

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**METROPOLITAN EDISON COMPANY
Docket No. M-_____**

**PENNSYLVANIA ELECTRIC COMPANY
Docket No. M-_____**

**PENNSYLVANIA POWER COMPANY
Docket No. M-_____**

**WEST PENN POWER COMPANY
Docket No. M-_____**

PHASE III ENERGY EFFICIENCY AND CONSERVATION PLAN

**Prepared
Direct
Testimony
of
Edward C. Miller**

List of Topics Addressed

**EE&C Plan Development
Description of Plans and Programs
Program Implementation
Compliance with Statutory and Regulatory Requirements**

1 **I. INTRODUCTION AND BACKGROUND**

2

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

4 A. My name is Edward C. Miller and my business address is 800 Cabin Hill Drive, Greensburg, PA
5 15601.

6

7 **Q. MR. MILLER, BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

8 A. I am employed by FirstEnergy Service Company as Manager, Development & Compliance in the
9 Energy Efficiency Department. I am responsible for development and compliance activities
10 related to energy efficiency and conservation (“EE&C”) and peak demand reduction (“PDR”) programs for the FirstEnergy utilities in Ohio, Maryland, New Jersey, Pennsylvania and West
11 Virginia. This primarily involves the development of programs and filings to meet the
12 FirstEnergy utilities’ EE&C and/or PDR requirements and obligations in the various states. I
13 report to the Director, Compliance and Reporting in FirstEnergy’s Energy Efficiency
14 Department.
15

16

17 **Q. WHAT IS YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND?**

18 A. I hold a Bachelor of Science degree in Electrical Engineering from the University of Pittsburgh.
19 For over seventeen years, I was employed by Allegheny Energy Service Corporation, the service
20 company for Allegheny Energy Inc. (“Allegheny”), which merged in 2011 with FirstEnergy
21 Corp. (“FirstEnergy”). While with Allegheny, I held various engineering, customer service and
22 management positions in Customer Services, Sales & Marketing, Customer Management and

1 Energy Efficiency departments. After FirstEnergy and Allegheny merged, I was assigned my
2 current position as Manager, Development & Compliance.

3
4 **Q. PLEASE DESCRIBE YOUR PROFESSIONAL EXPERIENCE RELEVANT TO THE**
5 **TESTIMONY YOU ARE NOW GIVING.**

6 A. Between 2009 and the FirstEnergy-Allegheny merger in 2011, I was involved in the
7 development of EE&C/PDR programs and filings for the utilities formerly owned by Allegheny
8 in Pennsylvania, Maryland and West Virginia. Since completion of the merger, I have been
9 involved in the same activities for the FirstEnergy utilities in West Virginia, Maryland, Ohio and
10 Pennsylvania. I was responsible for the design of the programs included in the Companies'
11 Phase II EE&C plans that were approved by the Commission in Docket Nos. M-2012-2334387
12 (Metropolitan Edison Company or "Met-Ed"), M-2012-2334392 (Pennsylvania Electric
13 Company or "Penelec"), M-2012-2334395 (Pennsylvania Power Company or "Penn Power")
14 and M-2012-2334398 (West Penn Power Company or "West Penn") (collectively, "Phase II
15 Plans"), overseeing the team that designed and developed those plans. I have the same
16 responsibilities related to the EE&C plans being proposed in this proceeding ("Phase III Plans").
17 In fulfilling my responsibilities, I collaborate with energy efficiency consultants who assist the
18 Companies with program design, implementation and the evaluation, measurement and
19 verification ("EM&V") of programs.

20
21 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

22 A. I am testifying on behalf of Met-Ed, Penelec, Penn Power and West Penn (collectively, the
23 "Companies"). Unless otherwise stated, my testimony equally applies to all four companies.

1 Further, rather than reiterating what is included in the Companies' Phase III Plans in my
2 testimony, any references to sections of those plans are incorporated as if fully rewritten herein.

3
4 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

5 A. The purpose of my testimony is to: (i) summarize the additional EE&C and PDR targets set for
6 the Companies by the Pennsylvania Public Utility Commission's ("Commission") 2015
7 Implementation Order¹ and the spending limitations for each Company under Act 129;² (ii)
8 describe the development of the Phase III Plans; (iii) summarize the Phase III Plans and the
9 programs included therein; (iv) describe how the Companies plan to implement the programs
10 included in the Phase III Plans; and (v) analyze whether the Phase III Plans comply with all
11 statutory and regulatory requirements, including without limitation the Commission's 2015
12 Implementation Order and its 2016 Total Resource Cost ("TRC") test Order.³

13
14 **Q. WHAT WAS YOUR ROLE IN THE DEVELOPMENT OF THE PHASE III PLANS?**

15 A. As I mentioned, I oversaw the team that developed the Phase III Plans. More specifically, my
16 role was to manage the creation of the Phase III EE&C and PDR programs and budgets; evaluate
17 the cost-effectiveness of the Phase III Plans consistent with the Commission's requirements; and
18 optimize the plan components to achieve the EE&C and PDR targets consistent with regulatory
19 requirements and spending parameters.

¹ *Energy Efficiency and Conservation Programs*, Docket No. M- 2014-2424864, Implementation Order (Entered June 19, 2015) ("2015 Implementation Order").

² Act 129 of 2008 was signed into law on October 15, 2008, and became effective on November 14, 2008. Among other things, the Act created an EE&C Program, codified in the Pennsylvania Public Utility Code at Sections 2806.1 and 2806.2, 66 Pa. C.S. §§ 2806.1 and 2806.2

³ Final Order on the TRC Test for Phase III of Act 129. From the Public Meeting of June 11, 2015, Docket No. M-2015-2468992 (Entered June 22, 2015) ("2016 TRC Order").

1 **Q. WHAT DOCUMENTS DID YOU REVIEW BEFORE DESIGNING THE PHASE III**
2 **PLANS?**

3 A. In order to guide the development of the plans, I primarily reviewed the requirements of the
4 Commission's 2015 Implementation Order and the 2016 TRC Order.

5
6 **II. PHASE III EE&C TARGETS AND SPENDING LIMITATIONS**

7
8 **Q. DID THE COMMISSION ADOPT ADDITIONAL INCREMENTAL EE&C AND PDR**
9 **TARGETS FOR THE COMPANIES?**

10 A. Yes. The Commission adopted new energy savings targets for each of the Companies. Distinct
11 from Phase II of the Commission's EE&C Program,⁴ the Commission also established demand
12 reduction targets for all of the Companies except Penelec. In his testimony, Companies' Witness
13 Dargie discusses the reasons underlying the exclusion of Penelec from this requirement. The
14 energy efficiency and demand reduction targets are set forth in the Commission's 2015
15 Implementation Order, and will be in effect for the period June 1, 2016 through May 31, 2021
16 ("Phase III Period"); although, in its 2015 Implementation Order (at page 35) the Commission
17 established that there is no demand reduction target for the first program year of the Phase III
18 Period.

⁴ *Energy Efficiency and Conservation Programs*, Docket Nos. M-2012-2289411 and M-2008-2069887, Implementation Order (entered August 3, 2012) ("Phase II Implementation Order").

1 **Q. WHAT ARE THE OVERALL MWH REDUCTION TARGETS THAT EACH OF THE**
 2 **COMPANIES MUST ACHIEVE PURSUANT TO ACT 129 AND THE COMMISSION’S**
 3 **2015 IMPLEMENTATION ORDER?**

4 A. The following table shows the MWh targets, which represent the total incremental annual
 5 savings required by each of the Companies for the Phase III Period:

EDC Name	Phase III Target MWh
Met-Ed	599,352
Penelec	566,168
Penn Power	157,371
West Penn Power	540,986

6

7 **Q. WHAT ARE THE MW REDUCTION TARGETS FOR EACH OF THE COMPANIES AS**
 8 **ESTABLISHED BY THE COMMISSION IN THE 2015 IMPLEMENTATION ORDER?**

9 A. The following table shows the MW targets, which represent the average of MW reductions to be
 10 obtained across all events over the last four years of the Phase III Period:

EDC Name	Phase III Target MW
Met-Ed	49
Penelec	0
Penn Power	17
West Penn Power	64

1 **Q. WHAT ARE THE ANNUALIZED SPENDING LIMITS FOR THE DEVELOPMENT**
2 **AND IMPLEMENTATION OF THE PHASE III PLANS?**

3 A. Act 129 specifies that “The total cost of any plan required under [Act 129] shall not exceed 2%
4 of the electric distribution company’s total annual revenue as of December 31, 2006.”⁵
5 Consistent with this requirement, the annualized spending limit as established by the
6 Commission⁶ for each of the Companies is as follows:

7

EDC Name	Annualized Cost Limit
Met-Ed	\$24,866,894
Penelec	\$22,974,742
Penn Power	\$6,659,789
West Penn Power	\$23,562,602

8

9 **Q. HOW MUCH HAS BEEN BUDGETED FOR EACH OF THE COMPANIES’**
10 **PROGRAMS?**

11 A. The proposed budgets for each program included in each Company’s Phase III Plan can be found
12 in Appendix C-1. Total portfolio budgets for each Company are also summarized in Appendix
13 E, Table 6c.

⁵ 66 Pa.C.S. § 2806.1(m).

⁶ 2015 Implementation Order, p. 11.

1 **Q. ARE ANY OF THE COMPANIES CARRYING OVER ANY EXCESS SAVINGS FROM**
2 **THE PHASE II PERIOD?**

3 A. Yes. Penn Power is carrying over 4,100 MWhs of excess savings that are projected to be
4 achieved during the Phase II Period. This amount of savings is included in the totals set forth in
5 Appendix E, Table 2 of the Penn Power Phase III Plan.

6
7 **III. DEVELOPMENT OF THE PROPOSED PLANS**

8
9 **Q. PLEASE DESCRIBE GENERALLY HOW THE COMPANIES' PHASE III PLANS**
10 **WERE DEVELOPED.**

11 A. Sections 1.2 and 3.1 of the Phase III Plans describe how the FirstEnergy plan development team
12 (“EE&C Team”) designed the Companies’ Phase III Plans. Generally, the EE&C Team
13 reviewed the existing programs and measures in the Companies’ Phase II Plans to assess
14 implementation and performance to date. It then reviewed the programs and measures offered
15 by both FirstEnergy and other utilities to establish a universe of programs and measures for
16 consideration. The EE&C Team also reviewed the Pennsylvania Market Potential Study,⁷ the
17 Statewide Evaluator’s Demand Reduction Market Potential Study,⁸ and the 2016 Technical
18 Reference Manual (“TRM”),⁹ and consulted with its implementation team and ADM Associates,
19 Inc. (“ADM”) -- its energy efficiency consultant and independent EM&V contractor -- in an

⁷ Act 129 Statewide Evaluator Energy Efficiency Potential for Pennsylvania (Feb. 25, 2015), released via Secretarial Letter, Docket No. M-2014-2424864, (Feb. 27, 2015) (“EE Potential Study”).

⁸ Act 129 Statewide Evaluator Demand Response Potential for Pennsylvania (Feb. 25, 2015), released via Secretarial Letter, Docket No. M-2014-2424864 (Feb. 27, 2015) (“DR Potential Study”).

⁹ 2016 Final Order updating the Technical Reference Manual, Docket No. M-2015-2469311 (Entered July 8, 2015) (“2016 TRM Order”).

1 effort to identify additional opportunities. The EE&C Team considered the program and
2 measure opportunities and completed initial modeling, taking into account: (i) implementation
3 experience through existing programs; (ii) program benefit and cost assumptions; (iii) input from
4 stakeholders, consultants and vendors; (iv) the 2016 TRM; and (v) the EE and DR Potential
5 Studies. Based on this analysis and evaluation, the EE&C Team selected the measures to be
6 included in the Phase III Plans, estimated participation levels and corresponding program and
7 measure savings results, and developed program budgets within the budget constraints
8 established under Act 129's statutory 2% spending cap.

9
10 **Q. DURING THE COURSE OF YOUR WORK ON THE DEVELOPMENT OF THE PHASE**
11 **III PLANS, WHAT ASSUMPTIONS WERE MADE?**

12 A. The key assumptions made when developing the Phase III Plans are set forth in Section 1.2 of
13 the Phase III Plans.

14
15 **Q. DURING THE DEVELOPMENT OF THE PHASE III PLANS, WAS THE COMPANIES'**
16 **DESIGN STRATEGY DISCUSSED WITH INTERESTED STAKEHOLDERS?**

17 A. Yes. During the stakeholder meetings, the Companies discussed the programs, subprograms and
18 measures that were being considered for the Phase III Plans, as well as the Phase II measures that
19 would be removed from the Phase III Plans. In his direct testimony, Companies' Witness Dargie
20 describes the stakeholder process, as well as other meetings in which the Companies participated
21 during the development of the Phase III Plans.

1 **IV. SUMMARY OF THE COMPANIES' PHASE III EE&C PLANS**

2
3 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF THE PHASE III PLANS.**

4 A. Each Company's Phase III Plan is virtually identical to the other Companies' Phase III Plans.
5 They include a portfolio of energy efficiency programs and demand reduction programs, which
6 are designed to achieve the specific reduction targets during the Phase III Period as established
7 by the Commission in its 2015 Implementation Order. Like the Companies' prior EE&C plans,
8 the proposed Phase III Plans include a portfolio of EE&C programs targeted to a variety of
9 customer segments, including: (i) residential (with programs specific to the low-income sector);
10 (ii) small commercial and industrial ("C&I"); (iii) large C&I; and (iv) the
11 Government/Education/Non-profit sector (collectively "G/E/NP sector").

12 Each of the Phase III Plans is generally an extension of the programs and measures included in
13 the Companies' Phase II Plans, with slight modifications to the programs, the elimination of
14 several measures and the addition of new subprograms and measures, including new PDR
15 programs. Also, like the Phase II Plans, the Phase III Plans continue the use of incentive level
16 ranges. Under this approach, the Companies have the ability to adjust rebate levels within the
17 range as market conditions warrant, provided that these adjustments do not increase program
18 costs beyond approved budgets and, further provided, that the Companies discuss potential
19 changes with interested stakeholders. Based on these ranges, the Companies can adjust
20 incentives for the measures or programs to either avoid overpaying for measures, or if it is
21 determined that an incentive is not sufficient, the Companies can increase incentives within the
22 approved range to enhance market response without missing potential opportunities while
23 waiting for resolution through the regulatory process. This allows the Companies to quickly

1 react to changing market conditions, thus, optimizing its efforts to achieve its energy savings
2 goals.

3
4 **Q. WHY DO THE COMPANIES BELIEVE THAT A STRATEGY TO CONTINUE A
5 NUMBER OF THE PHASE II PROGRAMS INTO PHASE III WILL BE SUCCESSFUL
6 IN MEETING THE EE&C REDUCTION TARGETS?**

7 A. The Phase II Plans are a comprehensive portfolio of proven EE&C programs that created a solid
8 foundation on which to build the Phase III plans. Continuing the Phase II programs not only
9 allows the Companies to build upon the momentum gained during the Phase II Period through
10 program implementation, customer education and marketing efforts, but it also allows them to
11 leverage the experience as well as the implementation practices, procedures and systems that
12 were put in place to support the operation of the programs. The strategy to leverage the Phase II
13 programs was discussed during the stakeholder process.

14
15 **Q. YOU INDICATED THAT THERE WERE SLIGHT MODIFICATIONS TO THE PHASE
16 II PROGRAMS AND CERTAIN MEASURES WERE EITHER ELIMINATED FROM
17 OR ADDED TO THE PHASE III PLANS. WOULD YOU PLEASE SUMMARIZE THE
18 DIFFERENCES BETWEEN THE PHASE II AND PHASE III PLANS?**

19 A. From a practical perspective, the only significant change between the Phase II and Phase III
20 Plans is the addition of demand reduction programs in the Phase III Plans. All of the Phase III
21 Plans, *including* Penelec's, contain a residential demand response program, while all of the
22 plans, *except* Penelec's, also include C&I demand response programs. There are several other
23 minor changes to programs and measures, which are summarized in the Phase III Plans. A

1 comparison between the Phase II and Phase III programs is included in Table 1 of the Phase III
2 Plans. A list of measures that have been retained, removed or added for each program for each
3 customer segment can be found in Tables 8, 10, 12 and 14 of the Phase III Plans.

4
5 **Q. WHY WERE CERTAIN PHASE II MEASURES EXCLUDED FROM THE PHASE III**
6 **PLANS?**

7 **A.** Phase II measures were eliminated from the Phase III Plans for several basic reasons. Either
8 there was: (i) poor participation or results during Phase II that did not justify incurring the
9 expense to retain the measure in Phase III; and/or (ii) a change in federal standards effectively
10 eliminating the efficient condition; and/or (iii) the savings projections for Phase III were either
11 considered to be very small or non-existent. And, as I previously mentioned, the Companies’
12 reasoning for eliminating certain Phase II measures was discussed during the stakeholder
13 meetings.

14
15 **Q. HOW MANY MEASURES ARE INCLUDED IN EACH OF THE PHASE III PLANS?**

16 **A.** There are over 150 unique measures included in each of the Phase III Plans. Appendix D-4 in
17 each of the plans lists the measures selected. These measures were selected after taking into
18 account the Companies’ implementation experience during Phase II, program and measure
19 savings and cost assumptions, input from interested parties, and Commission directives included
20 in various Commission orders, including those related to the 2016 TRM and the EE and DR
21 Potential Studies.

1 **V. PROGRAMS**

2
3 **Q. WHAT PROGRAMS ARE THE COMPANIES PROPOSING FOR PHASE III?**

4 A. Each of the programs included in the Phase III Plans are described in detail in Section 3 of each
5 Company's plan. And, as I explain later in my testimony, the combination of these programs
6 provides benefits to all classes and optimizes the program mix in a manner that achieves a
7 portfolio TRC Benefit/Cost ratio of over 1.0 for each of the Companies' Phase III Plans.

8
9 **Q. PLEASE DESCRIBE THE RESIDENTIAL PROGRAMS THAT ARE INCLUDED IN**
10 **THE PHASE III PLANS.**

11 A. The Companies are proposing the following programs for Residential customers: (i) Appliance
12 Turn-In Program; (ii) Energy Efficient Products Program; and an (iii) Energy Efficient Homes
13 Program. Each of these residential programs includes numerous subprograms, which are
14 summarized in Tables 7 and 8 and are more fully described in Section 3.2 of the Phase III Plans.
15 Generally, the residential programs were designed with a progression from general to specific.
16 Home energy kits, energy usage reports and home energy audits are expected to serve as a
17 "portal" (but not a requirement) for the other programs, because they serve a dual purpose of
18 providing customers with both energy efficiency education and information regarding other
19 potential energy savings opportunities and specific energy savings measures or
20 recommendations. The energy efficiency programs then address the higher first cost of energy
21 efficient appliances and products by providing rebates to overcome cost barriers and tap a variety
22 of delivery channels and vendors. The Companies have also included a behavioral demand
23 response program for residential customers with smart meters. Through this program, the

1 Companies will provide notification messages to motivate customers to reduce usage during
2 demand reduction events. The program will also provide post-event customer feedback about
3 the customer's usage performance during the event and recommendations to reinforce their usage
4 reduction behavior in future demand reduction events. While not specifically targeted, low-
5 income customers are also eligible for this demand response program.

6
7 **Q. DO THE PHASE III PLANS INCLUDE PROGRAMS THAT ARE DESIGNED FOR**
8 **RESIDENTIAL LOW-INCOME CUSTOMERS?**

9 A. Yes. Basic, enhanced and comprehensive services and education will be offered in the low-
10 income sector so as to afford households the opportunity to better manage and control their
11 energy spending. The Companies are proposing a Low-Income Energy Efficiency Program,
12 which includes the following subprograms: (i) Energy Efficiency Kits; (ii) Weatherization; (iii)
13 Multi-family/ Low-Income Low-Use Single Family; (iv) Low-Income Behavioral; (v) Low-
14 Income New Homes; (vi) Low-Income Appliance Rebate; (vii) Low-Income Appliance Turn In;
15 and (viii) Low-Income School Education. Similar to the general residential sector programs, the
16 low-income customer sector programs are also designed with a progression from general to
17 specific in an effort to make EE&C programs and services available to all low-income customers
18 with various spending limits. The Companies will provide no-cost home energy kits, school
19 education and customized energy usage reports providing low-income customers with energy
20 efficiency recommendations or directly providing basic energy savings measures or energy
21 efficiency education. They will also provide recommendations and information regarding other
22 energy efficiency related services that may be available to these customers. Audits and
23 appliance replacement will be targeted to promote energy efficiency in multi-family or single-

1 family homes that are not eligible for services under the Weatherization subprogram. Appliance
2 rebate and appliance turn-in programs will also be targeted to promote adoption of these
3 measures and to help identify new low-income customers. And, the Companies are continuing
4 the Weatherization program where the Companies will complete additional comprehensive
5 weatherization services or expand the measures provided to customers under the Companies'
6 existing Low-Income Usage Reduction Program ("LIURP"). Details surrounding the Low-
7 Income Energy Efficiency Program and each of the low-income subprograms can also be found
8 in Section 3.2 of the Phase III Plans.

9
10 **Q. ARE THE LOW-INCOME PROGRAMS SPECIFICALLY TARGETED TO LOW-**
11 **INCOME CUSTOMERS?**

12 A. Yes. In accordance with the Commission's 2015 Implementation Order (at page 69), savings
13 counted towards the low-income target may only come from specific low-income programs or
14 low-income verified participants in multi-family housing programs. The Companies have
15 designed the Low-Income Energy Efficiency Program and each of the low-income subprograms
16 to meet this requirement. The Energy Efficiency Kits and Low-Income Behavioral subprograms
17 will continue to be specifically targeted to known low-income customers as they were under the
18 Phase II Plans. Energy efficiency education and materials provided under these subprograms
19 will also be customized for the low-income sector. Also, similar to the Phase II Plans, the
20 Weatherization subprogram is designed to capture electric energy savings as part of the delivery
21 of the Company's LIURP, by tapping the considerable expertise and existing infrastructure of
22 LIURP contractors comprised of both Community Based Organizations ("CBOs") and private
23 contractors, who specifically target low-income customers. The LIURP program has offered

Met-Ed/Penelec/Penn Power/West Penn Statement No. 2

1 comprehensive energy efficiency services to eligible Pennsylvania households since 1988. This
2 aspect of the Phase III Plan continues to enhance and accelerate the deployment of services to
3 LIURP-eligible households by providing additional measures and services to achieve more
4 savings in each visit or through additional home treatments. The Multi-family/ Low-Income
5 Low-Use Single Family subprogram is new for Phase III and will specifically target multi-family
6 or single family homes that are not eligible for services provided under the Weatherization
7 subprogram. This subprogram will be closely coordinated with the Weatherization subprogram
8 to avoid duplicating efforts or services targeted to qualified low-income customers. Under the
9 Low-Income New Homes subprogram, also new for Phase III, the Company will work with
10 Pennsylvania Housing Finance Authority (“PHFA”) and other entities to provide incentives for
11 the construction of new energy efficient housing for qualified low-income customers. Under the
12 Low-Income Appliance Rebate and Low-Income Appliance Turn In subprograms, also new for
13 Phase III, the Companies will target low-income customers through specific marketing and
14 outreach activities. In Phase II, the Companies evaluation, measurement and verification of the
15 general residential programs identified that there was low-income customer participation in these
16 programs. The Companies plan to offer enhanced rebates under these low-income subprograms
17 to contribute more towards the incremental cost of energy efficiency measures for qualified low-
18 income customers and to help identify new low-income customers to which the Companies can
19 target additional services under the other low-income subprograms. Finally, the Low-Income
20 School Education program will specifically target schools that have a higher percentage of low-
21 income families as identified through the assisted lunch program in an effort to reach low-
22 income families and make them more aware of potential energy savings opportunities.

1 **Q. DO THE COMPANIES' PHASE III PLANS INCLUDE SPECIFIC ENERGY**
2 **EFFICIENCY MEASURES FOR HOUSEHOLDS AT OR BELOW 150% OF THE**
3 **FEDERAL POVERTY INCOME GUIDELINES?**

4 A. Yes. Act 129 requires that each EE&C plan include specific energy efficiency measures for
5 households at or below 150% of the federal poverty income guidelines in proportion to that
6 sector's share of the total energy usage in the EDC's service territory.¹⁰ As explained in Section
7 9.1.3 of the Phase III Plans, each Company's plan exceeds this requirement.

8
9 **Q. HOW WILL THE COMPANIES TRACK THE RESULTS FROM THE LOW-INCOME**
10 **SPECIFIC PROGRAMS?**

11 A. The Companies have processes and procedures already in place that successfully tracked the
12 results from both the Phase I and Phase II EE&C plans. The Companies will continue these
13 processes and procedures and will specifically track the participation in the Low-Income
14 programs consistent with how they track participation in the other non-low-income programs.
15 Section 5 of the Phase III Plans describes the Companies' reporting and tracking systems.

16
17 **Q. SOME OF THE SUBPROGRAMS BEING OFFERED TO THE GENERAL**
18 **RESIDENTIAL CUSTOMER ARE ALSO BEING OFFERED TO THE LOW-INCOME**
19 **CUSTOMER. ARE THERE ANY DISTINCTIONS BETWEEN THE TWO?**

20 A. Yes. The Companies will develop marketing materials and complete outreach activities that are
21 specifically designed to target low-income customers and to encourage these customers'

¹⁰ 66 Pa. C.S. § 2806.1(b)(1)(i)(G).

1 participation in the low-income programs. The Companies also plan to provide an enhanced
2 rebate to qualified low-income customers for certain measures to offset a greater portion of the
3 incremental cost for participation.

4
5 **Q. WOULD YOU PLEASE DESCRIBE THE OUTREACH ACTIVITIES THAT WILL BE**
6 **IMPLEMENTED TO TARGET THE LOW-INCOME SECTOR?**

7 A. The Companies have developed extensive outreach activities during Phases I and II of the EE&C
8 Program and plan to continue these activities for Phase III. These outreach activities include:
9 Radio interviews and ads, television ads, Websites, Twitter, Facebook, bill inserts, bus signs,
10 letters, calling campaigns, post-cards, newspaper ads/articles, posters, food pantry events, Head
11 Start program events, Be Utility Wise events and various county events within the FirstEnergy
12 service territory. The Companies have routinely discussed both these outreach activities as well
13 as their marketing materials in their stakeholder meetings throughout Phase II and plan to
14 continue this practice in Phase III. Further, the Companies will continue to look for new
15 outreach activities to assist with identifying and targeting qualified low-income customers for all
16 of the low-income subprograms, and will seek feedback from residential and low income
17 representatives on these activities, as well as the Companies marketing materials, as necessary.

1 **Q. PLEASE DESCRIBE THE SMALL AND LARGE C&I PROGRAMS THAT ARE**
2 **INCLUDED IN THE PHASE III PLANS.**

3 A. The Companies are proposing the following programs for the small and large C&I sectors: (i)
4 C&I Energy Solutions for Business Program – Small/Large¹¹ and (ii) C&I Demand Reduction
5 Program – Small/Large. The Phase III EE&C programs combine the C&I Equipment and C&I
6 Building programs that were offered through the Phase II Plans to simplify and streamline
7 administration as well as customer participation in the programs. Generally, C&I customers will
8 be provided targeted information on ways to save energy, which will be followed up with a
9 choice of prescriptive rebates on selected measures, or a performance (calculated based on
10 energy savings) rebate. Customized energy savings equipment and measures will also be
11 addressed through calculated rebates based upon the estimated amount of annual energy savings
12 associated with the project. The Phase III Plans also include a demand response program for
13 small and large commercial businesses and industrial customers. It will be implemented through
14 contracts with one or more PJM Curtailment Service Providers (“PJM-CSPs”) who will develop
15 a portfolio of callable load response resources that will be dispatched during targeted load
16 reduction events. More detailed descriptions of each of the C&I programs for both small and
17 large customers can be found in Sections 3.3 and 3.4 of the Phase III Plans.

¹¹ The classification of small and large C&I Customers is commonly governed by customer rate classes described in the Companies’ tariffs.

1 **Q. PLEASE DESCRIBE THE G/E/NP SECTOR PROGRAMS THAT ARE INCLUDED IN**
2 **THE PHASE III PLANS.**

3 A. The Companies are proposing the Governmental and Institutional Tariff Program to target
4 specific applications and customers in the G/E/NP sector, which includes street lighting and non-
5 profit entities served under discrete rate schedules. This program provides both prescriptive and
6 performance based incentives to G/E/NP sector tariff customers to purchase or install qualifying
7 high efficiency measures, or recycle inefficient appliances. The Companies will also target the
8 G/E/NP sector through special efforts for the prescriptive and custom energy efficiency programs
9 offered under the C&I programs in recognition of their unique decision-making and financing
10 processes for making capital improvements to facilities. These efforts will include the
11 leveraging of existing Company Area Manager relationships and employing experienced vendors
12 who specialize in working with governmental accounts. The Government and Institutional Tariff
13 program is described in more detail in Section 3.5 of the Phase III Plans.

14 **VI. IMPLEMENTATION OF PROGRAMS**

15
16 **Q. PLEASE DESCRIBE THE COMPANIES' APPROACH TO IMPLEMENTING THE**
17 **PHASE III PLANS.**

18 A. The Companies' implementation strategy will rely on a number of Conservation Service
19 Providers ("CSPs"), program allies and other entities engaged in energy-efficiency to promote,
20 deliver, and support effective deployment of the EE&C and PDR programs. Some CSPs will
21 operate as turnkey program delivery contractors while others will provide specific functions
22 across multiple programs. The Companies intend to contract with CSPs as soon as practicable to

1 enable a timely program transition and implementation of the proposed programs and measures
2 once the Phase III Plans are approved. Companies' Witness Dargie discusses the bidding and
3 contracting timelines in his direct testimony. As with the Companies previous EE&C plans,
4 contracts with selected vendors will be contingent upon Commission approval of the Phase III
5 programs and CSP contracts. The Companies' implementation strategy is more fully discussed
6 in Sections 1.4, 1.6 and 4 of the Phase III Plans.

7
8 **Q. UNLIKE PHASE II, THE COMMISSION INCLUDED A PHASE III DEMAND**
9 **REDUCTION REQUIREMENT FOR MET-ED, PENN POWER AND WEST PENN.**
10 **PLEASE DESCRIBE THE COMPONENTS OF THE PLAN THAT ARE DESIGNED TO**
11 **ACHIEVE THESE TARGETS.**

12 A. The Companies have developed both a residential and a small/large C&I demand response
13 program for these three companies. These programs were informed by a request for proposal
14 ("RFP") that the Companies issued soliciting demand response program proposals. As I
15 indicated earlier in my testimony, the residential demand response program will provide
16 notification messages to motivate customers with smart meters to reduce usage during demand
17 reduction events. The program will also provide post-event customer feedback about their
18 usage performance during the event and recommendations to reinforce their usage reduction
19 behaviors during future events. In response to the 2015 Implementation Order in which the
20 Commission encouraged Penelec to propose a voluntary demand reduction program if it

1 reasonably could,¹² Penelec has included this same residential demand response program in its
2 Phase III Plan.

3
4 In the C&I Demand Response program Met-Ed, Penn Power and West Penn will contract with
5 one or more PJM-CSPs who will develop a portfolio of callable load response resources that will
6 be dispatched during targeted load reduction events. The program has been designed in a
7 manner so that the cost to acquire MWs from customers who participate in PJM's Emergency
8 Load Reduction Program (ELRP) is no more than half the cost to acquire MWs from customers
9 in the same rate class that are not participating in PJM's ELRP. The program budgets and MW
10 projections for the C&I demand response programs are provided in Appendix C of the Phase III
11 Plans.

12
13 **VII. COMPLIANCE WITH STATUTORY AND REGULATORY REQUIREMENTS**

14
15 **Q. ARE THE COMPANIES' PHASE III PLANS DESIGNED TO MEET THE MWH**
16 **TARGETS IDENTIFIED IN THE COMMISSION'S 2015 IMPLEMENTATION**
17 **ORDER?**

18 A. Yes, based on the assumptions relied upon by the Commission when establishing the Phase III
19 energy savings targets, the Phase III Plans are designed to meet the MWh targets, including the
20 special carve outs for the low-income and G/E/NP sectors, as established in the Commission's
21 2015 Implementation Order. PUC Table 2 in Appendix E of the Phase III Plans shows the

¹² Implementation Order, p. 45.

1 projected MWh energy savings for each of the Companies. Further, as explained in Section
2 9.1.3 of the Phase III Plans, each of the plans also includes specific energy efficiency measures
3 for households at or below 150% of the federal poverty income guidelines in proportion to that
4 sector's share of the total energy usage in the respective Company's service territory as required
5 by 66 Pa. C.S. § 2806.1(b)(1)(i)(G).

6
7 **Q. ARE THE COMPANIES' PHASE III PLANS DESIGNED TO ACHIEVE AT LEAST**
8 **15% OF THE CONSUMPTION REDUCTION TARGETS EACH PROGRAM YEAR?**

9 A. Yes. The aforementioned PUC Table 2 in Appendix E indicates the projected energy savings for
10 each program year and illustrates that the Phase III Plans are designed to meet at least 15 % of
11 the consumption reduction targets each year.

12
13 **Q. ARE THE COMPANIES' PHASE III PLANS DESIGNED TO MEET THE MW**
14 **DEMAND REDUCTION TARGETS ESTABLISHED IN THE COMMISSION'S 2015**
15 **IMPLEMENTATION ORDER?**

16 A. Yes. The aforementioned PUC Table 2 in Appendix E shows the projected annual demand
17 reductions for the demand response measures for each of the Companies.

18
19 **Q. WHAT ASSUMPTIONS WERE MADE WHEN DETERMINING THE ESTIMATED**
20 **DEMAND REDUCTION RESULTS?**

21 A. When creating the RFP that was issued to solicit demand response programs, the Companies set
22 forth the parameters established by the Commission in the 2015 Implementation Order.

1 Specifically, we required that any demand response program design be based on the following
2 assumptions:

- 3 • Curtailment events would be limited to the months of June through September;
- 4 • Curtailment events would be called for the first six days that the peak hour of PJM's day-
5 ahead forecast from PJM's 7-day load forecast (found at the following link:
6 <http://www.pjm.com/markets-and-operations/energy/real-time/7-day-load-forecast.aspx>) for
7 the PJM RTO is greater than 96% of the PJM RTO summer peak demand forecast (as set
8 forth in Table B-1 of the annual PJM Load Forecast Report) for the months of June through
9 September each year of the program;
- 10 • Each curtailment event would last four hours;
- 11 • Each curtailment event would be called such that it will occur during the day's forecasted
12 peak hours above 96% of PJM's RTO summer peak demand forecast;
- 13 • Once six curtailment events have been called in a program year, the peak demand reduction
14 program would be suspended for that program year; and,
- 15 • Compliance will be determined based on the average MW performance across all event hours
16 in a given program year.

17
18 **Q. DO THE COMPANIES' PHASE III PLANS ACHIEVE THE OVERALL TRC COST-
19 BENEFIT THRESHOLD?**

20 A. Yes. PUC Tables 1A and 1B in Appendix E of the Phase III Plans show the projected TRC
21 results on a portfolio basis for the Energy Efficiency measures and Demand Response measures
22 respectively, for Met-Ed, Penelec, Penn Power and West Penn. The TRC for each exceeds 1.0.

1 **Q. HOW WERE THE TRC RESULTS CALCUATED?**

2 A. Each of the TRC values were calculated consistent with the methodology prescribed by the
3 Commission in the 2016 Total Resource Cost (“TRC”) test Order. Section 8.0 of the Phase III
4 Plans provides more details on the Cost Effectiveness evaluation and methodology.

5
6 **Q. DO THE COMPANIES’ PHASE III PLANS INCLUDE BOTH A RESIDENTIAL AND
7 NON-RESIDENTIAL COMPREHENSIVE PROGRAM?**

8 A. Yes. As more fully discussed in Section 3.1.4 of the Phase III Plans, the Companies’ plans
9 include comprehensive programs and measures for both residential and non-residential
10 customers that target overall energy usage and major end uses. Both the Energy Efficient Homes
11 Program and the Low Income Energy Efficiency Program offer a range of services to residential
12 and low-income customers from energy education and no or low cost measures to
13 comprehensive whole house treatments and retrofits. Similarly, the C&I Energy Solutions for
14 Business Program also offers a range of services for commercial, industrial and
15 governmental/educational/non-profit customers from energy audits and education to incentives
16 for the retrofit of major building end-uses, building shell improvements and comprehensive
17 process improvements.

18
19 **Q. DO THE COMPANIES PHASE III PLANS INCLUDE A VARIETY OF MEASURES
20 THAT ARE PROVIDED EQUITABLY TO ALL CUSTOMER CLASSES?**

21 A. Yes. Based on the programs and measures selected and included in the Companies’ Phase III
22 Plans, as listed in Tables 8, 10, 12 and 14, there is at least one energy efficiency program and a
23 wide variety of measures available for each class of customer.

1 **Q. IN YOUR OPINION DO THE PROPOSED PLANS COMPLY WITH ALL STATUTORY**
2 **AND REGULATORY REQUIREMENTS?**

3 A. Yes. Each of the Proposed Plans: (i) are designed, based upon the Commission's acquisition
4 cost assumptions, to achieve the Phase III energy reduction targets, both in the aggregate and for
5 special customer segment carve outs, as established in Act 129 and the Commission's 2015
6 Implementation Order; (ii) are designed to achieve the demand reduction targets as established in
7 the Commission's 2015 Implementation Order; (iii) are designed to achieve at least 15% of the
8 energy reduction targets during each year of the Phase III Period; (iv) include at least one
9 program for each customer class; (v) pass the TRC test on a portfolio basis; (vi) include both a
10 residential and non-residential comprehensive program; and (viii) include a budget no greater
11 than the 2% statutory spending cap. And, although not technically required, the Phase III Plans
12 have placed greater emphasis and consideration on multi-family housing.

13
14 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

15 A. Yes, it does.