable billing determinants to derive per unit rates. The rates are then
9 adjusted to recover Pennsylvania Gross Receipts Tax (“GRT”) and to establish final tariff
10 rates.

11
12 **Q. Does the EEC Phase II Surcharge include a reconciliation component?**

13 A. Yes. In the July 1 filing, the Company reconciles revenue collected through the EEC
14 Surcharge for each customer class with the actual expenses incurred for that class for the
15 prior program year, June 1 to May 31. The over or under collection amount, or “e-factor”
16 is included in the derivation of the final EEC Surcharge for each class effective
17 September 1 of each year. An over-collection is refunded through a positive e-factor and
18 an under-collection is recovered through a negative e-factor. There is no interest on over
19 or under collections.

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Q. Does the EEC Phase II Surcharge apply to all customers in the customer class?

A. Yes. The EEC Phase II Surcharge is a non-bypassable charge applicable to all customers in the customer class regardless of whether they are being supplied as a default service customer or by an electric generation supplier.

Q. Does the Company recover lost revenues associated with the programs in the EEC Phase II Surcharge?

A. No. In accordance with the Act, lost revenues due to reduced energy consumption or changes in energy demand are not recoverable under the adjustment clause. EDCs may reflect reduced revenue and consumption in the revenue and sales data to calculate proposed rates in a distribution base rate proceeding under 66 Pa. C.S. § 1308. 66 Pa. C.S. §§ 2806.1(k)(2) - (3).

Q. Has the Commission provided direction for cost recovery for Phase III?

A. Yes. The Commission's June 11, 2015 Implementation Order at Docket No. M-2014-2424864, provides further guidance for the Phase III EEC Plans.

Q. Please explain the Commissions guidance for cost recovery in its Implementation Order for Duquesne Light's Phase III Plan.

A. The cost provisions for the Phase III Plan are similar to those for Phase II with a few changes defined in the Phase III Implementation Order. The Commission adopted a plan regarding the transition from the cost recovery methodology utilized during Phase II,

1 ending May 31, 2016, to the cost recovery methodology to be utilized during Phase III,
2 beginning on June 1, 2016. Each EDC must reconcile its total actual recoverable EEC
3 Phase II Plan expenditures incurred through March 31, 2016, with its actual EEC Phase II
4 Plan revenues received through March 31, 2016. The net over- or under-recovered
5 amount shall be reflected as a separate line item of the E-factor calculation of the Phase
6 III rates to become effective June 1, 2016. In addition, each EDC should include, as part
7 of the calculation of the Phase III rates to become effective June 1, 2016, as clearly
8 identified separate line items, projections of the: expenses to finalize any measures
9 installed and commercially operable on or before May 31, 2016 (i.e., in April 2016 and
10 May 2016); expenses to finalize any contracts; and other Phase II administrative
11 obligations. The Phase II rate that became effective June 1, 2015 will remain effective
12 through May 31, 2016. The reconciliation period for Phase III will be revised to run from
13 April 1 to March 31 of a given plan year. This reconciliation will reconcile actual
14 expenses incurred with actual revenues received in order to calculate an over or under
15 recovery. Per the Implementation Order, no interest will be charged on over or under
16 recoveries.

17
18 **Q. Is the Company proposing to implement a new EEC Surcharge to accommodate its
19 Phase III EEC Plan?**

20 **A.** No. The Company is proposing to continue to use its current EEC Phase II Surcharge to
21 recover the costs remaining for Phase II and recovery of its Phase III EEC Plan costs in
22 accordance with the Implementation Order with one change. As previously discussed,
23 the reconciliation period for Phase III will run from April 1 to March 31 of a given plan

1 year instead of June 1 to May 31 in the current EEC Phase II Surcharge. The Company's
2 has the ability to track Phase II revenue and expense separate from Phase III revenue and
3 expense to ensure separate and accurate reconciliation. Any Phase II costs that remain
4 through the end of Phase II on May 31, 2016 will be included and reconciled separately
5 as separate line items in the April 1, 2016 through March 31, 2017 reconciliation period
6 for Phase III.

7
8 **Q. Have you prepared any exhibits showing the proposed change to the EEC Phase III**
9 **Surcharge to reflect this change?**

10 A. Yes. Exhibit WVP-1 is a clean version of the proposed tariff supplement and Exhibit
11 WVP-2 is a redline version of the proposed tariff supplement showing these changes.

12
13 **III. EEC PLAN SURCHARGE CALCULATION**

14 **Q. Has the Company established program costs by customer class for its proposed EEC**
15 **Phase III Plan?**

16 A. Yes. Exhibit WVP-3 shows the estimated annual EEC Phase III Plan costs for each
17 program for 2016 to 2021. This exhibit is based on the program costs defined in the
18 Company's EEC Plan and includes the costs for energy efficiency programs, demand
19 response programs, program administration and program incentives. Additional cost
20 detail for customer class assignment and assignment of administrative costs is provided in
21 the EEC Plan and testimony of Duquesne Light's witness David Defide.

22

1 **Q. Do the customer class costs in Exhibit WVP-3 include excess costs from current**
2 **Phase II EEC programs?**

3 A. No. The costs shown in Exhibit WVP-3 are for the Phase III EEC Plan only.
4

5 **Q. Do the customer class costs in Exhibit WVP-3 include capital costs?**

6 A. No. The costs shown in Exhibit WVP-3 are 100% expense.
7

8 **Q. Do the customer class costs in Exhibit WVP-3 include the cost of the Statewide**
9 **Evaluator?**

10 A. No. Once actual costs are known for the Statewide Evaluator (“SWE”), the Company
11 will allocate the SWE costs to each customer class based on the forecast sales (kWh) for
12 that customer class.
13

14 **Q. How long does the Company propose to keep the EEC Surcharge in effect?**

15 A. The EEC Phase III Plan is effective June 1, 2016 through May 31, 2021. As the
16 reconciliation period for Phase III runs from April to March, the Company proposes to
17 keep the surcharge in effect no later than calendar year 2021 to allow for full recovery
18 and reconciliation of revenue and expenses through May 2021.
19

20 **Q. Have you prepared an exhibit showing the estimated customer class surcharges**
21 **using these proposed costs?**

22 A. Yes. Exhibit WVP-4 provides an illustrative calculation of what the surcharges for each
23 customer class would be for the June 2016 to May 2017 EEC Plan year at the estimated

1 annual costs in Exhibit WVP-3. The estimated surcharges are calculated using the
2 forecast cost divided by the forecast billing determinants adjusted for GRT. The actual
3 surcharges will differ due to final program costs and the Phase II e-factor adjustment for
4 the period June 1, 2016 through March 31, 2017.

5

6 **Q. Does that conclude your direct testimony?**

7 **A. Yes.**

8

1 **Appendix A**

2 **William V. Pfrommer**

Rate and Regulatory Proceedings

3 **Pennsylvania Public Utility Commission:**

4 Docket No. P-2015-2497267 - Petition for Approval to Modify its Smart Meter Procurement
5 and Installation Plan

6 Docket No. P-2014-2418242 -- Default Service Program and Procurement Plan for the Period
7 June 1, 2015 through May 31, 2017

8 Docket No. R-2013-2372129 -- Distribution Base Rate Case

9 Docket No. M-2013-2350946 -- Petition for Approval and Modification of Company's 2014-
10 2016 Universal Service and Energy Conservation Plan

11 Docket No. M-2012-2334399 - Energy Efficiency and Conservation Phase II Plan

12 Docket No. P-2012-2301664 -- Default Service Program and Procurement Plan for the Period
13 June 1, 2013 through May 31, 2015

14 Docket No. R-2010-2179522 -- Distribution Base Rate Case

15 Docket No. P-2009-2135500 - Provider of Last Resort (POLR V)

16 Docket No. M-2009-2093217 - Act 129 Energy Efficiency and Conservation and Demand
17 Response Plan

18 Docket No. M-2009-2123948 - Act 129 Smart Meter Procurement and Installation Plan

19 Docket No. P-2008-2079461 -- Special Permission to File a Tariff Supplement on Less than
20 60 Days Notice (POLR IV)

21 Docket No. P-00072247 - Provider of Last Resort (POLR IV)

22 Docket No. R-00061346 -- Distribution Base Rate Case

23 Docket No. P-00032071 - Provider of Last Resort (POLR III)

24
25 **Federal Energy Regulatory Commission:**

26 Docket No. ER14-1258-000 -- Depreciation Rate Update Filing

27 Docket No. ER13-1220-000 -- Monthly Deferred Tax Adjustment Charge

28 Docket No. ER08-1309-000 -- Changes to the MISO Open Access Transmission Tariff to
29 integrate the Company into the Midwest Independent System Operator, Inc.

30 Docket No. ER05-85-000 -- Changes to the PJM Open Access Transmission Tariff to
31 integrate the Company into the PJM Interconnection, L.L.C.

32
33 **Other:**

34 Cause No. 42416, Filed April 14, 2003, Indiana Utility Regulatory Commission -- Petition of
35 Utility Center, Inc., d/b/a AquaSource

36 Cause No. 41968, Filed March 30, 2001, Indiana Utility Regulatory Commission -- In the
37 Matter of Utility Center, Inc., d/b/a AquaSource

38 Docket Nos. 2000-1074-UCR and 2000-1075-UCR, Filed June 15, 2000 -- Texas Natural
39 Resource Conservation Commission, Applications of AquaSource Utility, Inc. to Change
40 its Water and Sewer Tariffs and Rates
41

Exhibit WVP-1

SUPPLEMENT NO. XXX
TO ELECTRIC – PA. P.U.C. NO. 24



SCHEDULE OF RATES

For Electric Service in Allegheny and Beaver Counties

(For List of Communities Served, see Pages No. 4 and 5)

Issued By

DUQUESNE LIGHT COMPANY

411 Seventh Avenue
Pittsburgh, PA 15219

Richard Riazzi

President and Chief Executive Officer

ISSUED: Xxxxx XX, 2016

EFFECTIVE: June 1, 2016

Issued in compliance with Commission Order entered June 19, 2015,
at Docket No. M-2014-2424864.

NOTICE

**THIS TARIFF SUPPLEMENT DELETES AN EXISTING RIDER AND
REVISES THE TABLE OF CONTENTS, RIDER MATRIX AND AN EXISTING RIDER**

See Page Two

LIST OF MODIFICATIONS MADE BY THIS TARIFF

CHANGE

Table of Contents

Thirtieth Revised Page No. 3
Cancelling Twenty-Ninth Revised Page No. 3

Rider Matrix

Fourth Revised Page No. 79A
Cancelling Third Revised Page No. 79A

Rider No. 15 – Energy Efficiency and Conservation and Demand Response Surcharge is being removed from Tariff No. 24 and, therefore, from the *Table of Contents* and *Rider Matrix*.

In accordance with the provisions of the Order entered June 19, 2015, at Docket No. M-2014-2424864, Rider No. 15A – Phase II Energy Efficiency and Conservation Surcharge is being renamed "*Rider No. 15A – Phase III Energy Efficiency and Conservation Surcharge*" and, therefore, is being renamed in the *Table of Contents* and the *Rider Matrix*.

Rider No. 15 – Energy Efficiency and Conservation and Demand Response Surcharge

Twelfth Revised Page No. 100
Cancelling Eleventh Revised Page No. 100

First Revised Page No. 100A
Cancelling Original Page No. 100A

Second Revised Page No. 100B
Cancelling First Revised Page No. 100B

Second Revised Page No. 100C
Cancelling First Revised Page No. 100C

Rider No. 15 – Energy Efficiency and Conservation and Demand Response Surcharge is being removed from Tariff No. 24 as it is no longer applicable.

Pages No. 100 through 100C will read "This Page Intentionally Left Blank."

Rider No. 15A – Phase III Energy Efficiency and Conservation Surcharge

Third Revised Page No. 100D
Cancelling Second Revised Page No. 100D

First Revised Page No. 100E
Cancelling Original Page No. 100E

First Revised Page No. 100F
Cancelling Original Page No. 100F

First Revised Page No. 100G
Cancelling Original Page No. 100G

In accordance with the provisions of the Order entered June 19, 2015, at Docket No. M-2014-2424864 which states "*that the Phase II and Phase III surcharges be combined into a single surcharge and tariff with implementation of Phase III,*" Rider No. 15A has been renamed "*Rider No. 15A - Phase III Energy Efficiency and Conservation Surcharge.*"

Language in Rider No. 15A - Phase III Energy Efficiency and Conservation Surcharge has been revised to comply with the provisions of the Order entered June 19, 2015, at Docket No. M-2014-2424864.

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STANDARD CONTRACT RIDERS – (Continued)

RIDER MATRIX

	RS	RH	RA	GS/GM	GMH	GL	GLH	L	HVPS	AL	SE	SM	SH	UMS	PAL
Rider No. 1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rider No. 2				X	X	X	X								
Rider No. 3				X	X	X	X	X							
Rider No. 4				X	X	X	X								
Rider No. 5	X	X	X												
Rider No. 6				X											
Rider No. 7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rider No. 8	X	X	X	X	X					X	X	X	X	X	X
Rider No. 9						X	X	X	X						
Rider No. 10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rider No. 11				X		X									
Rider No. 12				X	X										
Rider No. 13				X											
Rider No. 14	X														
Rider No.															
Rider No. 15A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rider No. 16				X	X	X	X	X							
Rider No. 17						X	X	X	X						
Rider No. 18	X	X	X	X	X	X	X								
Rider No. 19	X	X	X	X											
Rider No. 20	X	X	X	X	X	X	X	X	X	X					
Rider No. 21	X	X	X	X	X	X									
Appendix A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

(C)

Rider Titles:

- Rider No. 1 — Retail Market Enhancement Surcharge
- Rider No. 2 — Untransformed Service
- Rider No. 3 — School and Government Service Discount Period
- Rider No. 4 — Budget Billing HUD Finance Multi-Family Housing
- Rider No. 5 — Universal Service Charge
- Rider No. 6 — Temporary Service
- Rider No. 7 — SECA Charge
- Rider No. 8 — Default Service Supply
- Rider No. 9 — Day-Ahead Hourly Price Service
- Rider No. 10 — State Tax Adjustment
- Rider No. 11 — Street Railway Service
- Rider No. 12 — Billing Option – Volunteer Fire Companies and Nonprofit Senior Citizen Centers
- Rider No. 13 — General Service Separately Metered Electric Space Heating Service
- Rider No. 14 — Residential Service Separately Metered Electric Space and Water Heating
- Rider No. — Intentionally Left Blank
- Rider No. 15A — Phase III Energy Efficiency and Conservation Surcharge
- Rider No. 16 — Service to Non-Utility Generating Facilities
- Rider No. 17 — Emergency Energy Conservation
- Rider No. 18 — Rates for Purchase of Electric Energy from Customer-Owned Renewable Resources Generating Facilities
- Rider No. 19 — Standard Offer Program Cost Recovery Rider
- Rider No. 20 — Smart Meter Charge
- Rider No. 21 — Net Metering Service
- Appendix A — Transmission Service Charges

(C)
(C)

DUQUESNE LIGHT COMPANY

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TWELFTH REVISED PAGE NO. 100
CANCELLING ELEVENTH REVISED PAGE NO. 100

STANDARD CONTRACT RIDERS - (Continued)

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DUQUESNE LIGHT COMPANY

SUPPLEMENT NO. XXX
TO ELECTRIC – PA. P.U.C. NO. 24
FIRST REVISED PAGE NO. 100A
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STANDARD CONTRACT RIDERS - (Continued)

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DUQUESNE LIGHT COMPANY

SUPPLEMENT NO. XXX
TO ELECTRIC – PA. P.U.C. NO. 24
SECOND REVISED PAGE NO. 100B
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STANDARD CONTRACT RIDERS - (Continued)

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DUQUESNE LIGHT COMPANY

SUPPLEMENT NO. XXX
TO ELECTRIC – PA. P.U.C. NO. 24
SECOND REVISED PAGE NO. 100C
CANCELLING FIRST REVISED PAGE NO. 100C

STANDARD CONTRACT RIDERS - (Continued)

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STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE III ENERGY EFFICIENCY AND CONSERVATION SURCHARGE

(C)

(Applicable to all Rates)

The Phase III Energy Efficiency and Conservation Surcharge ("EEC III") is instituted as a cost recovery mechanism to recover the costs associated with implementing Phase III of the Company's Energy Efficiency and Conservation Plan in effect from June 1, 2016, through May 31, 2021. Act 129 of 2008 became law on October 15, 2008, requiring the Pennsylvania Public Utility Commission ("Commission") to develop an Energy Efficiency and Conservation Program applicable to electric distribution companies ("EDCs") with at least 100,000 customers. This EEC III is implemented in compliance with Docket No. M-2014-2424864 renaming the current Rider No. 15A – Phase II Energy Efficiency and Conservation Surcharge. The EEC III is a non-bypassable Surcharge and shall be applied to all customers' bills.

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RATES

Customer Class	Applicable Tariff Rate Schedule	Monthly Surcharge		
		¢/kWh	Fixed Charge \$/Month	\$/kW ⁽¹⁾
Residential	RS, RH, RA	X.XX		
Small & Medium Commercial	GS, GM & GMH	X.XX		
Small & Medium Industrial	GM & GMH	X.XX		
Large Commercial	GL, GLH, L		\$XXX.XX	\$X.XX
Large Industrial	GL, GLH, L, HVPS		\$X,XXX.XX	\$X.XX
Lighting	AL, SE, SM, SH, PAL	X.XX		
Unmetered	UMS	X.XX		

(C)
(C)
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(C)
(C)
(C)
(C)

⁽¹⁾Monthly Surcharge applicable to the customer's Peak Load Contribution.

CALCULATION OF SURCHARGE

The rate, calculated independently for each customer class in this Tariff, shall be applied to all customers served under the Tariff. The rate shall be determined in accordance with the formulas set forth below and shall be applied to all customers served during any part of a billing month:

RESIDENTIAL CUSTOMER CLASS

$$EEC (r) = [((B - e) / S) * 100] * [(1 / (1 - T))]$$

Where: EEC (r) = The Energy Efficiency and Conservation Surcharge (residential) in one-hundredth of a cent which shall be added to the distribution rates for billing purposes for all residential customers.

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE III ENERGY EFFICIENCY AND CONSERVATION SURCHARGE – (Continued) (C)

(Applicable to all Rates)

CALCULATION OF SURCHARGE – (Continued)

RESIDENTIAL CUSTOMER CLASS – (Continued)

- B = The projected costs of the EEC (r) Plan applicable to the residential customer class for the planning year June 1 through May 31. (C)
- e = The over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended March 31. (C)
- S = Projected distribution sales in kWh for the residential customer class for the planning year.
- T = The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

SMALL AND MEDIUM COMMERCIAL & INDUSTRIAL, LIGHTING AND UNMETERED CUSTOMER CLASSES

$$EEC (s) = [((B - e) / S) * 100] * [(1 / (1 - T))]$$

- Where: EEC (s) = The Energy Efficiency and Conservation Surcharge (small commercial & industrial) in one-hundredth of a cent. This Surcharge shall be a separate line item for billing purposes for all small and medium C&I customers.
- B = The projected costs of the EEC (s) Plan applicable to the small and medium C&I customer class for the planning year June 1 through May 31. (C)
 - e = The over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended March 31. (C)
 - S = Projected distribution sales in kWh for the small and medium C&I customer class for the planning year.
 - T = The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE III ENERGY EFFICIENCY AND CONSERVATION SURCHARGE — Continued (C)

(Applicable to all Rates)

CALCULATION OF SURCHARGE – (Continued)

LARGE COMMERCIAL & INDUSTRIAL CUSTOMER CLASSES

$$EEC (I) (Fixed) = [(B_A - e_A) / C] * [(1 / (1 - T))]$$

$$EEC (I) (Demand) = [(B_i - e_i) / L] * [(1 / (1 - T))]$$

- Where: EEC (I) = The Energy Efficiency and Conservation Surcharge (large commercial & industrial) is a two-part Surcharge. EEC (I) (Fixed) is a monthly fixed Surcharge designed to recover projected program administrative costs and EEC (I) (Demand) is a monthly demand Surcharge designed to recover projected program incentive costs. Combined, the two components are designed to recover the total projected program costs. This Surcharge shall be shown separately for billing purposes for all large C&I customers. (C)
- B = The projected costs of the EEC (I) Plan applicable to the large C&I customer class for the planning year June 1 through May 31. B_A is the projected administrative costs applicable to each customer class and B_i is the projected incentive costs applicable to each customer class. (C)
- e = The over or under recovery for the reconciliation year. e_A is the over or under recovery of program administrative costs for the reconciliation year. e_i is the over or under recovery of program incentive costs for the reconciliation year. The reconciliation year shall be the twelve (12) months ended March 31. (C)
- C = Projected distribution customers for the planning year.
- L = Projected Peak Load Contribution (PLC) in kilowatts (kW) for the large C&I customer class for the planning year.
- T = The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

ANNUAL UPDATE

The Surcharges defined herein will be updated effective June 1 of each year. On or about May 1 of the filing year, the Company will file revised EEC III rates with the Commission defining rates in effect from June 1 to May 31 of the following year. The reconciliation year shall be the twelve (12) months beginning April 1 of the previous year and ending March 31 of the current year. The rates for EEC (r) and EEC (s) shall be determined based on the projected costs and sales for the planning year and the over or under collection of expenses based on actual EEC (r) and EEC (s) revenue and expense incurred for the reconciliation year. (C)

STANDARD CONTRACT RIDERS - (Continued)**RIDER NO. 15A – PHASE III ENERGY EFFICIENCY AND CONSERVATION SURCHARGE – Continued**

(C)

(Applicable to all Rates)

ANNUAL UPDATE – (Continued)

The rates for EEC (I) shall be determined based on the projected costs and the projected Peak Load Contribution for the planning year and the over or under collection of expenses based on actual EEC (I) revenue and expense incurred for the reconciliation year. In accordance with 66 Pa. C.S. § 1307(e), a reconciliation statement filing will be made with the Commission by April 30 of each year. A final reconciliation statement will be filed with the Commission within thirty (30) days after the completion of the final over or under collection refund/recovery period.

(C)

(C)

Upon determination that any EEC III, if left unchanged, would result in material over- or under-collection of costs incurred or expected to be incurred during the twelve (12) month period ending March 31, the Company may request that the Commission authorize interim revisions to the EEC III to become effective upon no less than ten (10) days' notice from the date of filing upon Commission approval.

(C)

MISCELLANEOUS

Rider No. 10 – State Tax Adjustment Surcharge (STAS) shall be applicable to the Surcharges defined in this Rider.

The EEC III shall be subject to review and audit by the Commission.

(C)

There shall be no interest applicable to over or under collections for the reconciliation period.

In compliance with Commission Order at M-2014-2424864, the EEC III effective June 1, 2016, will include a reconciliation component for the Energy Efficiency and Conservation Phase II program costs, ending March 31, 2016. The total actual recoverable EEC Phase II Plan expenditures incurred for the ten (10) months ended March 31, 2016, will be reconciled with actual EEC Phase II Plan revenues received for the ten (10) months ended March 31, 2016. The net over- or under-recovered amount shall be reflected as a separate line item, without interest, as an E-factor adjustment of the EEC Phase III rates effective June 1, 2016. In addition, as a separate line item, the Phase III rates effective June 1, 2016, shall include projections of the: expenses to finalize any measures installed and commercially operable on or before May 31, 2016; expenses to finalize any contracts; and other Phase II administrative obligations. The reconciliation of actual Phase II expenses with actual EEC Phase II surcharge revenue for April and May 2016 shall be reconciled with EEC Phase III revenue and expense for the twelve (12) months ending March 31, 2017.

(C)

In order to facilitate the termination of this Rider, the Company may propose a rate adjustment to become effective on no less than ten (10) days' notice to achieve a zero (-0-) balance at calendar year end. This interim filing will adjust the E-factor in effect June 1, 2021, for reconciliation of actual revenue and expense in April and May 2021.

(C)

This Rider will remain in effect until the final reconciliation statement is approved and all charges are fully recovered or refunded or until otherwise directed by the Commission.

(C)

SUPPLEMENT NO. XXX
TO ELECTRIC – PA. P.U.C. NO. 24



SCHEDULE OF RATES

For Electric Service in Allegheny and Beaver Counties

(For List of Communities Served, see Pages No. 4 and 5)

Issued By

DUQUESNE LIGHT COMPANY

411 Seventh Avenue
Pittsburgh, PA 15219

Richard Riazzi

President and Chief Executive Officer

ISSUED: Xxxxx XX, 2016

EFFECTIVE: June 1, 2016

Issued in compliance with Commission Order entered June 19, 2015,
at Docket No. M-2014-2424864.

NOTICE

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REVISES THE TABLE OF CONTENTS, RIDER MATRIX AND AN EXISTING RIDER**

See Page Two

LIST OF MODIFICATIONS MADE BY THIS TARIFF**CHANGE**

Table of Contents **Thirtieth Revised Page No. 3**
Cancelling Twenty-Ninth Revised Page No. 3

Rider Matrix **Fourth Revised Page No. 79A**
Cancelling Third Revised Page No. 79A

Rider No. 15 – Energy Efficiency and Conservation and Demand Response Surcharge is being removed from Tariff No. 24 and, therefore, from the *Table of Contents* and *Rider Matrix*.

In accordance with the provisions of the Order entered June 19, 2015, at Docket No. M-2014-2424864, Rider No. 15A – Phase II Energy Efficiency and Conservation Surcharge is being renamed "*Rider No. 15A – Phase III Energy Efficiency and Conservation Surcharge*" and, therefore, is being renamed in the *Table of Contents* and the *Rider Matrix*.

Rider No. 15 – Energy Efficiency and Conservation and **Twelfth Revised Page No. 100**
Demand Response Surcharge **Cancelling Eleventh Revised Page No. 100**

First Revised Page No. 100A
Cancelling Original Page No. 100A

Second Revised Page No. 100B
Cancelling First Revised Page No. 100B

Second Revised Page No. 100C
Cancelling First Revised Page No. 100C

Rider No. 15 – Energy Efficiency and Conservation and Demand Response Surcharge is being removed from Tariff No. 24 as it is no longer applicable.

Pages No. 100 through 100C will read "This Page Intentionally Left Blank."

Rider No. 15A – Phase III Energy Efficiency and **Third Revised Page No. 100D**
Conservation Surcharge **Cancelling Second Revised Page No. 100D**

First Revised Page No. 100E
Cancelling Original Page No. 100E

First Revised Page No. 100F
Cancelling Original Page No. 100F

First Revised Page No. 100G
Cancelling Original Page No. 100G

In accordance with the provisions of the Order entered June 19, 2015, at Docket No. M-2014-2424864 which states "*that the Phase II and Phase III surcharges be combined into a single surcharge and tariff with implementation of Phase III,*" Rider No. 15A has been renamed "*Rider No. 15A - Phase III Energy Efficiency and Conservation Surcharge.*"

Language in Rider No. 15A - Phase III Energy Efficiency and Conservation Surcharge has been revised to comply with the provisions of the Order entered June 19, 2015, at Docket No. M-2014-2424864.

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STANDARD CONTRACT RIDERS - (Continued)

(C)

RIDER NO. 15 – ENERGY EFFICIENCY AND CONSERVATION AND DEMAND RESPONSE SURCHARGE
 –(Continued)

(Applicable to all Rates)

CALCULATION OF SURCHARGE –(Continued)

RESIDENTIAL CUSTOMER CLASS –(Continued)

- ~~B =~~ The projected budget of the EECDR(r) Plan applicable to the residential customer class for the planning year June 1 through May 31.
- ~~e =~~ The estimated over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended May 31.
- ~~S =~~ Projected distribution sales in kWh for the residential customer class for the planning year.
- ~~T =~~ The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

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SMALL AND MEDIUM COMMERCIAL & INDUSTRIAL, LIGHTING AND UNMETERED CUSTOMER CLASSES

$$EECDR(s) = [((B - e) / S) * 100] * [(1 / (1 - T))]$$

Where: ~~EECDR(e) =~~ The Energy Efficiency and Conservation and Demand Response Surcharge (small commercial & industrial) in one hundredth of a cent. This Surcharge shall be a separate line item for billing purposes for all small and medium C&I customers.

- ~~B =~~ The projected budget of the EECDR(s) Plan applicable to the small and medium C&I customer class for the planning year June 1 through May 31.
- ~~e =~~ The estimated over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended May 31.
- ~~S =~~ Projected distribution sales in kWh for the small and medium C&I customer class for the planning year.
- ~~T =~~ The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

STANDARD CONTRACT RIDERS - (Continued)

(C)

RIDER NO. 15 – ENERGY EFFICIENCY AND CONSERVATION AND DEMAND RESPONSE SURCHARGE
– (Continued)

(Applicable to all Rates)

CALCULATION OF SURCHARGE – (Continued)LARGE COMMERCIAL & INDUSTRIAL CUSTOMER CLASSES

$$EECDR(l) \text{ (Fixed)} = [(B_A - e) / C] * [(1 / (1 - T))]$$

(C)

$$EECDR(l) \text{ (Demand)} = [(B_I - e) / L] * [(1 / (1 - T))]$$

Where: ~~EECDR(l) =~~ The Energy Efficiency and Conservation and Demand Response Surcharge (large commercial & industrial) is a two-part Surcharge. ~~EECDR(l) (Fixed) is a monthly fixed Surcharge designed to recover projected program administrative costs and EECDR(l) (Demand) is a monthly demand Surcharge designed to recover projected program incentive costs. Combined, the two components are designed to recover the total projected program budgets. This Surcharge shall be shown separately for billing purposes for all large C&I customers.~~

(C)

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~~B =~~ The projected budget of the EECDR(l) Plan applicable to the large C&I customer class for the planning year June 1 through May 31. ~~B_A is the projected administrative budget applicable to each customer class and B_I is the projected incentive budget applicable to each customer class.~~

(C)

~~e =~~ The estimated over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended May 31.

~~C =~~ Projected distribution customers for the planning year.

(C)

~~L =~~ Projected Peak Load Contribution (PLC) in kilowatts (kW) for the large C&I customer class for the planning year.

(C)

~~T =~~ The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

ANNUAL UPDATE

~~The Surcharges defined herein will be updated effective September 1 of each year. On or about July 1 of the filing year, the Company will file revised EECDR rates with the Commission defining rates in effect from September 1 to August 31 of the following year. The rates for EECDR(r) and EECDR(s) shall be determined based on the projected budget and sales for the planning year and the over or under collection of expenses based on actual EECDR(r) and EECDR(s) revenue and expense incurred for the reconciliation year. The rates for EECDR(l) shall be determined based on the projected budget and the projected Peak Load Contribution for the planning year and the over or under collection of expenses based on actual EECDR(l) revenue and expense incurred for the reconciliation year.~~

STANDARD CONTRACT RIDERS - (Continued)

(C)

RIDER NO. 15 - ENERGY EFFICIENCY AND CONSERVATION AND DEMAND RESPONSE SURCHARGE
-(Continued)

(Applicable to all Rates)

MISCELLANEOUS

~~The initial planning year will be December 1, 2009, through May 31, 2010, after which the twelve (12) month planning year described above will begin.~~

~~Rider No. 10 - State Tax Adjustment Surcharge (STAS) shall be applicable to the Surcharges defined in this Rider.~~

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~~The EEGDR shall be subject to review and audit by the Commission.~~

~~There shall be no interest applicable to over or under collections for the reconciliation period.~~

~~The EEGDR shall remain in effect through 2014 or until otherwise directed by the Commission.~~

~~In order to facilitate the termination of this Rider in 2014, the Company is proposing a rate adjustment to become effective on May 2, 2014.~~

(C)

~~In order to facilitate the termination of this Rider in 2014, the Company may propose a rate adjustment to become effective other than September 1, 2014, to become effective on no less than ten (10) days' notice.~~

(C)

~~The rates effective May 2, 2014, include reconciliation of the revenue and expense from June 1, 2013, through January 31, 2014.~~

(C)

~~The Company will file its 1307e reconciliation by June 30, 2014, for the revenue and expense from June 1, 2013, through May 31, 2014.~~

(C)

~~The Company may propose a rate adjustment to become effective on no less than ten (10) days' notice to achieve a zero over/under collection balance at October 31, 2014. Any residual over/under collection balance shall be carried over to and reflected in the Company's June 30, 2015, 1307e reconciliation filing for Rider No. 15A - Energy Efficiency and Conservation Surcharge.~~

(C)

~~This Rider will remain in effect until the final reconciliation statement is approved and charges fully recovered.~~

STANDARD CONTRACT RIDERS - (Continued)

RIDER NO. 15A – PHASE II-III ENERGY EFFICIENCY AND CONSERVATION SURCHARGE

(C)

(Applicable to all Rates)

The Phase II-III Energy Efficiency and Conservation Surcharge ("EEC III") is instituted as a cost recovery mechanism to recover the costs associated with implementing Phase II-III of the Company's Energy Efficiency and Conservation Plan in effect from June 1, 2013~~2016~~, through May 31, 2016~~2021~~. Act 129 of 2008 became law on October 15, 2008, requiring the Pennsylvania Public Utility Commission ("Commission") to develop an Energy Efficiency and Conservation Program applicable to electric distribution companies ("EDCs") with at least 100,000 customers. This EEC III Surcharge is implemented in compliance with Dockets No. M-2012-2289411M-2014-2424864 renaming the current Rider No. 15A – Phase II Energy Efficiency and Conservation Surcharge and M-2012-2334399. The EEC III is a non-bypassable Surcharge and shall be applied to all customers' bills.

(C)
(C)
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(C)

RATES

Customer Class	Applicable Tariff Rate Schedule	¢/kWh	Monthly Surcharge	
			Fixed Charge \$/Month	\$/kW ⁽¹⁾
Residential	RS, RH, RA	X.XX		
Small & Medium Commercial	GS, GM & GMH	X.XX		
Small & Medium Industrial	GM & GMH	X.XX		
Large Commercial	GL, GLH, L		\$XXX.XX	\$X.XX
Large Industrial	GL, GLH, L, HVPS		\$X,XXX.XX	\$X.XX
Lighting	AL, SE, SM, SH, PAL	X.XX		
Unmetered	UMS	X.XX		

(C)
(C)
(C)
(C)
(C)
(C)
(C)

⁽¹⁾Monthly Surcharge applicable to the customer's Peak Load Contribution.

CALCULATION OF SURCHARGE

The rate, calculated independently for each customer class in this Tariff, shall be applied to all customers served under the Tariff. The rate shall be determined in accordance with the formulas set forth below and shall be applied to all customers served during any part of a billing month:

RESIDENTIAL CUSTOMER CLASS

$$EEC (r) = [((B - e) / S) * 100] * [(1 / (1 - T))]$$

Where: **EEC (r)** = The Energy Efficiency and Conservation Surcharge (residential) in one-hundredth of a cent which shall be added to the distribution rates for billing purposes for all residential customers.

STANDARD CONTRACT RIDERS - (Continued)

(C)

RIDER NO. 15A – PHASE II-III ENERGY EFFICIENCY AND CONSERVATION SURCHARGE – (Continued)

(C)

(Applicable to all Rates)

CALCULATION OF SURCHARGE – (Continued)

RESIDENTIAL CUSTOMER CLASS – (Continued)

B = The projected budget ~~costs~~ of the EEC (r) Plan applicable to the residential customer class for the planning year June 1 through May 31.

(C)

e = The over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended ~~May~~ March 31.

(C)

S = Projected distribution sales in kWh for the residential customer class for the planning year.

T = The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

SMALL AND MEDIUM COMMERCIAL & INDUSTRIAL, LIGHTING AND UNMETERED CUSTOMER CLASSES

$$EEC (s) = [((B - e) / S) * 100] * [(1 / (1 - T))]$$

Where: **EEC (s)** = The Energy Efficiency and Conservation Surcharge (small commercial & industrial) in one-hundredth of a cent. This Surcharge shall be a separate line item for billing purposes for all small and medium C&I customers.

B = The projected budget ~~costs~~ of the EEC (s) Plan applicable to the small and medium C&I customer class for the planning year June 1 through May 31.

(C)

e = The over or under recovery for the reconciliation year. The reconciliation year shall be the twelve (12) months ended ~~May~~ March 31.

(C)

S = Projected distribution sales in kWh for the small and medium C&I customer class for the planning year.

T = The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form.

STANDARD CONTRACT RIDERS - (Continued)

(C)

RIDER NO. 15A – PHASE II-III ENERGY EFFICIENCY AND CONSERVATION SURCHARGE — Continued

(C)

(Applicable to all Rates)

CALCULATION OF SURCHARGE – (Continued)LARGE COMMERCIAL & INDUSTRIAL CUSTOMER CLASSES

$$\text{EEC (I) (Fixed)} = [(B_A - e_A) / C] * [(1 / (1 - T))]]$$

$$\text{EEC (I) (Demand)} = [(B_I - e_I) / L] * [(1 / (1 - T))]]$$

Where: EEC (I) = The Energy Efficiency and Conservation Surcharge (large commercial & industrial) is a two-part Surcharge. EEC (I) (Fixed) is a monthly fixed Surcharge designed to recover projected program administrative costs and EEC (I) (Demand) is a monthly demand Surcharge designed to recover projected program incentive costs. Combined, the two components are designed to recover the total projected program budget costs. This Surcharge shall be shown separately for billing purposes for all large C&I customers. (C)

B = The projected budget costs of the EEC (I) Plan applicable to the large C&I customer class for the planning year June 1 through May 31. B_A is the projected administrative budget costs applicable to each customer class and B_I is the projected incentive budget costs applicable to each customer class. (C)

e = The over or under recovery for the reconciliation year. e_A is the over or under recovery of program administrative costs for the reconciliation year. e_I is the over or under recovery of program incentive costs for the reconciliation year. The reconciliation year shall be the twelve (12) months ended May-March 31. (C)

C = Projected distribution customers for the planning year.

L = Projected Peak Load Contribution (PLC) in kilowatts (kW) for the large C&I customer class for the planning year.

T = The Pennsylvania Gross Receipts Tax in effect during the billing month, expressed in decimal form. (C)

ANNUAL UPDATE

The Surcharges defined herein will be updated effective September-June 1 of each year. On or about July-May 1 of the filing year, the Company will file revised EEC III rates with the Commission defining rates in effect from September-June 1 to August-May 31 of the following year. The reconciliation year shall be the twelve (12) months beginning June-April 1 of the previous year and ending May-March 31 of the current year. The rates for EEC (r) and EEC (s) shall be determined based on the projected budget costs and sales for the planning year and the over or under collection of expenses based on actual EEC (r) and EEC (s) revenue and expense incurred for the reconciliation year. (C)

STANDARD CONTRACT RIDERS - (Continued)

(C)

RIDER NO. 15A – PHASE II-III ENERGY EFFICIENCY AND CONSERVATION SURCHARGE — Continued

(C)

(Applicable to all Rates)

ANNUAL UPDATE – (Continued)

The rates for EEC (I) shall be determined based on the projected budget costs and the projected Peak Load Contribution for the planning year and the over or under collection of expenses based on actual EEC (I) revenue and expense incurred for the reconciliation year. In accordance with 66 Pa. C.S. § 1307(e), a reconciliation statement filing will be made with the Commission by June ~~April~~ 30 of each year. A final reconciliation statement will be filed with the Commission within thirty (30) days after the completion of the final over or under collection refund/recovery period.

(C)

(C)

Upon determination that any EEC III, if left unchanged, would result in material over- or under-collection of costs incurred or expected to be incurred during the twelve (12) month period ending March 31, the Company may request that the Commission authorize interim revisions to the EEC III to become effective upon no less than ten (10) days' notice from the date of filing upon Commission approval.

(C)

MISCELLANEOUS

Rider No. 10 – State Tax Adjustment Surcharge (STAS) shall be applicable to the Surcharges defined in this Rider.

The EEC III shall be subject to review and audit by the Commission.

(C)

There shall be no interest applicable to over or under collections for the reconciliation period.

In compliance with Commission Order at M-2014-2424864, the EEC III effective June 1, 2016, will include a reconciliation component for the Energy Efficiency and Conservation Phase II program costs, ending March 31, 2016. The total actual recoverable EEC Phase II Plan expenditures incurred for the ten (10) months ended March 31, 2016, will be reconciled with actual EEC Phase II Plan revenues received for the ten (10) months ended March 31, 2016. The net over- or under-recovered amount shall be reflected as a separate line item, without interest, as an E-factor adjustment of the EEC Phase III rates effective June 1, 2016. In addition, as a separate line item, the Phase III rates effective June 1, 2016, shall include projections of the: expenses to finalize any measures installed and commercially operable on or before May 31, 2016; expenses to finalize any contracts; and other Phase II administrative obligations. The reconciliation of actual Phase II expenses with actual EEC Phase II surcharge revenue for April and May 2016 shall be reconciled with EEC Phase III revenue and expense for the twelve (12) months ending March 31, 2017.

(C)

The reconciliation year (true-up period) shall be the twelve (12) months beginning June 1 of the previous year and ending May 31 of the current year.

The rates effective September 1, 2016, through August 31, 2017, shall include reconciliation of the revenue and expense from June 1, 2015, through May 31, 2016. During the period of June 1, 2016, through December 31, 2016, the Company will analyze the over or under recovery collection balance. If it is apparent that there will be a significant over or under recovery for the true-up period June 1, 2016, through May 31, 2017, the Company may propose a rate adjustment prior to the end of the true-up period to become effective on or about February 1, 2017, on no less than ten (10) days' notice. The proposed interim rate adjustment would be for the true-up period June 1, 2016, through December 31, 2016, and designed to achieve a zero over/under collection balance at August 31, 2017.

DUQUESNE LIGHT COMPANY

SUPPLEMENT NO. XXX
TO ELECTRIC – PA. P.U.C. NO. 24
ORIGINAL FIRST REVISED PAGE NO. 100G
CANCELLING ORIGINAL PAGE NO. 100G

In order to facilitate the termination of this Rider, the Company may propose a rate adjustment to become effective on no less than ten (10) days' notice to achieve a zero (-0-) balance at calendar year end. This interim filing will adjust the E-factor in effect June 1, 2021, for reconciliation of actual revenue and expense in April and May 2021. (C)

If any over or under collection balance is expected to remain after August 31, 2017, the Company will propose an additional rate adjustment to ensure that the balance is eliminated.

This Rider will remain in effect until the final reconciliation statement is approved and all charges are fully recovered or refunded or until otherwise directed by the Commission. (C)

Duquesne Light Company
 Energy Efficiency and Conservation Phase III Portfolio Costs
 RE: Table 3, page 129 of 144

Exhibit WVP-3

	PY 2016 <u>6/1/16 - 5/31/17</u>	PY 2017 <u>6/1/17 - 5/31/18</u>	PY 2018 <u>6/1/18 - 5/31/19</u>	PY 2019 <u>6/1/19 - 5/31/20</u>	PY 2020 <u>6/1/20 - 5/31/21</u>	Total
<u>Annual Cost Estimate</u>						
1 Residential	\$7,541,637	\$6,792,504	\$5,175,221	\$4,632,708	\$3,906,609	\$28,048,679
2 Small Commercial & Industrial	\$2,486,927	\$3,405,093	\$3,922,868	\$4,841,034	\$4,958,417	\$19,614,339
3 Large Commercial & Industrial	\$5,850,289	\$7,697,184	\$8,100,512	\$8,907,167	\$8,907,167	\$39,462,319
4 Large Commercial Public Agency	\$964,883	\$2,456,141	\$2,544,011	\$2,719,750	\$1,842,738	\$10,527,523
5 Total Portfolio Annual Budget	\$16,843,736	\$20,350,922	\$19,742,612	\$21,100,659	\$19,614,931	\$97,652,860

Assignment of Costs to Commercial & Industrial Classes

6 Residential	\$7,541,637	\$6,792,504	\$5,175,221	\$4,632,708	\$3,906,609	\$28,048,679
7 Small Commercial	\$1,699,588	\$2,327,070	\$2,680,922	\$3,308,405	\$3,388,626	\$13,404,611
8 Small Industrial	\$787,339	\$1,078,023	\$1,241,946	\$1,532,629	\$1,569,791	\$6,209,728
9 Large Commercial	\$3,200,260	\$4,210,559	\$4,431,190	\$4,872,451	\$4,872,451	\$21,586,910
10 Large Industrial	\$2,650,029	\$3,486,625	\$3,669,322	\$4,034,716	\$4,034,716	\$17,875,409
11 Small Commercial Public Agency	\$282,711	\$719,649	\$745,395	\$796,887	\$539,922	\$3,084,564
12 Large Commercial Public Agency	\$682,172	\$1,736,492	\$1,798,616	\$1,922,863	\$1,302,816	\$7,442,959
13 Total	\$16,843,736	\$20,350,922	\$19,742,612	\$21,100,659	\$19,614,931	\$97,652,860

Assignment of Costs for Rate Design Purposes

13 Residential	\$7,541,637	\$6,792,504	\$5,175,221	\$4,632,708	\$3,906,609	\$28,048,679
14 Small Commercial	\$1,982,298	\$3,046,720	\$3,426,318	\$4,105,292	\$3,928,548	\$16,489,175
15 Small Industrial	\$787,339	\$1,078,023	\$1,241,946	\$1,532,629	\$1,569,791	\$6,209,728
16 Large Commercial (Fixed-Administrative)	\$1,465,127	\$2,960,708	\$3,243,463	\$3,808,971	\$3,188,924	\$14,667,194
17 Large Commercial (Variable-Incentive)	\$2,417,305	\$2,986,343	\$2,986,343	\$2,986,343	\$2,986,343	\$14,362,676
18 Large Industrial (Fixed-Administrative)	\$1,161,154	\$1,526,548	\$1,709,245	\$2,074,639	\$2,074,639	\$8,546,226
19 Large Industrial (Variable-Incentive)	\$1,488,875	\$1,960,077	\$1,960,077	\$1,960,077	\$1,960,077	\$9,329,183
20 Total	\$16,843,736	\$20,350,922	\$19,742,612	\$21,100,659	\$19,614,931	\$97,652,860

Duquesne Light Company

Energy Efficiency and Conservation, Phase-III

Calculation of Proposed Surcharge, Effective June 1, 2016 (1)

Exhibit WVP-4

A	B	C	D	E	F
			= B / C * 100	= 1 / (1 - .059)	= D * E
<u>Customer Class</u>	<u>2016-2017 Costs</u>	<u>Forecast Billing Units June 2016-May 2017</u>	<u>Proposed Monthly Charge Excl. GRT</u>	<u>PA GRT Factor</u>	<u>Proposed Surcharge Rate Inc. GRT</u>
1 Residential (RS, RH, RA)	\$7,541,637	4,069,959,790	0.19	1.0627	0.20 cents/kWh
2 Small & Medium Commercial (GS, GM, GMH)	\$1,982,298	2,992,368,912	0.07	1.0627	0.07 cents/kWh
3 Small & Medium Industrial (GM, GMH)	\$787,339	211,805,187	0.37	1.0627	0.40 cents/kWh
4 Large Commercial (GL, GLH, L) [Fixed]	\$1,465,127	8,267	\$177.23	1.0627	\$188.34 \$/Mo.
5 Large Commercial (GL, GLH, L) [Variable]	\$2,417,305	6,991,847	\$0.35	1.0627	\$0.37 \$/kW [PLC] (2)
6 Large Industrial (GL, GLH, L, HVPS) [Fixed]	\$1,161,154	2,504	\$463.71	1.0627	\$492.79 \$/Mo.
7 Large Industrial (GL, GLH, L, HVPS) [Variable]	\$1,488,875	4,141,105	\$0.36	1.0627	\$0.38 \$/kW [PLC] (2)
8 Total	\$16,843,736				

(1) Excludes component for Energy Efficiency and Conservation Phase II reconciliation for the period June 1, 2015 to March 31, 2016.

(2) PLC = Peak Load Contribution

AFFIDAVIT

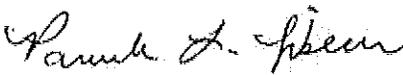
Commonwealth of Pennsylvania :
: ss.
County of Allegheny :

William Pfrommer, Affiant, being duly sworn according to law, deposes and says that:

I am the Senior Manager of Rates & Tariff Services for Duquesne Light Company. I hereby affirm that the statements made in the foregoing Testimony and Exhibits regarding Duquesne Light Company's original Phase III Energy Efficiency and Conservation Plan are true and correct to the best of my knowledge, information and belief.


William Pfrommer
Senior Manager, Rates & Tariff Services
Duquesne Light Company
411 Seventh Avenue
Pittsburgh Pennsylvania 15219.

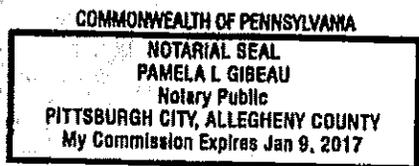
Subscribed and sworn to before me this 8 day of February, 2016.



Notary Public

My Commission expires: Jan. 9, 2017

SEAL



ATTACHMENT C

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

PETITION OF DUQUESNE LIGHT)
COMPANY FOR APPROVAL OF) DOCKET NO. M-2015-2515375
ITS ENERGY EFFICIENCY AND)
CONSERVATION PHASE III PLAN)

DIRECT TESTIMONY
OF
STACY L. SHERWOOD

ON BEHALF OF
PENNSYLVANIA OFFICE OF CONSUMER ADVOCATE

JANUARY 13, 2016

EXETER

ASSOCIATES, INC.
10480 Little Patuxent Parkway Suite 300
Columbia, Maryland 21044

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1 **I. INTRODUCTION**

2 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

3 A. My name is Stacy L. Sherwood. I am an Economist with Exeter Associates, Inc.
4 (“Exeter”). Our offices are located at 10480 Little Patuxent Parkway, Suite 300,
5 Columbia, Maryland 21044. Exeter is a firm of consulting economists specializing
6 in issues pertaining to public utilities.

7 Q. PLEASE DESCRIBE YOUR QUALIFICATIONS, WORK EXPERIENCE,
8 AND EDUCATIONAL BACKGROUND.

9 A. I have six years of experience in the energy sector, related specifically to the review
10 and development of energy efficiency and demand response programs and policies
11 for the use of advanced technologies for pollution prevention and energy efficiency.
12 With Exeter, I have provided technical support and analysis to state and federal
13 clients on energy efficiency, distributed resources, demand response, and renewable
14 energy. While serving as Assistant Director of the Energy Analysis and Planning
15 Division of the Maryland Public Service Commission, I oversaw the utilities’ energy
16 efficiency and demand response programs, participated in smart grid work groups,
17 and assisted with the composition of Maryland’s Ten Year Plan regarding Maryland’s
18 energy outlook. I hold a Bachelor’s Degree in Accounting, Business and Economics
19 from McDaniel College (2009). My qualifications are detailed in my resume,
20 included with this Testimony as Attachment A.

21 Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY
22 PROCEEDINGS ON UTILITY ISSUES?

23 A. Yes. I have previously presented testimony before the Maryland Public Service
24 Commission regarding the inclusion of energy advisor and engineer positions and
25 automated metering infrastructure (“AMI”) costs in Potomac Electric Power

1 Company's ("Pepco") base rate case, Docket No. 9311, *In the Matter of the*
2 *Application of Potomac Electric Power Company for an Increase in its Retail Rates*
3 *for the Distribution of Electric Energy*. Recently, I provided testimony on behalf of
4 the Pennsylvania Office of Consumer Advocate ("OCA") regarding Duquesne Light
5 Company's ("DLC" or "Company") Modified AMI Plan, Docket No. P-2015-
6 2497267, *Petition of Duquesne Light Company for Approval of its Smart Meter*
7 *Procurement and Installation Plan*.

8 Q. ON WHOSE BEHALF ARE YOU APPEARING?

9 A. I am presenting testimony on behalf of the OCA.

10 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

11 A. On November 30, 2015, DLC filed its *Petition of Duquesne Light Company for*
12 *Approval of its Energy Efficiency and Conservation Phase III Plan* ("Plan") with the
13 Commission. Exeter was retained by the OCA to assist in the review of the DLC
14 Plan. I will address the Plan's compliance with the Commission's *Phase III*
15 *Implementation Order* and subsequent *Clarification Order* regarding the Phase III
16 Energy Efficiency and Conservation ("EE&C") plans, comprehensive programs,
17 limited income program offerings, and the offering of a residential demand response
18 program.¹

19 Q. HAVE YOU PREPARED EXHIBITS TO ACCOMPANY YOUR
20 TESTIMONY?

21 A. No.

22 Q. PLEASE DESCRIBE THE MAIN COMPONENTS OF THE COMPANY'S
23 PLAN.

¹ Docket No. M-2014-2424864, *Implementation Order*, adopted June 11, 2015; and Docket No. M-2014-2424864, *Clarification Order*, adopted August 20, 2015.

1 DLC's Phase III Plan includes 15 energy efficiency programs and two demand
2 response programs; seven of the programs are Residential and the remaining ten
3 programs are Non-Residential, including the Government, Non-Profit, and
4 Education ("GNE") customer class. Collectively, the energy efficiency programs are
5 designed to achieve 449,734 MWh of energy savings and the demand response
6 programs are designed to achieve 44.1 MW of demand reduction by May 31, 2021.²
7 The Company forecasts that it will fully expend its five year plan expenditure cap of
8 \$97.7 million, resulting in an annual budget of \$19.5 million.³

9 The six Residential energy efficiency programs include Residential Energy
10 Efficiency Rebate Program ("REEP"); Residential Whole House Retrofit Program
11 ("WHRP"); Residential Home Energy Reports ("HER"); Residential Appliance
12 Recycling Program ("RARP"); Savings by Design Residential New Construction
13 Program ("SBD"); and Residential Low Income Energy Efficiency Program
14 ("LIEEP"). The LIEEP consists of a Home Energy Reporting Program, Whole
15 House Retrofit Program, and Multifamily Housing Retrofit Program, the last of
16 which is considered a commercial program.⁴ The Non-Residential programs are
17 directed towards the Small Commercial and Industrial ("C&I"), Large C&I, and
18 GNE customer classes. The Small C&I programs include Express Efficiency
19 Program ("EXP"), Small Non-Residential Upstream Lighting, Small Commercial
20 Direct Install Program ("SCDI"), and Multifamily Housing Retrofit Program. The
21 Large C&I programs include Commercial Efficiency Program ("CEP"), Industrial
22 Efficiency Program ("IEP"), and Large Non-Residential Upstream Lighting
23 Program. The GNE programs include Public Agency Partnership Program

² Plan at 7.

³ This excludes DLC's costs for the Statewide Evaluator.

⁴ The Home Energy Reporting Program and Whole House Retrofit Program are considered collectively in terms of reporting program-level energy savings, expenditures, and total resource cost ("TRC") calculations.

1 (“PAPP”) and Community Education Energy Efficiency Program (“CEEP”). The
 2 Demand Management Program (“DMP”) will offer two sub-demand response
 3 programs, a direct load control program for Residential and/or Small C&I customers,
 4 and a Large C&I load curtailment program.

5 A breakdown of the total estimated savings and costs between rate classes as
 6 proposed by the Company is provided in Tables 1 and 2, respectively.

7 **Table 1. Phase III Total Projected Energy and Demand Savings by Customer Class**

Customer Class	Total Projected Savings (MWh)	Percent	Total Projected Savings (MW) ^[1]	Percent
Residential and Low Income	137,568	31%	2.2	5%
Small C&I	74,458	17	0.0	0
Large C&I	181,564	40	42.0	95
GNE	56,145	12	0.0	0
Total	449,734	100%	44.2	100%
^[1] Demand savings begin in program year (“PY”) 9. Reflects demand reductions (MW) from demand response programs only. The energy efficiency programs are projected to achieved approximately 60.4 MW of demand reduction but do not count towards the Demand Response target of 42 MW for DLC.				

8 **Table 2. Phase III Total Projected Expenditures by Customer Class**

Customer Class	Total Direct Costs	Total Common Costs	Total Costs	Percent of Total Cost
Residential and Low Income	\$24,919,740	\$3,128,941	\$28,048,681	29%
Small C&I	17,960,370	1,653,967	19,614,337	20
Large C&I	35,017,395	4,444,925	39,462,320	40
GNE	9,280,356	1,247,167	10,527,523	11
Total	\$87,177,861	\$10,475,000	\$97,652,861	100%

9 Q. PLEASE SUMMARIZE YOUR FINDINGS AND RECOMMENDATIONS.

1 A. Based on the results of my review and analysis, I have reached the following
2 conclusions:

- 3 • The Company should consolidate the number of programs and measures that
4 it is offering.
- 5 • The Company should increase costly and/or higher tiered rebate measures
6 (i.e., refrigerators) and eliminate low cost and low rebated measures (i.e.,
7 freezers).
- 8 • The Company should not offer the SBD program and redirect the program
9 funds to other program efforts.
- 10 • The Company should pilot a bring your own device (“BYOD”) residential
11 demand response program before offering a full-fledged program.

12 Q. HOW IS THE REMAINDER OF YOUR TESTIMONY ORGANIZED?

13 A. Following this introductory section, my testimony is divided into six sections:
14 Implementation Order and Phase III Plan; Residential Portfolio; Residential Energy
15 Efficiency Rebate Program; Savings by Design Residential New Construction
16 Program; Low-Income Programs; and Demand Response.

17
18 **II. IMPLEMENTATION ORDER AND PHASE III PLAN**

19 Q. HAVE YOU REVIEWED THE PHASE III PLAN?

20 A. Yes, I have reviewed the material filed in the Company’s Plan, including the Direct
21 Testimony of David Defide and the Direct Testimony of William V. Pfrommer. In
22 addition, I have reviewed the Company’s responses to the OCA Interrogatory Sets I
23 and II, the Office of Small Business Advocate (“OSBA”) Interrogatory Set I, and the
24 Coalition for Affordable Utility Services and Energy Efficiency in Pennsylvania
25 (“CAUSE-PA”) Interrogatory Set I. The Company’s filing describes the programs
26 to be implemented in accordance with the requirements established in Act 129 of

1 2008 for program years ("PY") 8 through 12, which will begin in 2016 and end in
2 2020.

3 Q. DOES THE PLAN MEET THE REQUIREMENTS OF THE
4 COMMISSION'S PHASE III IMPLEMENTATION ORDER?

5 A. Yes. As proposed by the Company, the Plan meets or exceeds each of the following
6 requirements:

- 7 1. Achieve an annual target savings of 440,916 MWh;
- 8 2. Achieve total Phase III costs that do not exceed \$97.7 million;
- 9 3. Ensure that the acquisition costs for the first year of the Phase do not exceed
10 \$199.50/MWh saved;
- 11 4. Achieve 3.5 percent of the Plan's overall reduction in electricity consumption
12 (MWh) from the GNE sector;
- 13 5. Achieve a minimum of 5.5 percent of its reduction in electricity consumption
14 (MWh) reductions from programs exclusively directed at low-income
15 customers;
- 16 6. Offer at least one program to each customer class;
- 17 7. Offer at least one comprehensive program for residential customers and one
18 comprehensive program for non-residential customers;
- 19 8. Achieve an annual gross verified demand reduction of 92 MW; and
- 20 9. Achieve an annual reduction of 15 percent of the consumption reduction
21 target.

22 Q. WITH REFERENCE TO THE COMPANY'S PROPOSED PLAN, PLEASE
23 COMPARE THE LEVEL OF INVESTMENT IN THE EE&C PROGRAMS,
24 THE PROJECTED ENERGY SAVINGS, AND TOTAL DLC REVENUES
25 FOR BOTH RESIDENTIAL AND NON-RESIDENTIAL CUSTOMERS.

1 A. The comparison of the contributions based upon Residential and Non-Residential
2 customers is provided in Table 3. The difference between the ratios of investment
3 and energy savings when compared to the revenues contributed by customer class is
4 not significant.

5 **Table 3. Contributions by Customer Class**

	Residential	Non-Residential
Phase III Budget	29%	71%
Phase III Energy Reductions	31%	69%
Revenue ^[1]	59%	41%
Percentage of revenue is from the Plan at 146.		

6 Q. HAVE YOU DETERMINED THAT THE COMPANY'S PLAN IS COST-
7 EFFECTIVE?

8 A. Overall, the proposed plan is cost-effective with a net total resource cost ("TRC") of
9 1.7 over a five-year period. The programs are also cost-effective when considered
10 by sector.⁵ However, three of the proposed programs are not cost-effective on a
11 stand-alone basis— Residential Direct Load Control, SBD, and the residential Low
12 Income program which includes the HER and WHRP Programs. Further discussion
13 of the TRCs for those three programs is included in subsequent sections of my
14 testimony.

15 Q. HAVE YOU DETERMINED THAT THE COMPANY'S PLAN IS
16 REASONABLE AND WELL-BALANCED?

17 A. In order to determine whether the Company's Plan is reasonable and well-balanced,
18 I examined the features of the Plan's various programs to identify whether the Plan
19 includes accessible program options for all ratepayers, and I evaluated the return on

⁵ Sector level is broken down by Residential, Small C&I, Large C&I, and GNE.

1 investment to ratepayers. I have concluded that the Plan proposed by the Company
2 provides programs that are sufficiently diverse, allowing all ratepayers an
3 opportunity to participate in at least one program. The programs offered under the
4 Plan are considered the best practices among other utility energy efficiency
5 programs nationwide. The Plan provides energy efficiency and demand response
6 programs for both Residential and Non-Residential customer classes. Additionally,
7 the Residential comprehensive programs have been designed to allow participation
8 by all Residential customers, including a specified program for limited income
9 customers.

10 The overall portfolio and individual sector portfolios are also projected to be
11 cost-effective. A TRC above 1.0 indicates that the programs provide benefits that
12 exceed the costs invested in the program, indicating that ratepayers, including non-
13 participants, receive a return on the investment in the energy efficiency programs.

14 Q. DO YOU BELIEVE THAT DLC'S PROPOSED PLAN SUFFICIENTLY
15 MEETS THE REQUIREMENTS OF THE IMPLEMENTATION ORDER?

16 A. Yes.

17 Q. HAVE YOU REVIEWED THE COMPANY'S PROPOSED RECOVERY
18 CALCULATION FOR RIDER 15A – PHASE III ENERGY EFFICIENCY
19 AND CONSERVATION SURCHARGE?

20 A. Yes. The Company is requesting approval for one change to the calculation of the
21 surcharge from prior years. The Company is requesting to change its reconciliation
22 period of the prior year's actual costs from a June 1 through May 31 timeframe to a
23 April 1 through March 31 timeframe. The impact of the change in the timeframe
24 will be noticed with the reconciliation of the June 1, 2015 through May 31, 2016

1 costs, as that year would not be reconciled until 2017; however, the change would
2 not impact future years. At this time, I do not object to this change.

3
4 **III. PORTFOLIO OF RESIDENTIAL PROGRAMS**

5 Q. DOES THE SUITE OF RESIDENTIAL PROGRAMS DESCRIBED IN
6 DLC'S PLAN ALLOW FOR ALL RATEPAYERS TO PARTICIPATE?

7 A. Yes. The programs allow for the inclusion of all Residential ratepayers. The
8 programs provide customers with home energy reports and offer rebates for energy-
9 savings measures such as refrigerators and appliance recycling, central air
10 conditioners, and new home construction. In addition, the Residential portfolio
11 includes three low-income programs, including one targeted specifically for multi-
12 family units, which provides qualified ratepayers with energy-savings measures at
13 no additional costs.

14 Q. DO YOU BELIEVE THAT THE PROPOSED PLAN IS ACHIEVEABLE
15 BASED UPON PRIOR PROGRAM PERFORMANCE?

16 A. Yes. The annual energy-savings forecasts for PY 8 through PY 12 are lower when
17 compared to the savings verified in PY 5 and PY 6. In PY 6, the Company reported
18 a verified savings of 106,553 MWh compared to the forecasted PY 8 energy savings
19 of 93,792 MWh, representing a forecasted 12 percent decrease.⁶ The decrease in
20 annual energy savings between PY 8 and PY 6 also corresponds to the decrease in
21 total program expenditures. In PY 6, the Company spent \$18.2 million compared to
22 the forecasted PY 8 budget of \$16.8 million, a difference of 8 percent.⁷ After

⁶ *EDC Program Year 6 Annual Report: Program Year 6: June 1, 2014 – May 31, 2015*, Navigant, November 15, 2015, 7.

⁷ *Ibid*, 18.

1 comparing the Plan to DLC's Phase II achievements, I find that the plan is
2 achievable.

3 Q. PLEASE DISCUSS THE COST-EFFECTIVENESS OF THE
4 RESIDENTIAL PROGRAMS BEING OFFERED.

5 A. The full portfolio of Residential programs, including low-income programs, is cost-
6 effective when evaluated under the TRC test formula measuring cost-effectiveness.
7 The Company's forecasted program costs, participation, and energy-savings levels
8 for the Residential portfolio produce a net TRC of 1.3.⁸ However, as I previously
9 discussed, there are three Residential programs that are not independently projected
10 to produce a net TRC above 1.0—the LIEEP, SBD, and the Residential Direct Load
11 Control program.
12

13 **IV. RESIDENTIAL ENERGY EFFICIENCY REBATE PROGRAM**

14 Q. PLEASE DESCRIBE THE REEP PROGRAM.

15 A. The REEP offers rebates to raise awareness and mitigate the cost of energy
16 efficiency measures for Residential customers. The rebates range from \$10 to \$350
17 for energy-savings measures including refrigerators, freezers, HVAC, dehumidifiers,
18 pool pumps, programmable thermostats, and insulation.⁹

19 Q. DO YOU BELIEVE THAT THE REEP REBATES OFFERED FOR THE
20 VARIOUS ENERGYSAVING MEASURES ARE SUFFICIENT?

21 A. While a majority of the program's rebates appear to be sufficient to serve as a
22 motivator for customers to implement energy efficiency measures, several REEP
23 rebates seem insignificant when compared to the cost of the measure. For example,

⁸ The multi-family low-income program is excluded from this TRC calculation as it is considered a Small C&I program. Individually, the multi-family program is expected to produce a TRC of 1.8.

⁹ There is an opportunity for customers to receive a rebate higher than \$350 through the HVAC rebates which rebate at \$100 per ton.

1 a rebate level of \$25 is not likely to be a motivating factor in determining whether a
2 customer purchases a Tier III refrigerator, which typically costs more than \$1,000, as
3 opposed to a lower-tier, less efficient refrigerator.

4 Q. SINCE YOU BELIEVE THE REBATES ARE TOO LOW TO MOTIVATE
5 CUSTOMERS, WHAT REVISIONS DO YOU PROPOSE FOR THE
6 REEP?

7 A. I recommend that DLC increase the rebate for more expensive items appliances,
8 such as Tier III refrigerators. To fund the increase in rebates, I recommend that the
9 program eliminate rebates for items with low historical participation and/or low
10 incremental cost. Specifically, the Company should make the refrigerator rebate
11 range from \$25 to \$100, depending upon the tier. I also recommend that DLC
12 eliminate rebates for freezers, occupancy sensor and swimming pool pumps.¹⁰
13

14 **V. SAVINGS BY DESIGN RESIDENTIAL NEW CONSTRUCTION PROGRAM**

15 Q. WHAT IS THE PROJECTED TRC OF THE SBD PROGRAM AND WHY
16 IS IT NOT COST-EFFECTIVE?

17 A. The SBD program provides incentives to home builders for the new residential
18 construction of ENERGY STAR version 3.0 homes. The program is projected to
19 render a net TRC of 0.3. The low cost-benefit ratio for the program is likely the
20 result of the high non-incentive to incentive cost ratio of 7.8:1.¹¹

21 Q. DO YOU BELIEVE THE HIGH NON-INCENTIVE COSTS
22 ASSOCIATED WITH THE SBD PROGRAM ARE DUE TO START-UP
23 COSTS?

¹⁰ In PY 6, these three measures accounted for less than one percent of the energy savings for the REEP.

¹¹ Ratio of non-incentive costs of \$1,389,092 to incentive costs of \$177,506.

1 A. No. The SBD budget indicates that the expenditures for the program are even
2 throughout all five years and does not indicate that the program has significant start-
3 up costs.

4 Q. DO YOU RECOMMEND THAT THE COMMISSION APPROVE THE
5 SBD PROGRAM DESPITE IT NOT BEING COST-EFFECTIVE?

6 A. No. In the SBD program, the International Energy Conservation Code (“IECC”)
7 serves as the baseline from which the incremental savings is counted.
8 Pennsylvania’s current building code is the 2009 IECC.¹² If Pennsylvania were to
9 adopt an updated IECC; SBD’s cost-effectiveness would be “materially lower.”¹³
10 Due to the program’s low projected energy savings, I recommend that the funds
11 allocated for the proposed SBD program be reallocated to other proposed programs
12 to either increase or fund additional rebates.

13

14 **VI. LOW-INCOME PROGRAMS**

15 Q. WHAT ARE THE THREE DESIGNATED LOW-INCOME PROGRAMS
16 PROPOSED BY THE COMPANY?

17 A. The Company proposes to offer a comprehensive program that includes the Whole
18 House Retrofit Program, the Home Energy Reporting Program, and the Small C&I
19 Multifamily Housing Retrofit Program. Collectively, the three programs will offer
20 energy efficiency measures to 40,740 participants throughout Phase III, averaging
21 36,148 participants annually. The majority of participants are from the Low Income
22 Home Energy Reporting Program that will send energy reports to 35,000 customers
23 annually.

¹² In addition to the 2009 IECC, there are the 2012 IECC and 2015 IECC building codes.

¹³ DLC response to OCA I-10.

1 Q. DO YOU BELIEVE THAT THESE PROPOSED PROGRAMS ARE
2 SUFFICIENT FOR THE COMPANY'S LOW-INCOME CUSTOMERS?

3 A. Qualified low-income customers will have an opportunity to receive energy-savings
4 measures through the two housing retrofit programs. These programs serve as
5 comprehensive weatherization programs for single and multi-family low-income
6 households. However, it is unclear how beneficial the home energy reports will be,
7 as low-income customers may have difficulty participating in the other energy
8 efficiency programs offered by DLC and marketed in the reports.

9 Q. WHAT PERCENTAGE OF SAVINGS IS FORECASTED TO BE
10 ACHIEVED BY THE DESIGNATED LOW-INCOME PROGRAMS?

11 A. Collectively, the three programs are forecasted to produce 25,462 MWh of energy
12 savings throughout Phase III for low-income customers. Table 4 provides a
13 breakdown of the projected savings for each of the three programs.

14 **Table 4. Low-Income Forecasted Savings by Program**

Program	Total Savings (MWh)	Percent
Whole House Retrofit	3,819	15%
Home Energy Reporting	12,731	50%
Multifamily Housing Retrofit	8,912	35%
Total	25,462	100%

15 Q. ARE YOU CONCERNED THAT THE PLAN MAY NOT ACHIEVE THE
16 5.5 PERCENT ENERGY SAVINGS CARVE OUT MANDATED BY THE
17 IMPLEMENTATION ORDER?

18 A. As proposed, the Plan is projected to achieve 5.6 percent of the total energy savings
19 in Phase III from designated low-income programs. This only allows for a one
20 percent, or 727 MW, difference between the *Implementation Order* requirement and

1 the forecasted energy savings of the three programs combined. The majority of the
2 energy savings is projected to come from the low-income home energy reports;
3 however, it is unclear how effective and persistent the energy savings will be for
4 low-income customers. If the home energy reports do not achieve the projected
5 energy savings, it is likely that DLC will not meet the 5.5 percent carve-out
6 requirement for the low-income savings. I recommend that, if half of the projected
7 energy savings from the low-income home energy reports is not achieved by the
8 conclusion of PY 10, the Company cease the home energy reports, and allocate the
9 remaining funds to the existing low-income programs.

10 Q. WHY ARE YOU CONCERNED THAT LOW INCOME HOME
11 ENERGY REPORTS MAY NOT GENERATE THE PROJECTED
12 SAVINGS?

13 A. I have reservations about the applicability of the messaging to low income
14 customers, as well as the ability for low income customers to respond to the
15 messaging. Often times, energy savings tips call for reductions in energy usage that
16 low income households cannot implement, whether it is due to cost, health, or living
17 situations. Therefore, the messaging used in the reports cannot be duplicative of the
18 residential home energy reports. I recommend that the low income home energy
19 reports provide messaging targeted towards low income customers.

20 I also recommend that DLC find a way to allow customers to provide input on
21 what behaviors they are implementing, perhaps through a website, and for the
22 Company to track the programs in which a household has participated. By doing so,
23 the feedback can be used in generating more targeted marketing and energy tips than
24 what is currently provided in the reports.

1 Q. WOULD YOU ALSO MAKE THE SAME RECOMMENDATION FOR
2 THE RESIDENTIAL HOME ENERGY REPORT PROGRAM?

3 A. Yes. I recommend that DLC allow residential home energy report recipients to
4 provide input on what behaviors they are implementing, perhaps through a website,
5 and for the Company to track the programs in which a household has participated.
6 Inclusion of this input can reduce the repetitiveness of the messaging that can lead
7 some recipients to lose interest.

8 Q. ARE THE LOW-INCOME PROGRAMS EXPECTED TO BE COST-
9 EFFECTIVE?

10 A. The Low Income programs TRCs have been broken down between the residential
11 and multifamily programs. The Residential low-income programs are forecasted to
12 produce a net TRC of 0.7, and are not expected to be cost-effective. However, DLC
13 projects that the Small C&I Multifamily Housing Retrofit Program will be cost-
14 effective, with a projected net TRC of 1.8.

15 Q. ARE YOU CONCERNED THAT THE RESIDENTIAL LOW-INCOME
16 PROGRAMS ARE NOT COST-EFFECTIVE?

17 A. No. Despite the Residential low-income programs not producing a net TRC above
18 1.0, the Commission should approve the low-income programs. Low-income
19 programs tend to not be cost-effective due to the burden of absorbing participant
20 costs that are typically paid for by the consumer in other residential energy
21 efficiency programs.

22

23 **VII. DEMAND RESPONSE PROGRAM**

24 Q. PLEASE DESCRIBE THE PROPOSED RESIDENTIAL DEMAND
25 RESPONSE PROGRAM.

1 A. DLC has proposed the DMP, which offers a Residential and Commercial
2 component. The Residential demand response component will explore offering a
3 BYOD program that will allow participants to enroll smart thermostats into the
4 demand response program. The offering of BYOD allows for the program to have
5 reduced capital costs since the program will not provide the device. The Company
6 will also investigate whether the 1,474 devices installed under DLC's Phase I
7 demand response program would be compatible to participate in the BYOD
8 program. The program is expected to render 2.1 MW of demand reduction.

9 Q. DO YOU HAVE ANY CONCERNS REGARDING THE DEMAND
10 RESPONSE PROGRAM?

11 A. Yes. There can be complications with implementing a BYOD program, and
12 evaluation, measurement, and verification processes need to be established to verify
13 the savings generated from the program. Additionally, until AMI meters have been
14 fully implemented, it may be difficult to verify the demand reductions from BYODs
15 that are enrolled in the program.

16 Q. TO ALLEVIATE YOUR CONCERNS, WOULD YOU RECOMMEND
17 THAT THE COMPANY IMPLEMENT A FULL-FLEDGED
18 RESIDENTIAL DEMAND RESPONSE PROGRAM OR A PILOT
19 PROGRAM?

20 A. To ensure the success of the program, I recommend that the program be
21 implemented as a pilot program before being expanded to the entire Residential
22 customer base.

23 Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?

24 A. Yes, it does.

215877

ATTACHMENT A
QUALIFICATIONS OF
STACY L. SHERWOOD

STACY L. SHERWOOD

Ms. Sherwood is an Economist at Exeter Associates, Inc. At Exeter, Ms. Sherwood develops utility service assessments, provides bill and rate analysis, and assesses and evaluates the effectiveness of energy conservation and efficiency programs. She also conducts analysis on renewable energy initiatives and life-cycle cost analysis of renewable energy projects.

Education

B.A. (Economics, Business, and Accounting) – McDaniel College, 2009

Previous Employment

2013-2015	Assistant Director Maryland Public Service Commission Baltimore, Maryland
2011-2013	Regulatory Economist II Maryland Public Service Commission Baltimore, Maryland
2009-2011	Regulatory Economist I Maryland Public Service Commission Baltimore, Maryland

Professional Experience

At the Maryland Public Service Commission, Ms. Sherwood performed analysis on the EmPOWER Maryland energy efficiency and demand response programs, the Exelon Customer Investment Fund, and served as lead analyst for the EmPOWER Maryland limited income programs implemented by the Maryland Department of Housing and Community Development. For those initiatives, she developed reporting templates and guidelines, oversaw evaluation, measurement, and verification of program results, and recommended and ensured compliance with policies. She coordinated and supervised the 2014 through 2023 *Ten Year Plan Report* and the 2015 *Renewable Energy Portfolio Standard Report* for the Commission, as well as contributed to *The EmPOWER Maryland Energy Efficiency Act Standard Report* for the years 2011 through 2015. She also assisted with the development of regulations proposed before the Commission to implement the 2013 Maryland Offshore Wind Energy Act. On a semi-annual basis, she presented EmPOWER Maryland recommendations before the Commission.

Expert Testimony Presented

Before the Maryland Public Service Commission in Case No. 9311, In the Matter of the Application of Potomac Electric Power Company For an Increase in its Retail Rates For the Distribution of Electric Energy. Testified regarding the inclusion of energy advisor and engineer positions and advanced metering infrastructure meters in rates.

Before the Pennsylvania Public Utilities Commission in Docket No. P-2015-247267, Petition of Duquesne Light Company for Approval of its Smart Meter Procurement and Installation Plan. Testified regarding the request for additional AMI implementation costs and the approval to implement an Advanced Distribution Management System ("ADMS").

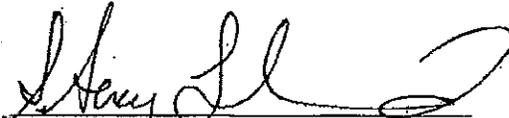
BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Act 129 Phase III : Docket No. M-2015-2515375
Energy Efficiency and Conservation Plan :

VERIFICATION

I, Stacy L. Sherwood, hereby state that the facts above set forth in my Direct Testimony, OCA St. No. 1, are true and correct and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Signature:


Stacy L. Sherwood

Consultant Address: 10480 Little Patuxent Parkway
Suite 300
Columbia, Maryland 21044

DATED: January 12, 2016

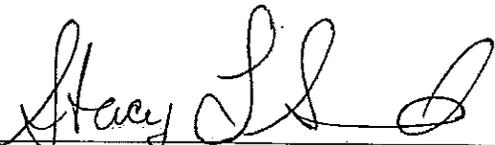
215824

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
for Approval of its Act 129 Phase III : Docket No. M-2015-2515375
Energy Efficiency and Conservation Plan :

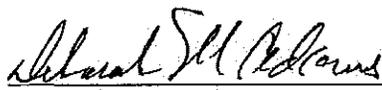
AFFIDAVIT OF STACY L. SHERWOOD

I, Stacy L. Sherwood, a consultant to the Pennsylvania Office of Consumer Advocate, having qualifications as set forth in Attachment A of my Direct Testimony at OCA Statement No. 1, state that the facts set forth in my Direct Testimony, OCA St. No. 1, are true and correct to the best of my knowledge, information and belief. I understand that the statements made herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities.)



STACY L. SHERWOOD

Sworn and subscribed before me this 8 day
of February 2016.



Notary Public

My Commission Expires: 2/2019

ATTACHMENT D

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

2 A. My name is Roger Colton. My business address is 34 Warwick Road, Belmont, MA
3 02478.

4
5 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT POSITION?**

6 A. I am a principal in the firm of Fisher Sheehan & Colton, Public Finance and General
7 Economics of Belmont, Massachusetts. In that capacity, I provide technical assistance to
8 a variety of federal and state agencies, consumer organizations and public utilities on rate
9 and customer service issues involving telephone, water/sewer, natural gas and electric
10 utilities.

11
12 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?**

13 A. I am testifying on behalf of the Office of Consumer Advocate (“OCA”).
14

15 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND.**

16 A. I work primarily on low-income utility issues. This involves regulatory work on rate and
17 customer service issues, as well as research into low-income usage, payment patterns,
18 and affordability programs. At present, I am working on various projects in the states of
19 New York, Pennsylvania, Michigan, Illinois, Iowa, as well as in the provinces of Ontario,
20 Manitoba and British Columbia. My clients include state agencies (e.g., Pennsylvania
21 Office of Consumer Advocate, Maryland Office of People’s Counsel, Iowa Department
22 of Human Rights), federal agencies (e.g., the U.S. Department of Health and Human
23 Services), community-based organizations (e.g., Energy Outreach Colorado, Community

1 Action Partnership Association of Idaho), and private utilities (e.g., Unitil Corporation
2 d/b/a Fitchburg Gas and Electric Company, Entergy Services, Xcel Energy d/b/a Public
3 Service of Colorado).

4
5 **Q. PLEASE EXPLAIN YOUR PREVIOUS WORK ON ENERGY EFFICIENCY**
6 **PLANNING AS IT RELATES TO MULTI-FAMILY HOUSING.**

7 A. Over the course of the past thirty years, I have been involved with energy efficiency
8 planning generally, with a more recent focus on utility investment in energy efficiency
9 for multi-family dwellings. I sat on the Board of Directors of the Vermont Energy
10 Investment Corporation (“VEIC”). VEIC is one of the leading energy efficiency
11 companies in the nation. I also sat on the Board of Directors of Affordable Comfort, Inc.
12 (“ACI”), one of the leading national proponents of residential energy efficiency
13 programs. I was a member of the National Technical Advisory Committee on Energy
14 Financing Alternatives for Subsidized Housing for the New York State Research and
15 Development Authority (NYSERDA). More recently, I testified for the OCA on issues
16 regarding the energy efficiency investments of the Philadelphia Gas Works (“PGW”) in
17 multi-family housing. In 2014, I was hired by the Natural Resources Defense Council
18 (“NRDC”) to develop an objective definition of “equitable investment” for application to
19 utility investments in energy efficiency; and to develop a mechanism through which the
20 equity of utility investments in multi-family housing in particular could be measured. I
21 completed that report in 2015.¹

¹ Colton (January 2015). The Equity of Efficiency: Distributing Utility Usage Reduction Dollars for Affordable Multi-Family Housing. Natural Resources Defense Council: New York (NY).

1

2 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

3 A. After receiving my undergraduate degree in 1975 (Iowa State University), I obtained
4 further training in both law and economics. I received my law degree in 1981 (University
5 of Florida). I received my Master's Degree (economics) from the MacGregor School in
6 1993.

7

8 **Q. HAVE YOU EVER PUBLISHED ON PUBLIC UTILITY REGULATORY**
9 **ISSUES?**

10 A. Yes. I have published more than 80 articles in scholarly and trade journals, primarily on
11 low-income utility and housing issues. I have published an equal number of technical
12 reports for various clients on energy, water, telecommunications and other associated
13 low-income utility issues.

14

15 **Q. HAVE YOU EVER TESTIFIED BEFORE THIS OR OTHER UTILITY**
16 **COMMISSIONS?**

17 A. Yes. I have testified before the Pennsylvania Public Utility Commission ("PUC" or
18 "Commission") on numerous occasions regarding utility issues affecting low-income
19 customers. I have also testified in regulatory proceedings in more than 30 states and
20 various Canadian provinces on a wide range of utility issues.

21

22 **Q. PLEASE EXPLAIN THE PURPOSE OF YOUR DIRECT TESTIMONY.**

1 A. The purpose of my Direct Testimony is to assess whether the Duquesne Light Company's
2 ("Duquesne" or "Company") proposal(s) to extend energy efficiency investments to
3 multi-family housing is reasonable. I also review the extent to which the Company
4 provides for reasonable cost recovery for its multi-family energy efficiency investments.

5

6 **Q. PLEASE SUMMARIZE YOUR FINDINGS AND CONCLUSIONS.**

7 A. Based on the data and discussion presented above, I conclude the following with respect
8 to the Company's multi-family Energy Efficiency and Conservation Plan ("EECP")
9 Phase III proposal:

10

11 1. The Company's plan does not clearly identify the type of multi-family housing
12 buildings that will be served by the proposed energy efficiency programs.

13

14 2. The Company's multi-family program should address non-subsidized, non-low-
15 income multi-family housing.

16

17 3. To the extent that the Company's multi-family program addresses subsidized
18 housing, it should address not only multi-family housing receiving public
19 subsidies owned and/or operated by a public agency, but multi-family housing
20 receiving public subsidies owned and/or operated by private entities (e.g., Low-
21 Income Housing Tax Credits).

22

23 4. The Company's proposal should be approved to the extent that it requires that
24 costs of any multi-family program directed exclusively to master metered
25 developments be allocated exclusively to the commercial class.

26

27 **Part 1. Appropriately Covering the Full Range of Multi-Family Housing.**

28 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
29 **TESTIMONY.**

1 A. In this section of my testimony, I assess whether the Company appropriately defines the
2 scope of multi-family housing in its design of energy efficiency and conservation
3 programs to target such housing. I conclude that the Company does not clearly identify
4 the multi-family market that it is targeting in its Plan (i.e., large multifamily complexes or
5 buildings with fewer units). Duquesne should be required to clearly identify the type of
6 multi-family housing that it is targeting in each program and ensure that its programs are
7 available to the full range of multi-family homes.

8
9 As the data I discuss below will show, there is a significant market of multi-family
10 housing stock that cannot possibly be reached by the Company's approach. I base this
11 conclusion on three observations. First, as I explain below, the Company limits its multi-
12 family program to larger multi-family developments, thus excluding the vast majority of
13 multi-family units in buildings with 3 to 19 units. Second, the Company limits its multi-
14 family program to buildings occupied by "income qualified occupants" thus excluding
15 even more multi-family units. Finally, the Company then limits its program to multi-
16 family low-income units owned and/or managed by public agencies and receiving public
17 subsidies, thus excluding multi-family housing developed by private entities subsidized
18 by public funding.

19
20 **Q. DOES THE COMPANY'S PLAN INCLUDE SMALL MULTI-FAMILY**
21 **HOUSING UNITS?**

22 A. No. Duquesne proposes to serve multi-family housing through its low-income sector
23 programs. (Plan, at 40). Not all multi-family units are targeted, however. According to

1 the Company, its Low-Income Multifamily Housing Retrofit Program “is operated in
2 conjunction with the Public Agency Partnership Program (PAPP) that serves as a conduit
3 to housing authority property inventories.” (Plan, at 41, citing Plan Section 3.3.4). The
4 Company explicitly states that its Low-income Multifamily Housing Retrofit Program
5 “will be marketed to low-income multifamily housing facilities served under commercial
6 master-meter accounts in conjunction with the Public Agency Partnership Program
7 (PAPP) that serves as a conduit to housing authority program inventories.” (Plan, at 42-
8 43). Moreover, the Company states, in its “program description,” that “the multifamily
9 market manager will integrate funding sources to include program and agency co-
10 funding, performance contracting, grant funding and available financing options.” (Plan,
11 at 58). None of these financing options are directed toward small multi-family housing
12 developments. The Company finally states that “the cost-share to the participating
13 jurisdictions or property owners is negotiated on a case-by-case basis, depending on the
14 availability of funding and finance option.” (Plan, at 58). Again, this approach is directed
15 toward larger, master metered multi-family developments.

16
17 **Q. PLEASE COMPARE THIS FOCUS TO THE OVERALL DISTRIBUTION OF**
18 **MULTI-FAMILY UNITS?**

19 A. In the Energy Efficiency Potential Study for Pennsylvania (February 2015), GDS
20 Associates (“GDS”) appropriately defined “multi-family” housing broadly. According to
21 GDS, “multi-family” extended to all building types with more than one unit when the
22 building was bigger than a duplex (or 1-family attached unit). (see, e.g., GDS Potential
23 Study, at 3). Data from the American Community Survey, as set forth in Schedule RDC-

1 2, the database largely relied upon by GDS, indicates the extent to which small multi-
2 family buildings represented the multi-family housing stock in Pennsylvania in 2014. As
3 is evident, within the homeowner sector, the number of units in buildings with three to 19
4 units (32,525) exceeded the number of units in the larger developments (28,117). This
5 same result can be seen in the rental sector (442,084 units in 3 – 19 unit buildings vs.
6 256,275 in 20+ unit buildings). Designing multi-family energy efficiency programs
7 where, by design or by practical application, the program focuses on large developments
8 to the exclusion of smaller multi-family buildings could potentially exclude the majority
9 of multi-family units in Pennsylvania, particularly in the rental sector.

10
11 **Q. DOES THE CONCLUSION CHANGE IF YOU LIMIT THE DATA TO**
12 **COUNTIES SERVED BY DUQUESNE LIGHT?**

13 A. No. This conclusion does not change if one limits the data exclusively to Allegheny and
14 Beaver Counties. These two counties are the geographic units that the Duquesne Light
15 EECF relies upon as “representative of housing characteristics in Duquesne Light’s
16 service area.” (Plan, at 18 – 19, and footnote 14). As shown in Schedule RDC-3, while
17 there are 64,000 rental housing units in buildings with 3 – 19 units, there are 42,000 in
18 buildings with 20 or more units. While the numbers are closer for ownership units,
19 nonetheless, the number of units in small multi-family buildings exceeds the number of
20 units in large multi-family developments.

21

1 **Q. WOULD EXCLUDING A SUBSTANTIAL PORTION OF MULTI-FAMILY**
2 **HOUSING HAVE THE EFFECT OF EXCLUDING A DISPROPORTIONATELY**
3 **LOWER INCOME POPULATION?**

4 A. Yes. Schedule RDC-1 sets forth the data on income by number of units in a building for
5 Pennsylvania (without controlling for owner / renter status). The data in Schedule RDC-
6 1 is limited to units that are individually-metered for electricity. Households living in
7 smaller multi-family buildings have the lowest incomes of all building types. Households
8 living in multi-family buildings with 3 – 4 units have an average income of \$38,095
9 while households living in a building with 5 – 9 units have an average income of
10 \$37,974. In contrast, households living in multi-family buildings with ten or more units
11 all have incomes exceeding \$40,000. While the households excluded by the Duquesne
12 Light multi-family efficiency program may not be “low-income” as defined by reference
13 to 150% of Federal Poverty Level, they are nonetheless households at the lower end of
14 the income spectrum.

15
16 **Q. DOES DUQUESNE ALSO LIMIT ITS MULTI-FAMILY PROGRAM TO**
17 **SUBSIDIZED HOUSING DEVELOPMENTS?**

18 A. Duquesne states that its Low-Income Energy Efficiency Program provides “energy
19 efficiency services to households that are at or below 150% of the federal poverty income
20 guidelines, including those located in multi-family buildings.” (Plan, at 40). The Low-
21 Income Multi-Family Housing Retrofit Program, however, is directed toward “housing
22 authority property inventories” through the Public Agency Partnership Program (PAPP).
23 (Plan, at 41). Duquesne Light acknowledges that rather than being directed toward

1 income-qualified households in an effort to help those households reduce their electricity
2 costs, the Low-Income Multi-Family Housing Retrofit Program “will be marketed to low
3 income multi-family housing facilities served under commercial master-meter rate
4 accounts.” (Plan, at 42 – 43; see also, Duquesne Light Petition, at 7, 12) (emphasis
5 added).

6
7 **Q. PLEASE EXPLAIN WHY YOU CONCLUDE THAT DUQUESNE LIGHT HAS**
8 **EXCLUDED PRIVATE DEVELOPMENTS RECEIVING PUBLIC SUBSIDIES**
9 **FROM ITS MULTI-FAMILY EFFICIENCY PROGRAM.**

10 A. Limiting the multi-family program only to subsidized housing units owned and operated
11 by housing authorities (Duquesne Plan, at 41, 43, 58) excludes most housing
12 developments receiving public subsidies. Consider for example, that private
13 development subsidized with federal Home Investment Partnership Program dollars in
14 Allegheny and Beaver counties has produced 2,900 housing units since 1992 (the year
15 that federal program was initiated), more than 60% of which have been rental units.
16 More than 6,000 units of private housing subsidized with federal Low-Income Housing
17 Tax Credits have been produced in Allegheny and Beaver counties. In contrast, housing
18 authorities in these two counties own and operate only 5,500 units of public housing in
19 total.

20
21 **Q. PLEASE SUMMARIZE YOUR FINDINGS AND CONCLUSION.**

22 A. In sum, I find that Duquesne Light excludes multi-family units that are individually-
23 metered, the biggest sector of multi-family housing. Duquesne further excludes small

1 multi-family housing, which is by far the majority of multi-family units. By limiting its
2 multi-family energy efficiency investments to subsidized housing owned and operated by
3 local housing authorities, the Company precludes the investment in a substantial majority
4 of subsidized housing owned and operated by private entities, even if receiving public
5 subsidies. If an Electric Distribution Company (“EDC”) targets or limits its energy
6 efficiency programs in this way, the EDC misses the opportunity to provide energy
7 efficiency investments that will produce substantial electricity savings from, and reduce
8 electricity costs to, customers living in multi-family housing.

9
10 **Part 2. Multi-Family Cost Recovery.**

11 **Q. PLEASE EXPLAIN THE PURPOSE OF THIS SECTION OF YOUR**
12 **TESTIMONY.**

13 A. In this section of my testimony I review the Company’s proposed cost-recovery to the
14 extent that it allocates the costs of its proposed multi-family efficiency program.

15
16 **Q. PLEASE DESCRIBE YOUR ASSESSMENT OF THE COMPANY’S PROPOSED**
17 **COST RECOVERY FOR ITS MULTI-FAMILY EFFICIENCY PROGRAM.**

18 A. Duquesne presents its multi-family energy efficiency program as a “small commercial”
19 program. (Plan, at 8; Petition, at 7 and 12). It notes that the program is a continuation of
20 the small C&I program adopted in Phase II. (Plan, at 107). Duquesne Light states that its
21 cost recovery will be from the customer class receiving the benefits of the program.
22 (Statement 1, at page 22). Duquesne Light will define the customer sector being served

1 based on the Company's existing tariff as applied to the meter for the account receiving
2 the service. (Petition, at 12).

3
4 The costs of multi-family EECF programs should be allocated to the customer class to
5 which the meter associated with the account belongs as determined by the Company's
6 rate tariffs. Accordingly, the cost allocation method proposed by Duquesne Light, under
7 which the costs of its multi-family program directed to master-metered developments are
8 allocated to the small commercial customer class, should be approved.

9
10 **Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?**

11 **A.** Yes, it does.

12 215900

Colton Schedules

Schedule RDC-1

Average Income by Units in Building (Pennsylvania)
 (American Community Survey: 2014: 5-year data)

Pennsylvania	\$71,164
Total BLD	\$71,164
One-family house detached	\$84,520
One-family house attached	\$60,105
2 Apartments	\$38,134
3-4 Apartments	\$38,095
5-9 Apartments	\$37,974
10-19 Apartments	\$45,915
20-49 Apartments	\$41,084
50 or More Apartments	\$46,450

Schedule RDC-2

Tenure by Units in Structure: Occupied Housing (Pennsylvania) /a/ (2014 ACS: 5-year data) (ACS Table B25032)	
Total (includes boats and vans):	4,957,736
Owner-occupied housing units (includes boats and vans):	3,446,230
1, detached	2,584,705
1, attached	625,013
2	30,911
3 or 4	12,953
5 to 9	10,059
10 to 19	9,513
20 to 49	8,076
50 or more	20,041
Renter-occupied housing unit(includes boats and vans):s	1,511,506
1, detached	300,988
1, attached	285,807
2	182,995
3 or 4	177,388
5 to 9	150,183
10 to 19	114,513
20 to 49	90,299
50 or more	165,976
/a/ Excludes mobile home, vans and boats.	

Schedule RDC-3

Tenure by Units in Structure: Occupied Housing (Allegheny and Beaver Counties) (2014 ACS: 5-year data) (ACS Table B25032)		
	Allegheny County, Pennsylvania	Beaver County, Pennsylvania
Total:	527,445	70,336
Owner-occupied housing units:	344,578	51,222
1, detached	300,461	46,424
1, attached	28,713	1,385
2	3,275	257
3 or 4	1,362	294
5 to 9	1,447	253
10 to 19	1,394	86
20 to 49	1,646	40
50 or more	2,905	12
Renter-occupied housing units:	182,867	19,114
1, detached	39,545	6,983
1, attached	23,054	1,502
2	20,338	2,004
3 or 4	18,236	2,507
5 to 9	22,093	1,844
10 to 19	18,816	973
20 to 49	13,614	1,175
50 or more	26,352	1,319
/a/ Excludes mobile home, vans and boats.		

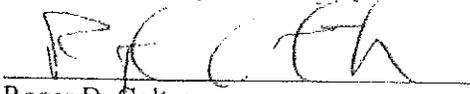
BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
For Approval of its Act 129 Phase III : Docket No. M-2015-2515375
Energy Efficiency and Conservation Plan :

VERIFICATION

I, Roger D. Colton, hereby state that the facts above set forth in my Direct Testimony, OCA St. No. 2, are true and correct and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Signature:


Roger D. Colton

Consultant Address:

34 WARREN ROAD
BECKETT, MA 02478

DATED: 11/2/15

215823

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
for Approval of its Act 129 Phase III : Docket No. M-2015-2515375
Energy Efficiency and Conservation Plan :

AFFIDAVIT OF ROGER D. COLTON

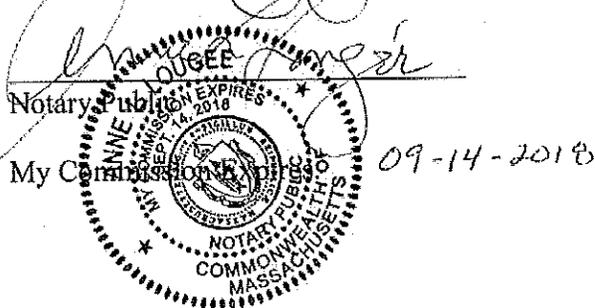
I, Roger D. Colton, a consultant to the Pennsylvania Office of Consumer Advocate, state that the facts set forth in my Direct Testimony, OCA St. No. 2, and the accompanying schedules, are true and correct to the best of my knowledge, information and belief. I understand that the statements made herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities.)



ROGER D. COLTON

Sworn and subscribed before me this 8th day
of February 2016.



Notary Public
My Commission Expires 09-14-2018


ATTACHMENT E

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Petition of Duquesne Light Company :
for Approval of its Act 129 Phase III : Docket No.: M-2015-2515375
Energy Efficiency and Conservation Plan :

DIRECT TESTIMONY OF MITCHELL MILLER
ON BEHALF OF
THE COALITION FOR AFFORDABLE UTILITY SERVICES AND
ENERGY EFFICIENCY IN PENNSYLVANIA (“CAUSE-PA”)

January 13, 2016

1 **PREPARED DIRECT TESTIMONY OF MITCHELL MILLER**

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

3 A. Mitchell Miller. I currently provide consulting services regarding utility programs that
4 promote the public interest with a focus on low-income households. My address is 60 Geisel
5 Road, Harrisburg, PA 17112.

6 **Q. Briefly outline your education and professional background.**

7 A. As my attached resume shows, I received my B.S. Degree in Community Development
8 from Pennsylvania State University where I graduated Cum Laude in 1974, and a M.A degree in
9 Public Administration from Shippensburg University in 1984. I have over 35 years of
10 experience in the development, implementation, and evaluation of program design for residential
11 utility consumers. The focus of my work has concerned education, energy efficiency, credit and
12 collections, and customer assistance programs.

13 After serving as a research analyst at both the Pennsylvania Governors Action Center and
14 the Pennsylvania Public Utility Commission (“Commission”), in 1978 I was appointed Chief of
15 the Commission’s Division of Research and Planning and in 1992, designated as the Director of
16 the Bureau of Consumer Services where I served until my retirement from the Commission in
17 2009.

18 Following my retirement from the Commission in 2009, I served for over three years as a
19 consultant to the Pennsylvania Department of Community and Economic Development
20 (“DCED”) on weatherization and energy efficiency for the Pennsylvania Weatherization
21 Assistance Program (WAP.) My resume is included as Attachment A.

1 **Q. Please describe the focus of your work over the past thirty-five years.**

2 A. During my tenure at the Commission, I was primarily engaged in activities relating to
3 regulatory policy involving residential customer service, complaint handling, credit and
4 collections, and universal service, including customer assistance programs and low-income
5 energy efficiency and conservation. The Bureau of Consumer Services has regulatory authority
6 and responsibility for policy development for all areas of consumer services including resolving
7 consumer complaints and problems, enforcing consumer regulations, developing, implementing
8 and evaluating programs involving complaint handling, complaint analysis, collections,
9 enforcement of consumer regulations, utility customer assistance programs and low income
10 conservation. My focus at DCED was the creation of a performance-based Weatherization
11 Assistance Program system, dedicated to a high standard of quality, compliance and production.

12 **Q. What is your relevant experience on issues of low-income utility affordability and**
13 **energy efficiency?**

14 A. During my tenure, the Commission emerged as a national leader in research,
15 development, and oversight of programs addressing credit and collection issues affecting low-
16 income utility consumers. I was responsible for evaluating utility and Commission customer
17 service programs, identifying problems and making recommendations for change. These
18 activities led to the recognition of the need for development of integrated programs for low
19 income consumers. As director of BCS, I was responsible for the development, oversight, and
20 monitoring of the initial pilot and then the statutorily required low-income Universal Service
21 Programs. Each of these programs is structured to provide a different form of assistance to low-
22 income customers to enable those customers to afford and maintain basic service. For example,
23 the Customer Assistance Program (CAP) provides alternatives to traditional collection methods

1 for low income, payment troubled utility customers, and the Low Income Usage Reduction
2 Program (“LIURP”) is a targeted weatherization program designed to assist low-income
3 households with the highest energy consumption, payment problems, and arrearages. These
4 programs work in tandem and are designed to assist low-income households in obtaining
5 affordable utility services and safe living environments while reducing utility collection and
6 therefore benefitting other ratepayers.

7 As director of BCS, I supervised the review and determination of thousands of low-income
8 consumer complaints and inquiries as well as the reviews of utility performance at handling these
9 customer complaints and payment arrangement requests.

10 I directed the creation, development, and evaluation of the effectiveness and the
11 expansion of the Universal Service Programs in Pennsylvania that are targeted toward low-
12 income households. These programs included CAP and LIURP, as well as the Customer
13 Assistance Referral Evaluation program (CARES) and utility-funded hardship funds. Since the
14 programs’ inception, followed by the passage of the Electricity Generation and the Natural Gas
15 Customer Choice and Competition Acts, which required that the Commission ensure that
16 universal service and energy conservation services are appropriately funded and available in each
17 utility distribution territory, until about the time of my retirement in 2009, the Bureau of
18 Consumer Services was responsible for Commission oversight of these programs.

19 Further, upon my retirement from the Commission, I served as a consultant on
20 weatherization and energy efficiency for the Pennsylvania Weatherization Assistance Program
21 (WAP) at DCED. I was instrumental in transforming the WAP program by creating a
22 performance-based system, dedicated to a high standard of quality, compliance and production.
23 Innovations included introducing performance standards for production, quality and compliance

1 and independent state certification and training for all state WAP workers. I was also responsible
2 for coordinating DCED's WAP program with the Commission's LIURP and Act 129 low-income
3 programs.

4 I have participated at the National Association of Regulatory Utility Commissioners
5 ("NARUC"), the National Low Income Energy Consortium and the National Energy Utility
6 Affordability Conference meetings and have presented numerous sessions related to low-income
7 utility affordability. I currently serve on the board of directors of the Keystone Energy Efficiency
8 Alliance ("KEEA"), a co-chair of KEEA's annual conference and a member of the WAP Policy
9 Advisory Council.

10 **Q. Have you testified in any proceeding before the Pennsylvania PUC?**

11 A. Yes. I have submitted testimony in a number of proceedings before the PUC. Most
12 recently, I submitted testimony in the 2015 PPL rate proceeding at Docket No. R-2015-2469275,
13 the 2015 Columbia base rate proceeding at Docket No. R-2015-2468056, 2014 Columbia base
14 rate proceeding at Docket No. R-2014-2406274, and the Verizon Pennsylvania, LLC, and
15 Verizon North, LLC, Petition for Competitive Classification at Docket Nos. P-2014-2446303, P-
16 2014-2446304 and the Petition of Philadelphia Gas Works for Approval of its Phase II Demand
17 Side Management Plan at Docket No. P-2014-2459362. I have also submitted testimony in the
18 past with regard to the Petition of PECO Energy Company ("PECO") for Approval its Act 129
19 Phase II Energy Efficiency and Conservation Plan at Docket No. M-2012-2333992 and in
20 PECO's Default Service and Universal Service Proceedings at Docket Nos. P-2012-2283641 and
21 M-2012-2290911, respectively.

22

1 **Q. Have you provided litigation support for the Commission?**

2 A. Although I did not testify in any proceeding during my tenure at the Commission, I directed
3 the Bureau's activities in policy development, as well as enforcement litigation to ensure
4 compliance with customer service regulations and statutes.

5 **Q. For whom are you testifying in this proceeding?**

6 A. I am testifying on behalf of the Coalition for Affordable Utility Services and Energy
7 Efficiency in Pennsylvania ("CAUSE-PA").

8 **Q. What is the purpose of your testimony?**

9 A. The purpose of my testimony is to comment upon Duquesne Light Company's
10 ("Duquesne") *Petition for Approval of its Energy Efficiency and Conservation Phase III Plan*
11 ("Phase III Plan") filed on November 25, 2015 with the Pennsylvania Public Utility Commission
12 ("Commission"). Duquesne filed its Phase III Plan pursuant to the requirements of Act 129 of
13 2008 and the Commission's Act 129 Phase III Implementation Order, *Energy Efficiency and*
14 *Conservation Program Implementation Order*, entered on June 19, 2015, at Docket No. M-2014-
15 2424864 ("Phase III Implementation Order").

16 I will focus my testimony on those parts of Duquesne's Plan affecting households with
17 income at or below 150% of the federal poverty income level. Throughout this testimony, the
18 term "low-income" as applied to persons or households will refer to those individuals and/or
19 households whose income is at or below 150% of the federal poverty income guidelines.

20 Specifically, I will address those areas of Duquesne's proposed Phase III Act 129 Plan
21 that I believe require further development in order to appropriately assist Duquesne's low-
22 income customers in a way that provides meaningful energy reduction and bill reductions for

1 these economically vulnerable households while at the same time allowing Duquesne to meet its
2 energy savings targets.

3 **Q. Please summarize Phase III Act 129 low-income energy savings requirements.**

4 A: Act 129 requires that each Electric Distribution Company's ("EDC") Energy Efficiency
5 and Conservation ("EE&C") Plan must include specific energy efficiency measures for households
6 at or below 150% of the federal poverty income guidelines, in proportion to that sector's share of
7 the total energy usage in the EDC's service territory.¹ The Commission adopted this requirement
8 for all Phase I Plans. In Phase II, the Commission continued its Phase I low-income requirement
9 that each plan include specific energy efficiency measures for households at or below 150% of the
10 federal poverty income guidelines, in proportion to that sector's share of the total energy usage
11 and also required an additional metric that each EDC Phase II EE&C Plan must obtain a minimum
12 of four-and-a-half percent (4.5%) of its consumption reduction requirements from the low-income
13 sector.²

14 For Phase III, the Commission increased the consumption reduction requirement for the
15 low-income sector to five-and-a-half percent (5.5%).³ In addition, the Commission required that
16 for savings to count towards the 5.5% target, they must come from programs specifically designed
17 for low-income households, or from low-income verified participants in multifamily housing
18 programs. Savings from low-income participants in other programs cannot be counted as low-
19 income savings.⁴ In its order, the Commission was concerned that EDCs should not rely on low-

¹ 66 Pa. C.S. §2806.1(b)(1)(i)(G).

² Pennsylvania Public Utility Commission Act 129 Phase II Implementation Order, *Energy Efficiency and Conservation Program Implementation Order*, entered on August 2, 2012, Docket No. M-2012-2289411 at 55.

³ Phase III Implementation Order at 69.

⁴ Phase III Implementation Order at 69-70.

1 income household participation in general residential programs or rely to any significant extent on
2 upstream, retail lighting programs.⁵ Thus, EDC plans should be primarily targeted at direct
3 installation measures such as comprehensive weatherization and appliance replacement programs.

4 **Q. Please describe Duquesne's low-income offerings in its Phase III Plan?**

5 A: Duquesne has developed a portfolio approach to meeting its obligation to provide
6 measures to its population of low-income customers and meet the 5.5% energy savings carve-out
7 for the low-income population. This portfolio is organized under the program name Low Income
8 Energy Efficiency Program (LIEEP), and includes three programs: Multifamily Housing Retrofit
9 Program; Low Income Home Energy Reporting Program; and Low-Income Whole House
10 Retrofit Program. Duquesne describes its LIEEP program as follows:

11 LIEEP is an income qualified program providing services designed to assist low-
12 income households to conserve energy and reduce electricity costs. LIEEP relies
13 on several contributing engagement channels to deliver program services and
14 achieve projected savings impacts and program cost effectiveness.⁶

15 Duquesne proposes three (3) subprograms as a part of its LIEEP for low-income customers:

16 1. The Multifamily Housing Retrofit Program targets master-metered (owner-paid)
17 affordable housing buildings, in conjunction with Duquesne's Public Agency Partnership
18 Program that serves government and nonprofits. This program will provide audits,
19 technical assistance, property aggregation, contractor negotiation, and equipment bulk
20 purchasing.⁷ A multifamily market manager will assist building owners and managers in
21 contracting and obtaining appropriate financing.⁸ Both available measures and cost-share

⁵ Phase III Implementation Order at 69-70.

⁶ Duquesne Phase III Plan at 40-41.

⁷ Phase III Plan at 58.

⁸ Phase III Plan at 58.

1 for buildings will be negotiated on a case-by-case basis. While Duquesne's Plan is
2 ambiguous as to whether the available measures for direct install are limited to the
3 measures available to nonresidential buildings, or whether the measures subject to
4 negotiation include all measures available through general residential programs,⁹
5 Duquesne clarified through discovery that the incentives listed in Figure 13: Residential
6 Energy Efficiency Program Eligible Measures are available under the Multifamily
7 Housing Retrofit Program.¹⁰ However, Duquesne does not intend to offer increased
8 incentives for multifamily buildings in this program. Duquesne estimates that the
9 Multifamily Housing Retrofit Program will generate 35% of low-income savings, and 2%
10 of overall savings.¹¹

11 2. The Low-Income Home Energy Reporting Program will target 12,000 low-income
12 customers per year and will send those customers specialized home energy use reports
13 (HERs) via direct mail.¹² These HERs will compare "the program participant population
14 energy use behavior to a low-income nonparticipating control group."¹³ Duquesne
15 proposes that approximately 50% of its savings for the low-income sector (2.8% of
16 overall savings) will be achieved through this program.¹⁴

⁹ See Phase III Plan at 58, referencing only Figure 28. The list of available measures does not include any shell measures.

¹⁰ See Attachment B, Response of Duquesne Light Company to CAUSE-PA I-10.

¹¹ Duquesne Phase III Plan at 41. In Figure 23, Duquesne projects 8,912 MWH of savings from the Multifamily Housing Retrofit Program, out of a total 25,463 MWH savings for the low-income sector.

¹² *Id.* at 41.

¹³ *Id.* at 41.

¹⁴ *Id.* at 41, Figure 23. Duquesne projects 12,731 MWH of savings from Low Income Home Energy Reports, out of a total 25,463 MWH savings for the low-income sector.

1 3. Through the Low Income Whole House Retrofit Program (“LIWHRP”), Duquesne
2 will provide home energy audits at no cost to low-income households, and will directly
3 install measures designed to assist audited households in reducing their home energy
4 consumption.¹⁵ Residential customers will first complete an online audit, and will then be
5 offered the opportunity to pursue a “comprehensive track audit.”¹⁶ The direct install
6 program will include the following measures, where appropriate: installation of CFLs,
7 night lights, and refrigerator replacement for all customers; faucet aerators, low flow
8 showerheads, water heater pipe wrap, heat pump water heaters and water heater tank wrap
9 for electric water heating customers; and attic, wall, and floor insulation, blower door
10 resting and air sealing, sealing attic bypasses, crawl space and heater insulation, duct
11 insulation and repair, and caulking and weather stripping for electric space heating
12 customers. Duquesne estimates that 15% of its savings within the low-income sector and
13 .8% of overall savings will be achieved through this program.¹⁷

14 **Q: What is your overall opinion of Duquesne’s Phase III Plan for low-income**
15 **customers?**

16 A: I am concerned that Duquesne’s Phase III program relies too heavily on home energy
17 reports and savings achieved through master-metered properties to achieve the bulk of energy
18 savings, as opposed to direct install measures for individually-metered low-income households
19 that provide durable and tangible bill savings for low-income bill payers. I will elaborate more
20 fully as to each program below, but first believe that it is important to provide information about

¹⁵ Phase III Plan at 43-44.

¹⁶ Phase III Plan at 43.

¹⁷ *Id.* at 41, Figure 23. Duquesne projects 3,819 MWH of savings from Low Income Whole House Retrofits, out of a total 25,463 MWH savings for the low-income sector.

1 Duquesne's low-income population and the realities that they face in affording energy and
2 accessing weatherization services.

3 **Q: Why is it important to provide information about Duquesne's low-income**
4 **customers' inability to afford home energy and access weatherization services?**

5 A: Duquesne's Phase III Plan relies heavily on Home Energy Reports. This assumes that
6 with access to additional information, low-income households can take steps to significantly
7 reduce their energy consumption on their own. This is a dubious conclusion. While I do not
8 doubt that all customers, including low-income customers, can benefit from energy-efficiency
9 education, this education must be paired with an ability to take the steps needed to effectuate the
10 recommended changes. Absent a meaningful opportunity to enact the recommended changes,
11 Duquesne's low-income customers will quickly become frustrated and are likely to conclude that
12 energy-efficiency is a luxury they cannot afford.

13 In fact, many who study poverty have concluded that the income level needed to allow a
14 household to be self-sufficient are 2 to 2½ times the federal poverty level.¹⁸ Thus, many people
15 living in households with incomes *significantly higher* than those eligible for the Companies'
16 Universal Service Programs or for assistance from the Low-Income Home Energy Assistance
17 Program (LIHEAP) do not have sufficient monthly income to pay all their essential expenses,
18 including their utility bills. The situation is all the worse for households living at or below 150%
19 of the federal poverty income guidelines.

20

¹⁸ See Pierce, Diana M (2012) "Overlooked and Undercounted 2012: Impact of the Great Recession as Measured by the Self-Sufficiency Standard in Pennsylvania" at 13-19. Available on Pathway PA's website at: <http://pathwayspa.org.mytempweb.com/wp-content/uploads/2014/01/Overlooked-and-Undercounted-2012.pdf> (last visited: January 13, 2016).

1 According to the most recent report by the Commission’s Bureau of Consumer Services
2 on Universal Programs and Collections Activity, Duquesne has a significant confirmed low-
3 income population. Duquesne reports that 11.1% of its residential customers have been
4 confirmed as having incomes that are at or below 150% of the Federal Poverty Level.¹⁹ In raw
5 numbers, this is 58,792 households out of the approximately 527,000 residential customers.²⁰
6 The maximum annual household income for eligibility (at 150% FPIG) for family of four is
7 \$34,575. However, the Report indicates that even when the eligibility requirement is set at 150%
8 federal poverty income guidelines, the average income of Pennsylvania households who avail
9 themselves of utility company low-income assistance programs is much lower. In 2014, the
10 household income of the average Pennsylvania CAP customer was only \$13,134 and the average
11 income of those receiving services under LIURP was \$16,826 for electric customers and \$14,899
12 for gas customers.²¹

13 Households at or below 150% of the federal poverty guidelines simply lack sufficient
14 income to pay for all of their essential needs. Before all the bills are paid, low-income families
15 routinely run out of money. Many cannot afford to pay for utility service because of the cost of
16 competing essential needs like rent, food, and medicine. As such, low-income households have a
17 significantly higher termination rate as compared to all residential customers. In 2014, the
18 termination rate for Duquesne’s confirmed low-income customers was 19.8% compared to 4.5%

¹⁹ Pa. Public Utility Comm’n, Bureau of Consumer Services, *2014 Report on Universal Service Programs & Collections Performance of the Pennsylvania Electric Distribution Companies & Natural Gas Distribution Companies*, 6, available at

http://www.puc.state.pa.us/General/publications_reports/pdf/EDC_NGDC_UniServ_Rpt2014.pdf

²⁰ *Id.* at 7. The number of estimated low-income customers within Duquesne’s service territory is 24.1% of its residential customers or more than 127,000 households. *Id.*

²¹ *Id.* at 35.

1 of all residential customers.²² Thus, Duquesne's low-income electric customers are significantly
2 more likely – more than four times as likely – to be disconnected than residential customers as
3 whole.

4 As I address Duquesne's proposals targeted at low-income households, I do so with the
5 perspective that the focus of Duquesne's Plan must be on comprehensive direct-install measures
6 that lead to meaningful, long-lasting savings for low-income households. To the extent that
7 Duquesne will focus on Home Energy Reports, those reports must be coupled with the economic
8 resources, including access to no cost direct-install measures that allow low-income households
9 to meaningfully implement changes.

10 **Q: Please comment on Duquesne's Low-Income Energy Efficiency Program as a whole.**

11 A: In Phase III, EDCs must achieve 5.5% of savings from low income households
12 participating in targeted low-income programs, or confirmed low-income residents in
13 multifamily housing. Savings achieved from low-income participants in general residential
14 programs cannot be counted towards this low-income carve out. Duquesne proposes to meet the
15 5.5% through its Low Income Energy Efficiency Program (LIEEP), which has three sub-
16 programs: Multifamily Housing Retrofit Program; Low Income Home Energy Reporting
17 Program; and Low Income Whole House Retrofit Program.

18 My comments will address the three Duquesne Low-Income subprograms. I will also
19 comment on possible coordination between these subprograms, CSPs, and other programs
20 serving low-income customers. First, I will comment on Duquesne's Home Energy Report
21 program, which while obtaining kilowatt hour savings for Duquesne, will likely do very little to

²² *Id.* at 12.

1 tangibly benefit low-income families. Next, I will comment about the Whole House Retrofit
2 Program, which I believe will provide meaningful savings for low-income households. Finally, I
3 will comment on Duquesne’s proposed Multifamily Housing Retrofit Program, and on
4 opportunities for coordination with other programs.

5 **Q: Please explain your concerns with Duquesne’s proposal to continue with its Low-**
6 **Income Home Energy Reporting Program?**

7 A: Duquesne proposes to provide specialized low-income Home Energy Reports (HERs) to
8 approximately 12,000 customers each year for the duration of its five-year plan.²³ According to
9 Duquesne’s plan, “[s]avings impact measurement is based on documented savings comparing the
10 program participant population energy use behavior to a low income non-participating control
11 group.”²⁴

12 Duquesne anticipates that fully 50% its low-income savings will come from Home
13 Energy Reports. This is problematic for a number of reasons. Duquesne’s plan states that these
14 HERs will be “specialized” for the low income population. Duquesne further elaborates that the
15 reports will include tailored tips and targeted marketing.²⁵ However, Duquesne does not explain
16 whether the comparisons in the reports themselves are tailored to different bill structures, such as
17 CAP customers or low-income shopping customers. In my view, the dollars that Duquesne plans
18 to spend on this program should be directed towards direct installation programs that provide
19 tangible, long-lasting energy efficiency for low-income households.

20

²³ *Phase III Plan* at 41.

²⁴ *Id.* at 41.

²⁵ See Attachment C, Response of Duquesne Light Company to CAUSE-PA I-13.

1 **Q: Please elaborate on why Home Energy Reports are problematic.**

2 A: Duquesne's reliance on Home Energy Reports is problematic for several reasons. First,
3 the Commission has made it clear that in Phase III of Act 129, it wants EDCs to target low-income
4 programs that lead to bill reductions and not just energy reductions, and that the components of
5 the plan should be specifically directed at low-income households. To that end, the Commission
6 stated in its Phase III Implementation Order:

7 **Savings counted towards the 5.5% target may only come from specific low-**
8 **income programs or low-income verified participants in multifamily housing**
9 **programs.** Savings from non-low-income programs will not be counted for
10 compliance. . . .

11
12 **The Commission believes that low-income savings should primarily come from**
13 **measures that are directly provided to low-income households.** Thus far in
14 Phase II, a substantial portion of the low-income savings is coming from the
15 contribution of low-income customers who are identified during random surveys as
16 participants in upstream lighting programs. While the low-income savings are
17 verified by a SWE-approved evaluation method, there are shortcomings in this
18 method. Random customers are asked a series of questions that allow them to self-
19 identify their income levels and number of household occupants, but there is no
20 further verification of their low-income status. It was the Commission's intent to
21 allow savings to be counted from the upstream lighting programs because it was
22 reasonable to believe that there would be some low-income customers who would
23 participate. It was not, however, the Commission's intent to have that program be
24 the primary contributor in meeting the low-income carve-out.

25
26 . . . Further review of the savings through PY6Q3 shows that the majority of the
27 low-income savings is coming from the upstream lighting program, rather than the
28 mix of low-income specific programs. The Commission is concerned with the
29 heavy reliance on the low-income savings generated from the upstream lighting
30 programs and does not want to see the same disproportionate reliance in Phase III.²⁶

31 While the thrust of the Commission's comments are directed at upstream lighting programs, it is
32 important to note the context of this discussion. In the Tentative Implementation Order, the
33 Commission proposed requiring each of the EDCs to obtain at least 2% of their energy savings

²⁶ Phase III Implementation Order at 69-70 (emphasis added).

1 from a direct install requirement as opposed to indirect measures. The Commission stated the
2 following when initially proposing the 2% direct install requirement:

3 The Commission also proposed the additional requirement that each EDC must
4 obtain no less than 2% of their overall consumption reduction target exclusively
5 from direct-installed low-income measures. Programs utilizing measures such as
6 home energy reports, efficiency kits, giveaways at community events and all other
7 non-low-income sector program savings (*e.g.*, upstream lighting, rebates, etc.)
8 would not count toward meeting the 2% consumption target. The Commission
9 wanted to shift the focus for the low-income sector from indirect measures to those
10 directly-installed measures that will provide more of a whole-house and/or
11 weatherization (*e.g.*, insulation or air sealing) type of program emphasis. We
12 expressed a belief that **direct-installed measures typically have higher**
13 **realization rates, are verifiable and represent a better investment of the low-**
14 **income program dollars.**²⁷

15 While the Commission ultimately concluded that it would not require a specific savings target for
16 direct installation in Phase III, it nonetheless reinforced that EDCs should prioritize direct install
17 programs over programs that provide low cost, but non-durable savings that provide little bill
18 impact. The Commission stated, “[w]hile the SWE’s EE Potential Study data was insufficient to
19 justify establishing a direct-install requirement, we nonetheless feel that the intent of our proposal
20 was accurate.”²⁸ Duquesne’s emphasis on Home Energy Reports to meet their low-income target
21 ignores this guidance and should not be approved without significant modification.

22 **Q: What is the second reason why Duquesne’s reliance on home energy reports is**
23 **problematic?**

24 A: Home Energy Reports do not sufficiently meet the needs of low-income households.
25 While I do not doubt that all customers, including low-income customers, could potentially
26 benefit from participation in indirect measures and energy-efficiency education, there must also
27 be a realistic ability to take the steps needed to effectuate the changes that are recommended.

²⁷ Phase III Implementation Order at 61-62 (emphasis added).

²⁸ Phase III Implementation Order at 70.

1 Absent the resources to enable low-income households to participate in non-low-income
2 programs or to enact the changes recommended through education, the Duquesne projection
3 regarding its expected low-income sector savings are questionable. I believe the most appropriate
4 method to achieve the targeted 5.5% low-income sector energy savings is through dedicated low-
5 income programs and that within those programs, measures that will last and provide long term
6 usage and economic stability should be emphasized.

7 As discussed previously in my testimony, households living at or below 150% of the
8 federal poverty guideline lack sufficient income to pay for all of their essential needs. Before all
9 of the bills are paid, low-income families routinely run out of money. Many of them cannot
10 afford to pay for utility service because of the cost of competing essential needs like rent, food,
11 water and medicine.²⁹

12 **Q: How does the inability to make ends meet impact the potential savings from Home**
13 **Energy Reports?**

14 A: Low-income households simply do not have the same ability to reduce consumption,
15 without economic assistance, as do moderate and upper income customers. Low-income
16 households tend to live in older and less well-maintained housing with older less-efficient
17 heating and cooling systems. These factors contribute to a greater inability to reduce usage.
18 Many low-income households must make greater use of their heating or cooling appliances, not
19 out of ignorance of the consequences to their bill, but rather out of necessity to keep their homes
20 adequately heated or cooled because their building is not weather-tight or the heating/cooling

²⁹ See e.g., National Energy Assistance Directors' Association, 2011 National Energy Assistance Survey (Nov. 2011) (to pay their energy bills, 24% of LIHEAP recipients went without food, 37% went without medical or dental care, 34% did not fill or took less than the full dose of a prescribed medicine). Available at <http://www.appriseinc.org/reports/Final%20NEADA%202011%20Report.pdf>

1 system is deficient or both. In these situations, the provision of information regarding the
2 benefits of thermostat adjustment, without concurrent remediation of the physical reasons for
3 higher thermostat settings, is a particularly inefficient use of Act 129 resources. It is for this
4 reason that I make the recommendation in my testimony that Duquesne should closely align its
5 low-income energy education with the installation of energy efficiency measures, be they Act
6 129 programs or non-Act 129 programs.

7 Furthermore, while I do not doubt that the Home Energy Report programs show savings
8 on the aggregate level, these programs are very unlikely to have a meaningful impact on the
9 customer's bill. Low-income households need access to weatherization and, when appropriately
10 tied to the weatherization work performed, education to sustain and maintain the savings
11 accomplished through that weatherization. I support real and comprehensive weatherization
12 work because it is the only way to help a family to control their bills and stay in their house. The
13 approach proposed by Duquesne's behavioral program might show aggregate program-wide
14 savings when using certain statistical methods, but it is not enough to make any difference to
15 individual households.

16 Moreover, programs such as the HERs are inherently questionable at the customer level
17 because they do not physically account for the cause of savings shown by the household meters.
18 That is, we do not know whether savings occurred because of actions tied to the reports, we only
19 know that they in fact occurred. This is problematic because if we do not know why the savings
20 occurred, there is no real way of knowing that *they will continue to occur*, which for low-income
21 households is essential for long term stability. Low-income households need access to measures

1 that will last. Measures such as energy reports, with relatively short measures lives,³⁰ provide
2 little in the way of meaningful savings that can be counted on by the household to assist them in
3 lowering their bill on an ongoing basis and reduce the likelihood that their service will be
4 terminated.

5 I recognize that the Low-Income Home Energy Reports Program may be a cost-effective
6 way to meet savings targets.³¹ However, to provide the meaningful and long-lasting savings for
7 low income households the Commission described in its Implementation Order, Duquesne
8 should redirect dollars allocated to this program to provide additional comprehensive
9 weatherization measures to eligible households through the Low Income Whole House Retrofit
10 and Multifamily Housing Retrofit Program (for both master metered and individually metered
11 units).

12 **Q: To the extent Duquesne retains Low-Income Home Energy Reports, do you have any**
13 **suggestions for improvement for this program?**

14 A: It is difficult to see how any program designed to teach low-income households to conserve
15 energy based on price and usage signals will be successful if it uses only generic price
16 information such as the default service price, and does not take into account whether customers
17 are on Duquesne's Customer Assistance Program or customers who are receiving alternative

³⁰ The Commission's 2016 TRM Update Final Order stated that the effective useful life of HERs was assumed to be one year in Phases I and II, and directed the Statewide Evaluator (SWE) to assess HER program decay. 2016 TRM Update Final Order, M-2015-2469311 at 20-21. As of the filing of this testimony, that report has not been made public. Absent direction from the Commission to the contrary, I believe the measure life of HERs should be assumed at one year. Duquesne specifies in response to discovery that it assumes a three year measure life for TRC calculation. *See* Attachment D, Response of Duquesne Light Company to CAUSE-PA I-14. In reaching that conclusion, Duquesne relies on studies that looked at savings for a general residential population, and does not produce any studies showing the same savings can be assumed for low-income populations. *Id.*

³¹ In its plan, Duquesne does not specify the TRC for the Low Income Home Energy Reports, only the TRC for the entirety of the Low Income Energy Efficiency Program, which is 0.9. Phase III Plan at 46. Therefore, I cannot assume that the Low Income Home Energy Reports Program is, in fact, cost effective.

1 generation supply. For almost every low-income household the primary motivation for reducing
2 usage is out of economic necessity. If tips are implemented, but no reduction in the bill occurs
3 this will send a negative reinforcement not a positive one.

4 Furthermore, what Duquesne proposes to do with this program is consistent with its
5 already existing obligations to provide outreach and education. It is precisely the kind of thing a
6 utility should do anyway as part of its Commission mandated responsibility to customers: Send
7 out quarterly letters about how to save energy and to try to motivate customers.

8 At a minimum, if this program is to continue, Duquesne should be required to tailor the
9 reports to the actual realities of the households. Those in CAP should have their CAP rates
10 reflected in the impact that any energy savings reduction will have. Those receiving generation
11 from an EGS should have their actual costs reflected in any such savings. Tying savings of
12 energy to savings of costs is an important piece, but can only be done accurately when the
13 correct costs are assumed.

14 Duquesne should utilize these reports to provide information and opportunities to apply
15 for its universal service programs such as CAP and LIURP, as well as LIHEAP. Every
16 opportunity to educate households about the bill payment and reduction programs available
17 should be used, and the HERs provide an opportunity remind households that they do not need to
18 do this all on their own, but rather there are programs and services available.

19 Notwithstanding the forgoing suggestions, Duquesne should significantly scale back their
20 proposed Low Income Home Energy Report program and should reallocate the dollars allocated
21 to this program to provide appliance replacement measures or other Whole House Retrofit
22 services, including education that is tied to installed measures. In my view, an education

1 program must be connected to tangible and ongoing energy conservation through weatherization
2 to be meaningful for low-income customers.

3 **Q: What is your opinion about Duquesne's Whole House Retrofit Program?**

4 A: This program has the potential to provide very real benefits to low-income families.
5 While the details of how the program will operate remain vague, Duquesne has proposed to
6 provide low-income families with access to the direct installation of measures such as CFLs,
7 night lights, refrigerator replacement, as well as faucet aerators, heat pump water heaters, water
8 heater pipe wrap and water heater tank wrap for electric water heating customers. Duquesne also
9 proposes several measure for electric space heating customers, including: attic, wall and floor
10 insulation; blower door testing and air sealing; sealing attic bypasses; crawl space and heater
11 insulation; duct insulation and repair; caulking and weather stripping; and electric heating repair
12 and replacement.³²

13 I support Duquesne's decision to employ a model that gives attention not only to
14 distribution of lighting measures, but also to the replacement of inefficient refrigerators. Low
15 Income households are more often than not unable to implement cost effective measures like
16 appliance replacement without significant assistance.

17 That said, I believe this program could be improved. First, the program is limited. Of the
18 25,463 MWh of savings Duquesne projects in total, only 3,819 MWh (15%) of low-income
19 sector savings will be generated by this program. Duquesne indicates that it will coordinate with
20 natural gas distribution companies' low-income programs and with other low-income

³² Phase III Plan at 43-44.

1 weatherization programs, but does not detail how that coordination will happen. In addition,
2 Duquesne states in its Plan that all proposed projects with aggregate measure costs exceeding
3 \$2000 will be approved on a case-by-case basis to “ensure equitable use of program funding.”³³ I
4 believe that in the context of a comprehensive retrofit, any and all measures that are cost
5 effective should be installed. Any required approval should not delay implementation, and
6 should be approved pro forma if the proposals are cost effective.

7 **Q: How could Duquesne implement a more comprehensive approach to the Whole House**
8 **Retrofit Program?**

9 A: First, Duquesne should target more households and increase its budget and target in this
10 category overall. Given the Commission’s express priority and preference for direct install
11 measures, it is inadequate that a mere .8% of the low-income energy savings is projected to come
12 from this category. At the very least, Duquesne should target between 1-1.5% of its savings
13 from this program.

14 Second, Duquesne must coordinate its efforts under LIURP with its efforts under Act
15 129. To the extent that a CSP has the discretion to say that the household is in need of more
16 comprehensive weatherization rather than simply baseload measures it should be immaterial to
17 the household from which source of funding it comes.

18 Third, Duquesne should more clearly spell out the means through which it will
19 collaborate with the natural gas distribution companies (NGDCs) in its service territory. Act 129
20 specifically requires that the “electric distribution company shall coordinate measures under this
21 clause with other programs administered by the Commission or another federal or state

³³ Phase III Plan at 44.

1 agency.”³⁴ While the NGDCs who have overlapping service territories with Duquesne are not
2 other state or federal agencies they each have required LIURP programs that receive
3 administrative approval from the Commission and it makes abundant sense for Duquesne to
4 coordinate with these NGDCs. This may require a closer level of coordination so that a single
5 audit is performed rather than multiple audits. From the perspective of a low-income household
6 this degree of coordination will reduce the fatigue associated with multiple audits and multiple
7 home visits from CSPs.

8 At the very least, if a CSP is in the home of a low-income household for a Duquesne
9 audit and sees measures that could be funded through an NGDC’s LIURP (or vice versa) the
10 CSP should be required to make a referral back to Duquesne or the NGDC for approval to install
11 appropriate remedial measures. In addition to this level of coordination, Duquesne should refer
12 low-income households who participate in its Act 129 program to its other low-income programs
13 including CAP, Dollar Energy, and LIHEAP.

14 Finally, Duquesne should more closely align its Home Energy Reports with the
15 installation of energy efficiency measures, which is the type of education combined with
16 resources that I believe provides enhanced value to low-income households. While the
17 community based weatherization providers are within the homes of low-income individuals,
18 there is an opportunity to “connect the dots” that tie the home energy audit and the installation of
19 measures together to show the household ways in which it can conserve energy.

20
21

³⁴ 66 Pa. C.S. §2806.1(b)(1)(I)(G).

1 **Q: Do you have any other concerns about Duquesne’s Whole House Retrofit Program?**

2 A: Yes. I am concerned about how low-income consumers will access the whole house
3 retrofit program. According to Duquesne’s Phase III plan, “residential customers will enter the
4 program via the existing Duquesne Light Energy Insights online audit.”³⁵ Duquesne does not
5 explain in its Plan how or if customers who do not have internet access or have inconsistent
6 internet access will be able to access this specific program. In a discovery response, Duquesne
7 states that “the online audit is not a prerequisite to receiving services through Whole House
8 Retrofit Program . . . there are several other points of entry such as referral from gas companies,
9 LIURP and MFRP referrals.”³⁶ I recommend that Duquesne also have a call-in option and paper
10 application for customers who are unable to access the online audit and want to enter the
11 program directly rather than by referral. In addition, Duquesne should have a mobile version of
12 the audit for customers whose internet access is limited to internet enabled phones or tablets,
13 which tend to be cheaper than devices connected in a home.³⁷

14 **Q. What is your opinion of Duquesne’s Multifamily Housing Retrofit Program for**
15 **master-metered buildings?**

16 A. This has the potential to be a good program. Many low-income households live in multi-
17 family dwellings or in a master-metering situation where, although the household is clearly low-
18 income and clearly falls within the definition of low-income household for purposes of the
19 statute, the household is not the customer of record with the public utility. However, I am

³⁵ Phase III Plan at 43.

³⁶ Attachment E, Response of Duquesne Light Company to CAUSE-PA I-18.

³⁷ Duquesne only states that it will “work with partners to ensure customers experience via utilizing mobile devices will be a positive one.” *Id.*

1 concerned that Duquesne focuses its multifamily retrofit program exclusively on master-metered
2 properties, to the exclusion of individually metered buildings.

3 I support Duquesne's decision to bid out the management of this program to a single CSP
4 who will undertake the marketing, recruitment, and management of this program. Multi-family
5 buildings housing low-income families often have complicated ownership structures with a non-
6 profit serving as the general partner in a partnership with others designed to leverage federal tax
7 credits and other financing mechanisms. As a result, it is essential that the CSP chosen know
8 how to appropriately market and recruit properties that can successfully take advantage of the
9 Act 129 programs that Duquesne has to offer. However, in addition to a specialized CSP for
10 multifamily, Duquesne should have an in-house point person to assist managers and owners in
11 navigating all available services, including other Act 129 programs, LIURP and DCED's
12 Weatherization Assistance Program, and to coordinate simultaneous retrofits of individually
13 metered units (through the Low Income Whole House Retrofit Program) and master-metered
14 common areas (through the Multifamily Housing Retrofit Program).

15 **Q: What are your concerns about the Multifamily Housing Retrofit Program as proposed?**

16 A: Duquesne's plan is vague regarding the availability of measures to multifamily
17 buildings. Section 3.3.4 of Duquesne's Plan, which describes the Multifamily Housing Retrofit
18 Program, refers to the nonresidential measure list – a list that does not include any shell measures
19 (such as insulation) that could produce deep savings for these buildings and improve the lives of
20 the low-income tenants who reside there. Refrigerator replacement in individual units in master
21 metered buildings would also go far to improve the lives of low-income tenants. Duquesne has
22 implied that residential measures will be available as well – in response to a question about the

1 availability of increased incentives in the Multifamily Housing Retrofit Program, Duquesne
2 states "incentive amounts are provided at EE&C Plan Figure 13."³⁸

3 In addition, Duquesne's Multifamily Housing Retrofit Program only targets master-
4 metered properties. A comprehensive multifamily program must be designed to provide impacts
5 to low-income tenants in all multifamily buildings, whether units are individually
6 metered/tenant-paid or master metered/owner-paid, and in individually metered buildings, should
7 include measures targeted at both common areas and individual units. The multifamily CSP
8 should provide assistance to building owners and tenants accessing other energy efficiency
9 programs. Low-income tenants in individually metered units will qualify for services under the
10 Low Income Whole House Retrofit Program. Duquesne expects only 17% of low-income
11 savings from the Low Income Whole House Retrofit Program. As I discussed above, this
12 suggests a limited program. In comparison, Duquesne allocates 35% of its low-income savings
13 and half of its low-income budget to the multifamily housing retrofit program. Duquesne should
14 make both programs available to as many low-income properties and units as possible.

15 According to the National Housing Trust, there are approximately 16,900 multifamily
16 properties within Duquesne's service territory.³⁹ Duquesne must address the potential market
17 that exists and permit all low-income, affordable housing properties located within the service
18 territory to participate.

19
20
21

³⁸ Attachment B, Response of Duquesne Light Company to CAUSE-PA I-10.
³⁹ See National Housing Trust, "Multifamily Affordable Apartments in Pennsylvania Utility Service Territories"
(2012), attached hereto as Attachment F.

1 **Q: Do you have other recommendations that Duquesne should implement in their**
2 **multifamily program?**

3 A: Yes. It is important for Duquesne to coordinate the work that they are trying to do in the
4 multi-family sector with the work being done by affordable housing advocates and multi-family
5 program providers. Specifically, it is important that Duquesne tailor their offerings to the
6 programs most in demand by multi-family housing providers. If they do not, it is likely these
7 programs will continue to be ineffective. I have some specific suggestions that Duquesne should
8 consider.

9 First, Duquesne should provide more clarity on the measures that are available in the
10 Multifamily Housing Retrofit Program, and seek to coordinate those measures with those
11 required by PHFA.⁴⁰ Each year, PHFA issues an allocation plan for its allocation of tax credits.
12 These tax credits are often the vehicle by which developers and providers of affordable multi-
13 family housing either build or preserve their housing. This allocation plan is called the Qualified
14 Allocation Plan, and for 2016 PHFA lists a series of energy conservation measures that must be
15 installed within newly built and rehabilitated affordable multi-family projects financed with tax
16 credits. The full list is available on PHFA's website, and is attached hereto as Appendix C, but
17 for illustrative purposes, PHFA requires the housing developers include the following:

- 18 • In new construction and rehabilitation developments, all appliances, HVAC equipment
19 with a capacity less than 60,000 btuh, gas fired water heaters, windows, ceiling fans,
20 exhaust fans, range hoods and exit signs shall be Energy Star® labeled when such
21 equipment and appliances exist. (Exceptions: programmable thermostats do not need to
22 be provided, and windows in buildings over three stories in height may comply instead
23 with ASHRAE Standard 189.1-2009.) (Packaged terminal air conditioners (PTACs) and
24 packaged terminal heat pumps (PTHPs) may only be used if it can be proven that they
25 comply with the prescriptive requirements of Energy Star ®Version 3.0 for air-source
26 equipment.) In addition, 100% of the permanent room light fixtures in the dwelling units

⁴⁰ I note that Duquesne has already indicated a willingness to work with PHFA. See Attachment G, Response of Duquesne Light Company to CAUSE-PA I-9B.

1 shall be equipped with compact fluorescent, LED bulbs, or high efficiency fluorescent
2 with electronic ballasts; and 100% of the community room and common area corridor
3 and stair lighting shall be fluorescent with electronic ballasts or shall utilize compact
4 fluorescent or LED bulbs.

- 5
- 6 • In preservation developments, existing refrigerators more than 15 years old shall be
7 replaced with Energy Star® labeled type. Existing heat pumps, air conditioning
8 condensing units, and through- wall air conditioners more than 20 years old shall be
9 replaced with Energy Star® labeled type, when such equipment exists. Existing furnaces
10 and boilers more than 25 years old shall be replaced with Energy Star® labeled type,
11 when such equipment exists. (Programmable thermostats do not need to be provided.)
12 In addition, existing community room, common area corridor and stair lighting more
13 than 15 years old shall be replaced with fluorescent fixtures with electronic ballasts or
14 fixtures that utilize compact fluorescent or LED bulbs. Where windows are scheduled
15 for replacement, replacement should be made with Energy Star® qualified products,
16 except in buildings over three stories in height, where window replacement may comply
17 instead with ASHRAE Standard 189.1-2009.
- 18 • All developers must certify that when existing equipment, appliances and products are
19 replaced, they will be replaced with Energy Star® labeled equipment, when such
20 equipment exists.⁴¹

21 Most, if not all, of these measures are ones that are or could be available through an appropriately
22 structured Act 129 program. Duquesne should consider revising their plan to ensure that those
23 measures listed here can readily be implemented by affordable multi-family housing providers.
24 Furthermore, Duquesne should seek to market their multifamily programs to affordable housing
25 developers as being able to assist these projects in meeting their compliance obligations for PHFA
26 funding. Duquesne will have an opportunity to do this because of another PHFA requirement —
27 specifically, in its 2016 underwriting standards, PHFA is now requiring the general contractor to
28 submit an energy rebate analysis which includes:

- 29 a) a list of eligible utility company, local, regional, state, or federal rebate programs,
- 30 b) recommendations of applicable rebates to be included with estimated rebate
- 31 amounts or estimated tax credit amounts, c) calculations, energy models, or other

⁴¹ See Pennsylvania Housing Finance Agency, Allocation Plan for Year 2016 low Income Housing Tax Credit Program at 13, available at http://www.phfa.org/forms/multifamily_program_notices%5Cqap%5C2016_allocation_plan.pdf

1 technical data to support recommendations, d) letters, program data information, or
2 other documentation from utility providers to support noted programs, and e) if
3 renewable energy strategies are proposed, a cost-benefit analysis.⁴²

4 Duquesne should seek to capitalize on this opportunity and ensure that developers
5 of affordable multi-family housing have accessible pathways to obtain this information,
6 ideally through a single point of contact within Duquesne Light, and access the rebates,
7 measures, and custom programs for which they are eligible.

8 In addition to these tangible changes, Duquesne should actively seek to engage
9 affordable multifamily housing providers located in its service territory by working with
10 the various trade groups such as the Housing Alliance of Pennsylvania. I recommend that
11 Duquesne commit to having a stakeholder meeting co-facilitated by the Housing Alliance
12 of Pennsylvania and other interested trade groups that is specifically targeted to hearing the
13 needs of the multifamily affordable housing community. This stakeholder meeting should
14 occur within the first 6 months of Phase III (i.e. before the end of calendar year 2016) so
15 that Duquesne has appropriate room within the scope of Phase III to adjust their plan to
16 accommodate the needs of the developers.

17 Duquesne must serve individual units (regardless of meter) in multifamily
18 buildings. In Phase II, tenant unit retrofits in the Multifamily Housing Retrofit Program
19 were limited to lightbulb replacement.⁴³ As discussed in detail above, the Commission has
20 indicated a preference for directly-installed measures that will provide more of a whole-
21 house and/or weatherization (e.g., insulation or air sealing) type of program emphasis. I

⁴² See PHFA Underwriting Standards, Tab 5 Schematic Plans/Scope of Work, Energy Rebate Analysis, available at http://www.phfa.org/forms/multifamily_application_guidelines/submission/tab_05/2016_05_schmtc_pln_sep_wrk_instretns.pdf

⁴³ Attachment H, Response of Duquesne Light Company to CAUSE-PA I-22.

1 recommend that in addition to lightbulb replacement, Duquesne routinely provide, where
2 cost-effective, refrigerator replacement and weatherization measures to individual units in
3 both individually metered units and master metered units, with costs covered by the
4 appropriate class depending on meter. Duquesne should also consider appliance
5 replacement in common areas, including washing machines and dryers. These measures
6 will have real, direct impacts on the lives of low-income tenants.

7 Finally, it is essential that Duquesne coordinate the work of the various CSPs
8 involved with this sector. Because multifamily crosses rate classes (i.e. some buildings
9 are both residential because they are individually metered (tenant-paid) in the units and
10 commercially metered for common areas and some are simply commercial master-
11 metered) it is important for the commercial multifamily CSP to coordinate with the low-
12 income and residential CSPs. Ideally the same CSP would work on the building all at
13 once and Duquesne could coordinate which rate class is the appropriate rate class to be
14 charged. However, at the very least there should be one-stop shop coordination at the
15 utility level, including assistance with rebate applications and other documentation, and
16 comprehensive plan development, to ensure that all applicable and cost-effective
17 measures are installed no matter the meter configuration.

18 **Q: Please summarize your conclusions about Duquesne's targeted low-income**
19 **programs.**

20 **A:** As stated more fully throughout my testimony, Duquesne's Plan as currently
21 constructed relies too heavily on indirect measures that are not likely to provide durable
22 savings, and thus should be modified to include more direct installation and appliance

1 replacement at the expense of behavioral and education components. Specifically,

2 Duquesne should:

- 3 • Increase the amount and scope of work performed under the Low Income Whole
4 House Retrofit Program subprograms so that it can provide more direct installation
5 and appliance replacement to more households.
- 6 • Ensure all customers, regardless of internet access, can access services under the
7 Low Income Whole House Retrofit Program, through a dedicated call-in line and a
8 paper application
- 9 • Significantly decrease or curtail its behavioral program if additional funding is
10 needed for direct installation and appliance replacement.
- 11 • To the extent Duquesne continues to rely on Home Energy Reports, pair those
12 reports with physical measures that will allow households to save on their bills long
13 term.
- 14 • Include individually-metered units in multifamily housing in its allocation for
15 Multifamily Housing retrofit (adjusting cost allocation by rate class as appropriate
16 based on the meter), and provide comprehensive measures, including shell
17 measures and appliance replacement, to tenant units and common areas in
18 multifamily buildings.
- 19 • Coordinate their multifamily housing program with PHFA's measures required in
20 its qualified allocation plan, and work with interested stakeholders and trade
21 association to facilitate an early and ongoing stakeholder process tailored to the
22 unique needs of the affordable multifamily housing developers within each
23 company service territory.

1 In my view, each of these suggestions will assist in developing effective energy
2 conservation for low-income households that target measures which will actually reduce a
3 low-income household members bills rather than measures that yield high energy savings
4 only in the aggregate.

5 **Q: Does this conclude your testimony?**

6 **A: Yes.**

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EMPLOYMENT

2009-Present Mitch Miller Consulting LLC:

Practice provides consulting services that promote the public interest with a focus on low income households. Specifically over 35 years of expertise is applied to the evaluation of regulatory policy involving customer service, complaint handling, credit and collections and universal service. Objective is to promote public policy development, program design, and implementation of programs for consumer education, energy efficiency, credit and collections, and customer assistance.

**2009-2012 Pennsylvania Department of Community and Economic Development
Consultant**

Served as a Consultant on weatherization and energy efficiency for the Pennsylvania Weatherization Assistance Program (WAP) at PA DCED. Was instrumental in transforming the WAP program by creating a performance-based system, dedicated to a high standard of quality, compliance and production. Innovations include introducing performance standards for production, quality and compliance and independent certification and training for all state WAP workers. Also responsible for coordinating the states WAP program with the PUC, utilities and other efficiency programs.

**1992-2009 Pennsylvania Public Utility Commission, Bureau of Consumer Services
Harrisburg, PA
Director**

Until his retirement from state service Mr. Miller was director of Consumer Services and PA PUC. His bureau has regulatory authority and responsibility for policy development for all areas of consumer services including resolving consumer complaints and problems, enforcing consumer regulations, developing, implementing and evaluating programs involving complaint handling, complaint analysis collections, enforcement of consumer regulations, utility customer assistance programs and low income conservation. He also directed BCS responsibilities for implementing the Pennsylvania Electric, Gas and Telephone Customer Choice Programs. Specific areas under his Direction include:

Program evaluation and regulation

- Monitoring and evaluating the customer service practices and programs of utilities
- Promulgating regulations, implementing procedures to meet regulatory requirement and taking enforcement action to assure compliance

- Field reviews and audits of utilities' operations and advise the Commission regarding issues of interest and concern of utility consumers
- Compliance enforcement including informal investigations and prosecution of formal cases
- Track trends in the number and type of consumer complaints and inquiries, utility performance at handling customer complaints and payment arrangement requests. Other databases utilized to track utility termination activity, collection of delinquent accounts, compliance with customer service regulations and other areas critical to evaluating utility customer service performance.
- Produce utility performance and evaluative reports for the PUC, utilities and the public

Universal service programs

- The LIURP is targeted toward low-income households with the highest energy consumption, payment problems, and high arrearages. Since the program's inception to 2009, the major electric and gas companies required to participate in LIURP have spent over \$530 million to provide weatherization treatments to more than 350,000 low-income households in Pennsylvania. The budgets for 2008 were 22 million for electric utilities and 9 million for gas utilities
- Customer Assistance Programs (CAPs) provide an alternative to traditional collection methods for low income, payment troubled utility customers. Customers make regular monthly payments, which may be for an amount that is less than the current bill for utility service. Budgets for CAP programs in 2008 were 189 million for electric companies and 174 million for gas companies. Utility companies have spent over 2 billion dollars for CAP through 1998.

Utility Complaint Handling and Regulation

- Responsible for establishing procedures and directing 90 staff in investigating annually over 100,000 informal consumer complaints for regulated fixed utilities, payment arrangement requests and responding to over 70,000 inquiries.
- Arbitrate billing, credit and other informal complaints and issue binding decisions to resolve informal disputes expeditiously. Investigators also issue decisions regarding the amortization of overdue electric, gas, steam heat, water, wastewater and basic telephone bills.

1978-1992 Pennsylvania Public Utility Commission, Division of Research and Planning Harrisburg, PA

Chief

Reported to Director of Bureau of Consumer Services with direct responsibility for the direction, supervision and planning of a Division of 15 professionals who are delegated program responsibilities for regulation enforcement, utility program evaluation, customer assistance programs and consumer education. As the first Division Chief he was instrumental in creating these activities

- Bureau's compliance program in enforcing customer service regulations and statues through regulator interpretations, citations and litigation; including preparing with legal staff formal records, briefs, motions, interrogatories, reviewing utility responses and negotiating equitable settlements.

- Development and implementation of computer information evaluation systems for evaluation of utility customer service programs; systematic performance problems are identified through statistical analysis and observation and correction actions recommended via public reports, formal rate cases and consumer services audit programs.
- Managed the development of Commission's first consumer education program including proposing annual plans, statewide networking, supervising staff in conducting of workshops and conferences, and preparation of consumer education materials.
- Supervised the development of an integrated program for low income consumers; through program evaluation, leading to testimony, preparation of policy recommendations, interdepartmental coordination, regulation promulgation and establishing evaluation criteria

1977-1978 Pennsylvania Public Utility Commission

Harrisburg, PA

Research Analyst

Responsible for evaluating existing utility and Commission customer service programs and identifying problems and recommendations for change, which led to Division's current programs.

1974-1977 Governor's Action Center

Harrisburg, PA

Research Supervisor

Office supervisor for a research and information unit. Duties included the modification and maintenance of an information and evaluation system, writing technical and topical reports, quality control review and staff training. Responsible for the supervision of five case evaluator and student interns.

EDUCATION

M.S., Shippensburg University, 1984

Major: Public Administration

G.P.A. 3.9/4.0

B.S., Pennsylvania State University, 1974

Major: Community Development

Cum Laude

Additional Affiliations

Board of Directors, Keystone Energy Efficiency Alliance

Co-Chair Keystone Energy Efficiency Alliance Conference

Member, Pennsylvania WAP Policy Advisory Council

Past Co-Chair National Energy and Utility Affordability Conference

Duquesne Light Company Act 129 Phase III Energy Efficiency and Conservation Plan
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Duquesne Light Company Answers to CAUSE-PA Interrogatories, Set I

- CAUSE-PA I-10:** On pages 58 to 60, Duquesne describes the Multifamily Housing Retrofit Program as a subset of commercial programs.
- What percentage of buildings served by this program are expected to have savings towards the low-income carve-out?
 - Will increased incentives be offered for multifamily buildings with low-income residents?
 - Compare Fig. 24 with Fig. 33: Are the administrative costs for Multifamily Housing Retrofit in addition to or included in costs for Low Income Energy Efficiency overall?

ANSWER:

Sponsored by: Dave Defide

- What percentage of buildings served by this program are expected to have savings towards the low-income carve-out?

100%

- Will increased incentives be offered for multifamily buildings with low-income residents?

No. The MFRP is primarily a "direct-install" program model where energy efficiency retrofits are provided at no charge to dwelling occupants; retrofit costs are shared by the housing authorities and/or facility owners and the Program. Incentives are provided to support adoption of audit-recommended measures not addressed by the direct-install offering. The incentive amounts are provided at EE&C Plan Figure 13.

- Compare Fig. 24 with Fig. 33: Are the administrative costs for Multifamily Housing Retrofit in addition to or included in costs for Low Income Energy Efficiency overall?

The administrative costs for Multifamily Housing Retrofit (Figure 33) are in addition to the administrative costs reflected in LIEEP (Figure 24). The costs for MFRP are not included under LIEEP. LIEEP is a residential sector program, the MFRP is a small commercial sector program. See answers to CAUSE-PA I-4a-c for a breakdown of program budgets.

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Duquesne Light Company Answers to CAUSE-PA Interrogatories, Set I

- CAUSE-PA I-13:** Explain how the Low Income Home Energy Reports will be specialized to Low Income customers, including:
- How will the control group identified on page 41 be selected?
 - How will Duquesne select the 12,000 low income customers who will receive reports?
 - Will low-income customers be able to opt in or out?
 - Will reports be tailored to customers receiving bill credits through CAP?
 - Will reports be tailored to low income customers receiving default service?
 - Will reports be tailored to low income customers using an Electric Generation Supplier?
 - How else will reports be specialized?

ANSWER:

Sponsored by: Dave Defide

- a. How will the control group identified on page 41 be selected?

Recipients and controls will be selected using a Randomized Control Trial ("RCT") setup. RCTs are extremely effective because the random assignment of customers to treatment and control groups leads to the two groups being statistically equivalent on both observed and unobserved dimensions.

- b. How will Duquesne select the 12,000 low income customers who will receive reports?

Duquesne Light will identify customers by their low income indicator in its customer information system. Customers will be randomly allocated between Recipient and Control to fit the populations that would be required. As an example, if the recipient population size is 12,000 customers, there would be 12,000 recipients and 10,000 controls to perform a good test.

- c. Will low-income customers be able to opt in or out?

Low Income customers will be able to opt-out if they are selected as recipients. Opt-in functionality is not possible due to the randomization required for an RCT test.

- d. Will reports be tailored to customers receiving bill credits through CAP?

Customers who are identified as Low Income customers will receive a tailored experience (low-income specific tips, targeted marketing). Some customers on the CAP program will be

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Duquesne Light Company Answers to CAUSE-PA Interrogatories, Set I

recipients of this experience. Using Segmentation and targeting, CAP customers can receive targeted messages.

e. Will reports be tailored to low income customers receiving default service?

Similar to answer for d. above, reports will have tailored tips and targeted marketing for low income customers.

f. Will reports be tailored to low income customers using an Electric Generation Supplier?

Similar to answer for d. above, reports will have tailored tips and targeted marketing for low income customers.

g. How else will reports be specialized?

Report specialization can occur in many ways. For example, specialized campaigns are available to target messaging and content around the following use-cases:

- High User Experience
- Seasonal Awareness
- Program Promotion (energy efficiency, universal services and LIHEAP)
- Other

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Duquesne Light Company Answers to CAUSE-PA Interrogatories, Set I

- CAUSE-PA I-14:** Will the Low Income Home Energy Reports lead to measurable bill impacts for the customers receiving reports?
- a. If the answer is yes, does PPL believe that these savings will continue for each household receiving Home Energy Reports for:
 - i. two years,
 - ii. three years,
 - iii. in excess of three years?
 - b. Please explain the basis for your answer, and provide supporting documentation, reports, or other information relied on by Duquesne in assessing the ability for Home Energy reports to produce bill savings for participating households and the length or expected duration of those savings.

ANSWER:

Sponsored by: Dave Defide

Yes, low income home energy reports have produced measureable bill savings across the country. Duquesne Light does not believe target market characteristics are somehow unique in Pennsylvania, or its service territory, so as to render the measure ineffective.

- a. If the answer is yes, does PPL believe that these savings will continue for each household receiving Home Energy Reports for:
 - i. two years,
 - ii. three years,
 - iii. in excess of three years?

Response: Three years

- b. Please explain the basis for your answer, and provide supporting documentation, reports, or other information relied on by Duquesne in assessing the ability for Home Energy reports to produce bill savings for participating households and the length or expected duration of those savings.

Persistence studies³ indicate an estimated useful life ("EUL") effect of at

³ Navigant Consulting, Evaluation Report: OPOWER SMUD; February 20, 2011. Allcott, Hunt, and Todd Rogers. 2014. "The Short-Run and Long-Run Effects of Behavioral Interventions: Experimental Evidence from Energy Conservation." -- American Economic Review, 104(10): 3003-37 -- <https://www.aeaweb.org/articles.php?doi=10.1257/aer.104.10.3003> . Long-Run Savings and Cost-Effectiveness of Home Energy Report Programs -- http://www.cadmusgroup.com/wp-content/uploads/2014/11/Cadmus_Home_Energy_Reports_Winter2014.pdf; Massachusetts Cross Cutting

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least 30 months. Overall these studies reflect an annual decay rate of approximately 20%, such that at the end of the second year 80% of the savings remain; 80% of this savings remain in at the end of the third year (or 64% of the original annualized savings). In the fourth year savings drop to approximately 50% of the original annualized savings. EUL of energy efficiency measures is generally deemed to reflect savings maintenance until it falls below 50% of the original annualized savings.

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Duquesne Light Company Answers to CAUSE-PA Interrogatories, Set I

- CAUSE PA I-18:** Regarding the Low Income Whole House Retrofit Program described in Section 3.2.6, will the online audit for the Whole House Retrofit Program take into account bill structure?
- a. If the online audit is a prerequisite to receiving services through Whole House Retrofit Program, how will Duquesne make this program available to households with little or no access to a computer or the internet or households headed by individuals who do not have the ability or inclination to use a computer and/or the internet?
 - b. Is the online audit optimized for customers to access via smart phones or other mobile devices?

ANSWER:

Sponsored by: Dave Defide

No, the Whole House Retrofit Program does not take into account bill structure.

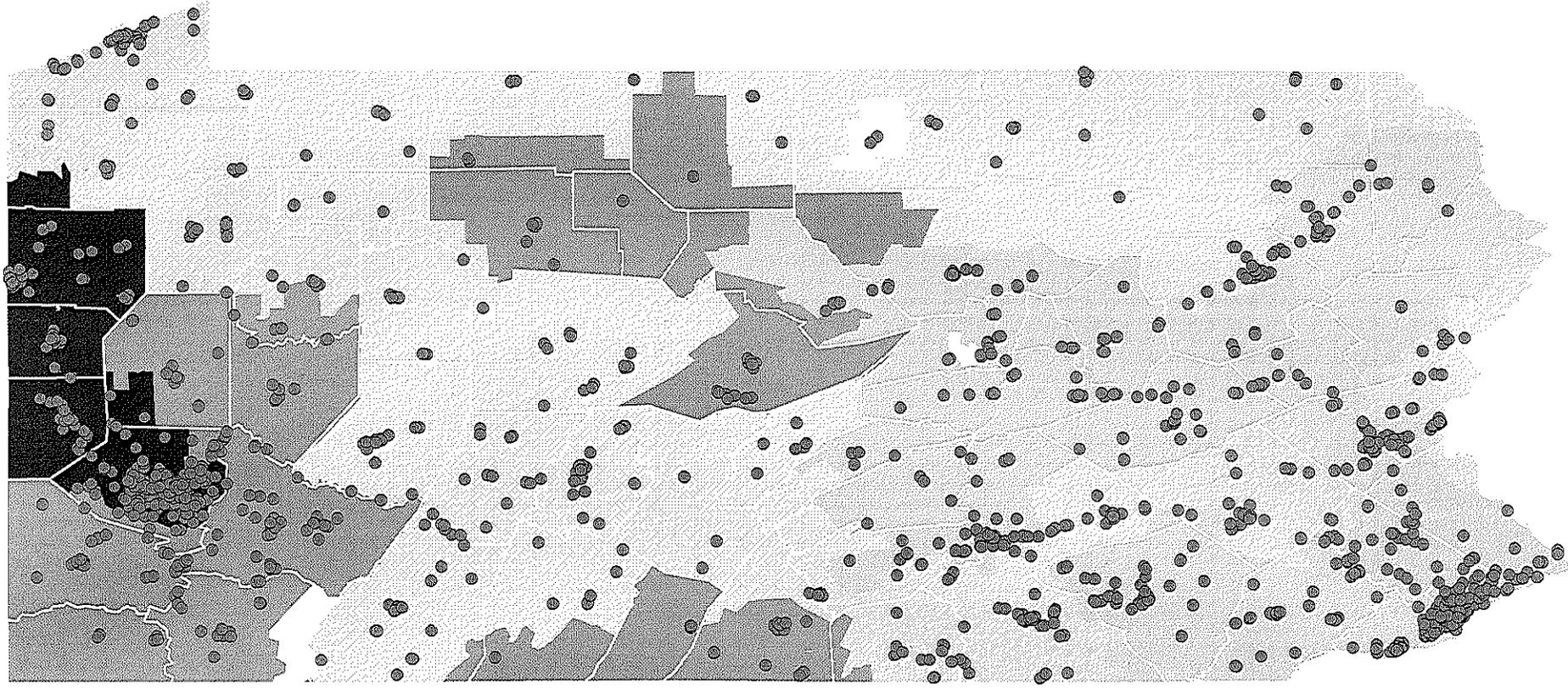
- a. The online audit is not a prerequisite to receiving services through Whole House Retrofit Program. It is a point of entry but there are several other points of entry such as referrals from gas companies, LIURP and MFRP referrals.
- b. We will work with partners to ensure customers experience via utilizing mobile devices will be a positive one and will utilize implementation contractors that will recognize mobile devices as a vital and emerging trend.

**Attachment F: National Housing Trust, Multifamily
Affordable Apartments in Pennsylvania Utility Service
Territories**

Multifamily Affordable Apartments in Pennsylvania Utility Service Territories



There are more than **90,000** affordable multifamily apartments throughout the state of Pennsylvania. These apartments are financed through various federal housing programs and are home to families and elderly individuals with incomes less than 60% of the area median income. Owners of these properties have a contractual obligation to maintain the property as affordable.



Number of MF Affordable Apts. in Utility Service Territories:

- PECO Energy Co.: 26,700
- PPL Electric Utilities Corp.: 19,800
- Duquesne Light Co.: 16,900
- Pennsylvania Electric Co.: 11,600
- West Penn Power Co.: 9,900
- Metropolitan Edison Co.: 8,200
- Pennsylvania Power Co.: 2,700
- UGI Utilities, Inc.: 1,300

Legend

- Location of MF Affordable Apt. Bldg.
- Duquesne Light Co.
- Metropolitan Edison Co.
- PECO Energy Co.
- Pennsylvania Electric Co.
- Pennsylvania Power Co.
- PPL Electric Utilities Corp.
- UGI Utilities, Inc.
- West Penn Power Co.

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Duquesne Light Company Answers to CAUSE-PA Interrogatories, Set I

- CAUSE-PA I-9B:** When marketing the low-income multifamily housing retrofit program, how will Duquesne target the following:
- Public Housing;
 - PHFA properties;
 - Low Income Tax Credit Properties;
 - HUD-financed properties.
 - Please describe how Duquesne will outreach to other multifamily housing buildings with low-income populations.

ANSWER:

Sponsored by: Dave Defide

1. Public Housing

Please refer to Duquesne Light's response provided at CAUSE-PA Interrogatories Set I question 11.

2. PHFA properties

Duquesne Light and its CSP will work with PHFA to identify opportunities in their low income funded multifamily properties.

3. Low Income Tax Credit Properties;

Duquesne Light will require the CSP to develop a list of low income tax credit properties and market to them as appropriate.

4. HUD-financed properties.

A condition of continuing HUD's finance of qualifying multifamily facilities is the conduct of energy efficiency audits every five years. HUD offices maintain a listing of properties that are in and out-of-compliance with this provision. Knowledgeable implementers will work with regional HUD offices to pursue the required energy efficiency audits and prospective energy efficiency upgrade projects. This program is implemented pursuant to competitive solicitation for specialized implementation contractors. Bidder selection criteria will focus on such market specific knowledge.

5. Please describe how Duquesne will outreach to other multifamily housing buildings with low-income populations.

Please see Duquesne Light's answers to I-9A and I-9B as well as responses to I-11. Additionally, Duquesne Light will employ Global Information Systems ("GIS") mapping and spacial analysis to physically map multifamily and low income multifamily facilities in Duquesne Light's service territory. Duquesne Light will work with the selected implementation contractor to target this physical inventory of low income multifamily facilities.

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Duquesne Light Company Answers to CAUSE-PA Interrogatories, Set I

- CAUSE-PA I-22:** On page 7 (Section 1.2) Duquesne states that the MultiFamily Housing Retrofit program was successful in Phase II. Please describe success of Multifamily Housing retrofit program, and answer the following questions:
- How many buildings were served?
 - How many individual tenant units were served in the buildings identified in subpart a?
 - How many common area spaces were served in the buildings identified in subpart a?
 - How many residents were served in each building? Please separately identify the number of residents that were identified as low income.
 - What measures were applied in common areas and tenant units? Please list KWh saved by measure applied.
 - Please provide a copy of any and all evaluations, documentation, or other information collected from low-income residents and building owners related to the Multifamily Housing Retrofit Program in Phase II.

ANSWER:

Sponsored by: Dave Defide

- How many buildings were served?
The MFRP was launched during Program Year 6. Through 5/31/2015, the program retrofitted approximately 195 buildings, served by 38 Duquesne Light Company accounts.
- How many individual tenant units were served in the buildings identified in subpart a?
At the 195 building retrofitted in PY6, 3,201 dwelling units received energy efficiency upgrades. The precise measure mix installed in each unit varied based on site-specific need and opportunity.
- How many common area spaces were served in the buildings identified in subpart a?
The common areas of all buildings retrofitted during Program Year 6 were served by the program. That is, the common areas of approximately 195 buildings. It must be noted, however, that not all common area retrofits are comparable, and the retrofits that were conducted in common areas vary depending on the size, configuration, and amenities of each particular facility.
- How many residents were served in each building? Please separately identify the number of residents that were identified as low income.

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Duquesne Light Company Answers to CAUSE-PA Interrogatories, Set I

Only income-qualified, restricted use properties are eligible for energy efficiency services under the MFRP. The number of individuals occupying each dwelling unit is not available.

- e. What measures were applied in common areas and tenant units? Please list KWh saved by measure applied.

Measures installed through the program during Program Year 6 have produced a first-year energy savings of 2,171,407 kWh. Energy savings by each measure are presented below in Table 1. Measure counts split by common areas and tenant units are not readily available. However, tenant unit retrofits consisted entirely of incandescent to compact fluorescent replacements (measure "LA1 Screw-in Compact Fluorescent Lamp: 5-25 watts").

Table 1: MFRP Savings by Measure for PY6

MEASURE NAME	SAVINGS KWH
BEVERAGE VENDING MACHINE CONTROLLER, CAN CAPACITY ≥500	6,466
CUSTOM, C&I, EXTERIOR LIGHTING	878,581
CUSTOM, C&I, INTERIOR LIGHTING	39,208
CUSTOM, C&I, REFRIGERATION	19,878
DUAL-SIDED LED EXIT SIGNS REPLACING INCANDESCENT EXIT SIGNS	76,285
LA1 SCREW-IN COMPACT FLUORESCENT LAMP: 5-25 WATTS	368,475
LED AIGINE 8-12W	43,067
LED DECORATIVE 2-4W	21,086
LED MR16 4-7W	344
LED PAR 20 7-9W	1,447
LED PAR 30 10-13W	82,482
LED PAR 38 10-21W	12,403
OCCUPANCY SENSOR, CEILING OR WALL MOUNTED, <500W CONTROLLED	22,684
OCCUPANCY SENSOR, HIGH BAY FIXTURE-INTEGRATED	973
T8-17W 2 FT 1 LAMP ELECTRONIC BALLAST	167
T8-17W 2 FT 2 LAMP ELECTRONIC BALLAST	26,456
T8-17W 2 FT 3 LAMP ELECTRONIC BALLAST	6,820
T8-25W 3 FT 2 LAMP ELECTRONIC BALLAST	2,747
T8-28W 4 FT 1 LAMP (OR 24" U-TUBE) ELECTRONIC BALLAST	109,636
T8-28W 4 FT 2 LAMP ELECTRONIC BALLAST	385,716
T8-28W 4 FT 3 LAMP ELECTRONIC BALLAST	13,030
T8-28W 4 FT 4 LAMP ELECTRONIC BALLAST	39,334
T8-30W 4 FT 2 LAMP ELECTRONIC BALLAST	1,111
T8-30W 4 FT 4 LAMP ELECTRONIC BALLAST	12,902
OTHER	109
TOTAL	2,171,407

- f. Please provide a copy of any and all evaluations, documentation, or other information collected from low-income residents and building owners related to the Multifamily Housing Retrofit Program in Phase II.

A customer satisfaction survey of building owners/managers is attached to this response.

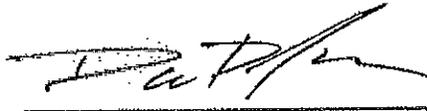
**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

_____ :
Petition of Duquesne Light Company for Approval :
of its Act 129 Phase III Energy Efficiency and :
Conservation Plan :

:
Docket No. M-2015-2515375
:
:

VERIFICATION

I, David Defide, Manager of Customer Programs for Duquesne Light Company, verify that the foregoing Answers to Discovery Requests are true and correct to the best of my knowledge, information and belief. I understand that false statements herein are made subject to the penalties of 18 Pa. C.S. §4904, relating to unsworn falsifications to authorities.



David Defide

Date: 1/11/16

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of Duquesne Light Company :
for Approval of its Act 129 Phase III : M-2015-2515375
Energy Efficiency and Conservation Plan :

AFFIDAVIT

I, Mitchell Miller, being duly sworn according to law depose and say that the following:

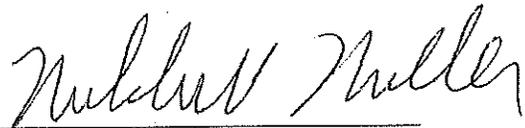
CAUSE-PA Statement No. 1, Direct Testimony of Mitchell Miller

and

Appendix A to CAUSE-PA Statement No. 1

were prepared by me, or under my direct supervision, and are true and correct to the best of my knowledge, information and belief.

I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).



Mitchell Miller
60 Geisel Rd.
Harrisburg, PA 17112
mitchmiller77@hotmail.com

Date: 2/9/16

Sworn to and subscribed before me

this 9th day of February, 2016.

