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|  | **PENNSYLVANIA**  **PUBLIC UTILITY COMMISSION**  Harrisburg, PA. 17120 |  |

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|  | Public Meeting held March 12, 2020 |
| Commissioners Present: |  |

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| --- | --- | --- |
| Gladys Brown Dutrieuille, Chairman, Statement | |  |
| David W. Sweet, Vice Chairman  Andrew G. Place, Statement | |  |
| John F. Coleman, Jr. | |  |
| Ralph V. Yanora | |  |
|  | |  |
|  |  |
| Energy Efficiency and Conservation Program | Docket No. M-2020-3015228 |

**TENTATIVE IMPLEMENTATION ORDER**

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**BY THE COMMISSION:**

The Pennsylvania Public Utility Commission (Commission) has been charged by the Pennsylvania General Assembly (General Assembly) with establishing an energy efficiency and conservation program (EE&C Program). The EE&C Program requires each electric distribution company (EDC) with at least 100,000 customers to adopt a plan to reduce energy demand and consumption within its service territory. 66 Pa. C.S. § 2806.1. On January 15, 2009, the Commission adopted an Implementation Order at Docket No. M-2008-2069887 establishing the standards each plan must meet and providing guidance on the procedures to be followed for submittal, review and approval of all aspects of EDC EE&C plans.[[1]](#footnote-2)

The Commission was also charged with the responsibility to evaluate the costs and benefits of the EE&C Program by November 30, 2013, and every five years thereafter. 66 Pa. C.S. § 2806.1(c)(3). The Commission must adopt additional incremental reductions in consumption if the benefits of the EE&C Program exceed its costs. *Id*. In addition, the Commission was charged with the responsibility to compare the total costs of the EE&C Program to the total savings in energy and capacity costs. If the Commission determines that the benefits exceed the costs, the Commission shall set additional incremental requirements for reduction in peak demand for the 100 hours of greatest demand or an alternative reduction approved by the Commission. 66 Pa. C.S. § 2806.1(d)(2). Furthermore, EDCs are to file a new EE&C plan with the Commission every five years or as otherwise required by the Commission. Such plans are to set forth the manner in which the EDC will meet the required reductions in consumption under subsections (c) and (d). 66 Pa. C.S. § 2806.1(b)(1)(ii). With this Tentative Implementation Order, the Commission begins the process of evaluating the costs and benefits of the EE&C Program and proposing the establishment of additional incremental reductions in electric consumption and peak demand.

# BACKGROUND AND HISTORY OF THIS PROCEEDING

Act 129 of 2008 (the Act or Act 129) 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. This initial program required an EDC with at least 100,000 customers to adopt an EE&C Plan, approved by the Commission, to reduce electric consumption by at least one percent (1%) by May 31, 2011 and by a minimum of three percent (3%) May 31, 2013. Also, by May 31, 2013, peak demand was to be reduced by a minimum of four‑and‑a‑half percent (4.5%) of the EDC’s annual system peak demand in the 100 hours of highest demand. By November 30, 2013, and every five years thereafter, the Commission is to assess the cost-effectiveness of the EE&C Program and set additional incremental reductions in electric consumption if the EE&C Program’s benefits exceed its costs.

The Act required the Commission to develop and adopt an EE&C Program by January 15, 2009 and sets out specific issues the EE&C Program must address. 66 Pa. C.S. § 2806.1(a). The Commission’s EE&C Program is to include the following:

(1) A procedure for approving EE&C Plans.

(2) A process to evaluate and verify the results of each EE&C Plan and the EE&C Program as a whole.

(3) A process to analyze the costs and benefits of each EE&C Plan in accordance with a total resource cost (TRC) Test.

(4) A process to analyze how the EE&C Program as a whole and each EE&C Plan will enable the EDCs to meet or exceed the consumption and peak demand reduction requirements.

(5) Standards to ensure that each EE&C Plan uses a variety of measures that are applied equitably to all customer classes.

(6) A process through which recommendations can be made for the employment of additional measures.

(7) A procedure to require and approve the competitive bidding of all contracts with conservation service providers (CSPs).

(8) A procedure through which the Commission will review and modify, if necessary, all contracts with CSPs prior to execution.

(9) A requirement for the participation of CSPs in the implementation of all or part of an EE&C Plan.

(10) A procedure to ensure compliance with the requirements of Sections 2806.1(c) & (d).

(11) A cost recovery mechanism to ensure that measures approved are financed by the customer class that directly receives the energy and conservation benefits.

On January 15, 2009, the Commission adopted the Phase I Implementation Order establishing the EE&C Program in compliance with Section 2806.1(a), 66 Pa. C.S. § 2806.1(a). In addition to adopting the Phase I Implementation Order, the Commission also adopted orders implementing specific and essential components of the EE&C Program, to include the establishment of a TRC Test,[[2]](#footnote-3) updates to the Technical Reference Manual (TRM)[[3]](#footnote-4) and the establishment of a Statewide Evaluator (SWE).

The Commission determined in its Phase II Implementation Order that additional reductions in consumption were cost-effective and prescribed targets to be met by May 31, 2016.[[4]](#footnote-5) At that time, though, the Commission did not have enough information to determine the cost-effectiveness of peak demand reduction programs and only permitted EDCs to voluntarily offer cost-effective demand reduction programs.[[5]](#footnote-6)

The Commission determined in its Phase III Implementation Order that additional reductions in consumption and peak demand were cost-effective and therefore prescribed reductions in consumption and peak demand targets to be met by May 31, 2021.[[6]](#footnote-7)

In preparation for a potential Phase IV, the Commission tasked the Phase III SWE with performing an energy efficiency and peak demand reduction (EEPDR) potential study, as well as a dispatchable demand response (DDR) potential study to determine the cost-effective consumption and peak demand reduction potential in Pennsylvania. The SWE submitted its final *Pennsylvania Act 129 Phase IV Energy Efficiency and Peak Demand Reduction Market Potential Study* and *Pennsylvania Act 129 Phase IV Demand Response Potential Study* to the Commission on February 28, 2020.[[7]](#footnote-8) The EEPDR and DDR Potential Studies were released publicly via Secretarial Letter served March 2, 2020.[[8]](#footnote-9)

# DISCUSSION

In this Order, the Commission will present its evaluation of the cost-effectiveness of the EE&C Program and any proposed additional required incremental reductions in consumption and peak demand. In addition, we will outline our proposals addressing the issues delineated in Section 2806.1(a) of the Act, 66 Pa. C.S. § 2806.1(a), for establishing Phase IV of the EE&C Program. We seek comments on the evaluation of the EE&C Program, the proposed additional required incremental reductions in consumption and peak demand shown in Table 1, as well as on the proposals addressing the design and implementation of the next round of the EE&C Program. The Commission proposes to implement a five-year Phase IV of the Act 129 EE&C Program that would operate from June 1, 2021 through May 31, 2026. We note that the EE&C Programs have matured enough so that EDCs can increase their focus on more comprehensive measures which tend to require greater implementation timeframes.

Table 1: Proposed Phase IV Targets, by EDC

|  |  |  |
| --- | --- | --- |
| EDC | Consumption Reduction (MWh) | Peak Demand Reduction (MW) |
| Duquesne Light | 347,084 | 67 |
| PECO | 1,380,837 | 276 |
| PPL | 1,250,157 | 244 |
| FE: Met-Ed | 463,215 | 85 |
| FE: Penelec | 437,676 | 91 |
| FE: Penn Power | 128,909 | 22 |
| FE: West Penn Power | 504,951 | 95 |

## Proposed Reductions in Electric Consumption

### Summary of SWE’s EEPDR Potential Study

The SWE performed an EEPDR Potential Study which presented the technical, economic and achievable potential over ten years and program potential over five years beginning June 1, 2021 for the residential, commercial and industrial sectors.[[9]](#footnote-10) This study was released to the public on March 2, 2020. In addition, the SWE performed baseline studies for the residential,[[10]](#footnote-11) and the non-residential[[11]](#footnote-12) sectors. which the Commission released on February 14, 2019.[[12]](#footnote-13) Together, these baseline studies represent a thorough assessment of current electricity usage and electrical energy consuming equipment installed in Pennsylvania. These baseline studies formed the basis for the EEPDR Potential Study.

The purpose of the EEPDR Potential Study was to determine the remaining opportunities for cost-effective electricity savings in the service areas of the seven EDCs that are subject to Act 129. For this study, the SWE used the Act 129 Pennsylvania-specific cost-effectiveness criteria, including the most recent EDC avoided cost projections for electricity.[[13]](#footnote-14) The avoided cost projections were calculated according to the Commission’s 2021 TRC Test Final Order.[[14]](#footnote-15) As part of the EEPDR Potential Study, the SWE also modeled combined heat and power (CHP) potential separately from other EE and associated peak demand reduction potential and integrated this potential into the final estimate of total EE and associated peak demand reduction potential. CHP was modeled separately because CHP projects have unique attributes (for example, CHP system size, sporadic adoption, site dependency, long lead times from design to operation, etc.) that required more rigorous assessment.

For the residential sector, the SWE first determined the eligible equipment stock, followed by estimations of the available electric savings and screened for cost‑effectiveness. The SWE then summed those savings at the end-use and the service‑territory levels.[[15]](#footnote-16) Regarding the non-residential sectors, the SWE used a similar approach to determine measure-level available electric savings and costs, in addition to cost-effectiveness. The cost-effective measure savings were then applied to all applicable shares of electric load.[[16]](#footnote-17)

The SWE utilized, as a reference from which to report savings as a percent of annual kWh sales, the forecast kWh sales for each EDC for the period June 1, 2009 through May 31, 2010.[[17]](#footnote-18) The SWE estimated that the total incremental annual achievable electric savings potential for the seven EDCs from June 1, 2021 through May 31, 2026 for consumption reductions is 3.1% of the 2009-2010 baseline annual kWh sales (Act 129 Achievable in Table 2).[[18]](#footnote-19) For Act 129 potential, the SWE estimated that, with the current annual spending cap the EDCs can achieve a combined annual electric savings equal to 0.62% per year of the baseline 2009‑2010 load, or 4,512,829 MWh of incremental annual savings over a five‑year timeframe.

Table 2: EEPDR Potential Study Savings compared to 2009-2010 Load Forecast

|  |  |  |
| --- | --- | --- |
| **Potential Study Scenario** | **2021-2026**  **Sum of Incremental Annual Savings** | |
| **MWh** | **% of 2009-2010 load** |
| Maximum Achievable | 8,898,584 | 6.1% |
| Act 129 Achievable | 4,512,829 | 3.1% |

The SWE also concluded that continuing consumption reduction programs will continue to be cost-effective for ratepayers, as noted in the EEPDR Potential Study and as presented in Table 3 below. The TRC ratio statewide for the Act 129 Potential scenario is estimated to be 1.62, with net benefits of approximately $1.2 billion over the lifetime of measures installed during Phase IV (June 1, 2021 through May 31, 2026). The estimated program acquisition cost (dollars per first-year MWh saved) of $271.01 per MWh will result in Act 129 Achievable Potential savings of 4,512,829 MWh.[[19]](#footnote-20)

**Table 3: Phase IV Energy Efficiency Potential, by EDC**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **EDC** | **Acquisition cost**  **($/MWh)** | **Budget ($MM)** | **TRC costs**  **($MM)** | **TRC benefits ($MM)** | **Net TRC benefits ($MM)** | **TRC**  **benefit -cost ratio (X:1)** | **GWh** |
| PECO | $309.51 | $427 | $639 | $1,019 | $379 | 1.59 | 1,381 |
| PPL | $245.97 | $308 | $513 | $912 | $399 | 1.78 | 1,250 |
| Duquesne Light | $281.57 | $98 | $137 | $197 | $60 | 1.44 | 347 |
| FE: Met-Ed | $268.42 | $124 | $190 | $301 | $110 | 1.58 | 463 |
| FE: Penelec | $262.46 | $115 | $188 | $303 | $115 | 1.61 | 438 |
| FE: Penn Power | $258.31 | $33 | $46 | $65 | $19 | 1.42 | 129 |
| FE: West Penn Power | $233.32 | $118 | $180 | $277 | $97 | 1.54 | 505 |
| **Statewide** | **$271.01** | **$1,223** | **$1,894** | **$3,073** | **$1,179** | **1.62** | **4,513** |

\*Statewide values in this table may not sum due to rounding

Of interest in setting the Phase IV consumption reduction targets are the program potential estimates that refer to the efficiency potential possible given specific program funding constraints. The Act 129 program potential contained in the EEPDR Potential Study considered an annual spending ceiling that limits the annual program spending to 2% of each EDC’s 2006 annual revenue. Act 129 states that “The total cost of any plan required under this section shall not exceed 2% of the electric distribution company’s revenue as of December 31, 2006.” 66 Pa. C.S. § 2806.1(g). Each EDC’s annual spending limit used by the SWE are as follows:

Table 4: EDC’s Act 129 Annual Budget

|  |  |
| --- | --- |
| **EDC** | **Annual Budget** |
| Duquesne Light | $19,545,952 |
| PECO | $85,477,166 |
| PPL | $61,501,376 |
| FE: Met-Ed | $24,866,894 |
| FE: Penelec | $22,974,742 |
| FE: Penn Power | $6,659,789 |
| FE: West Penn Power | $23,562,602 |

The reference annual consumption values utilized for the EEPDR Potential Study to express incremental savings are the forecast kWh sales for each EDC for the period of June 1, 2009 through May 31, 2010, which are the same forecasts utilized in the first three phases of the EE&C Program.[[20]](#footnote-21)

### Proposed Reductions in Consumption

As previously noted, the SWE determined in its EEPDR Potential Study that electric consumption reduction programs will continue to be cost-effective.[[21]](#footnote-22) Based on the SWE’s determination, we believe that the benefits of a Phase IV EE&C program will exceed the costs of such a program and therefore, propose additional required incremental reductions in consumption for another five years. Below we outline our proposals regarding consumption reduction requirements.

#### Baseline for Targets

Previously, the Commission adopted the June 1, 2009 through May 31, 2010 expected sales forecast as the reference consumption values against which to express incremental savings for each EDC and the EE&C program as a whole.[[22]](#footnote-23) Although somewhat dated at this point, the SWE maintained this same baseline when expressing Phase IV reductions on a percentage basis in the EEPDR Potential Study. This convention allows for an “apples-to-apples” comparison with targets, on a percentage basis, from prior phases of Act 129. The Commission proposes to continue to use the forecast MWh sales for each EDC for the period June 1, 2009 through May 31, 2010, as the consumption baseline from which to express incremental savings in Phase IV. Table 5 shows the baselines sales values for each EDC and statewide.

**Table 5: Baseline Sales Forecast by EDC from June 1, 2009 to May 31, 2010**

|  |  |
| --- | --- |
| EDC | MWh |
| Duquesne Light | 14,085,512 |
| PECO | 39,386,000 |
| PPL | 38,214,368 |
| FE: Met-Ed | 14,865,036 |
| FE: Penelec | 14,399,289 |
| FE: Penn Power | 4,772,937 |
| FE: West Penn Power | 20,938,650 |
| Statewide | **146,661,792** |

#### Proposed Consumption Reduction Targets

Regarding the consumption reduction targets, the Commission proposes to adopt a five-year consumption reduction requirement for each EDC for Phase IV that is based on the 2009‑2010 energy forecasts previously discussed. We propose to adopt the five-year consumption reduction requirements as presented in Table 6 below and reported in the EEPDR Potential Study.[[23]](#footnote-24) We note that these electric energy consumption reduction targets are measured at the retail level. The energy savings are to be reported to the Commission at the customer meter level without application of any line loss factor. As in Phase III, the Commission proposes that EE goals be measured using the sum of incremental annual savings.

**Table 6: Proposed Consumption Reduction Targets**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| EDC | Acquisition Cost ($/MWh) | Budget | Phase IV Potential (MWh) | Percent of 2009-2010 Reference Load |
| Duquesne Light | $281.57 | $97,729,760 | 347,084 | 2.5% |
| PECO | $309.51 | $427,385,830 | 1,380,837 | 3.5% |
| PPL | $245.97 | $307,506,880 | 1,250,157 | 3.3% |
| FE: Met-Ed | $268.42 | $124,334,470 | 463,215 | 3.1% |
| FE: Penelec | $262.46 | $114,873,710 | 437,676 | 3.0% |
| FE: Penn Power | $258.31 | $33,298,945 | 128,909 | 2.7% |
| FE: West Penn Power | $233.32 | $117,813,010 | 504,951 | 2.4% |
| Statewide | **$271.01** | **$1,222,942,605** | **4,512,829** | **3.1%** |

#### Annual Consumption Reduction Targets

The Commission proposes that the EDCs design their EE&C Plans to achieve at least 15 percent of their consumption reduction target in each program year. We believe 15 percent is a reasonable goal in the designing of the EE&C Plans. As in previous Phases, we propose that this requirement be limited to the Commission’s review and approval of the EE&C Plans and not be a target that would subject the EDCs to the penalty provisions prescribed under section 2806.1 of the Act, 66 Pa. C.S. § 2806.1(f).

#### Comprehensive Programs

As in Phase III, the Commission believes more comprehensive programs are beneficial to electric customers, therefore, for Phase IV, the EDCs should consider implementing a comprehensive mix of measures. We propose that each EDC’s EE&C Plan include at least one comprehensive program for residential and at least one comprehensive program for non-residential customer classes. The EDCs should work with stakeholders to determine what these programs should include, based on the unique attributes of each service territory. Additionally, we note that, while cost-effectiveness is always a priority, an individual program does not have to be cost-effective in order to be implemented, provided the EE&C Plan as a whole is cost‑effective. We believe it to be beneficial for the EDCs to utilize the knowledge gained from implementing a comprehensive program in Phase III,[[24]](#footnote-25) as well as feedback provided by interested stakeholders, to determine what measures should be incorporated into Phase IV comprehensive programs.

### Prescription of Low-Income Measures and Carve-Out

In all prior phases of Act 129 the Commission required each EE&C Plan to include specific measures for households at or below 150% of the Federal Poverty Income Guidelines (FPIG) and further established a minimum percentage for such measures that must be offered, in proportion to that sector’s share of the total energy usage in the EDC’s service territory.[[25]](#footnote-26) Additionally, in Phases II and III of the EE&C Program, the Commission added requirements that the EDCs obtain minimum percentages of consumption reductions from the low-income sector.[[26]](#footnote-27) The Commission permitted the EDCs to include savings from qualifying low-income customer participation in non-low-income programs and from multifamily housing, up to the percentage of customers living in the multifamily housing with incomes at or below 150% of the FPIG, towards these carve-out goals and clarified that savings from non-low-income programs, such as general residential programs, would not be counted for compliance.[[27]](#footnote-28)

#### Summary of SWE’s EEPDR Potential Study Findings Regarding Low-Income Potential

As part of the EEPDR Potential Study, the Commission directed the SWE to determine if the low-income sector could realize cost-effective consumption savings, and the extent of those possible MWh savings within the residential sector. The EEPDR Potential Study modeled a low-income spending carve-out consistent with historical EDC Act 129 spending levels in the low-income sector: approximately 13% of EEPDR budgets. The SWE determined that low-income customers at or below 150% of the FPIG could achieve approximately 6.5% of statewide portfolio savings when 12.7% of EEPDR budgets are allocated to specific low-income programs.[[28]](#footnote-29) The low-income potential varies by EDC, from a low of 5.8% for PECO to a high of 9.4% for Penn Power.

#### Commission Proposal

For Phase IV, as in all prior phases of Act 129, the Commission proposes that each EDC EE&C Plan include specific energy efficiency measures for households at or below 150% of the FPIG, in proportion to that sector’s share of the total energy usage in the EDC’s service territory. *See* 66 Pa. C.S. § 2806.1(b)(1)(i)(G).[[29]](#footnote-30) As shown in Table 7 below, we propose for Phase IV that the EDCs provide a proportionate number of measures equivalent to the low-income sector’s share of usage as previously required in Phases II and III of the program.[[30]](#footnote-31)

**Table 7: Proposed Phase IV Low-Income Savings Targets**

|  |  |  |  |
| --- | --- | --- | --- |
| EDC | Proportionate Number of Measures | 2021-2026 Potential Savings (MWh) | Low-Income Savings Target (MWh) |
| Duquesne Light | 8.40 | 347,084 | 20,131 |
| PECO | 8.80 | 1,380,837 | 80,089 |
| PPL | 9.95 | 1,250,157 | 72,509 |
| FE: Met-Ed | 8.79 | 463,215 | 26,866 |
| FE: Penelec | 10.23 | 437,676 | 25,385 |
| FE: Penn Power | 10.64 | 128,909 | 7,477 |
| FE: West Penn Power | 8.79 | 504,951 | 29,287 |
| Statewide |  | **4,512,829** | **261,744** |

Furthermore, after review of the EEPDR Potential Study results, the Commission proposes to require each EDC to obtain a minimum of 5.8% of its total consumption reduction target from the low-income sector as outlined in Table 7 above from programs solely directed at low-income customers or low-income-verified participants in multifamily housing programs. Savings from non-low-income programs, such as general residential programs, would not be counted toward these targets.[[31]](#footnote-32)

In addition, the Commission invites stakeholders to propose a different approach that would harmonize the management and spending of Act 129 low-income funds with Low Income Usage Reduction Program funds that is also overseen by the Commission.

As adopted in Phases II and III, EDCs that fail to meet this proposed Phase IV low-income carve-out, will not be subject to the penalties prescribed under subsection 2806.1(f) of the Act, 66 Pa. C.S. § 2806.1(f). They will, however, be subject to the penalties prescribed under Chapter 33 of the Public Utility Code, 66 Pa. C.S. § 3301(a).

### Carve-Out for Government, Nonprofit and Institutional Entities

Act 129 required in its initial phase of implementation that EE&C Plans obtain a minimum of ten percent (10%) of all consumption and peak demand reduction requirements from units of the federal, state and local governments, including municipalities, nonprofit entities and institutions, including school districts and institutions of higher education (GNI carve-out). 66 Pa. C.S. § 2806.1(b)(1)(i)(B). No such stipulation is required for subsequent phases of implementation. For Phase II, the Commission prescribed a similar requirement for the EE&C Program.[[32]](#footnote-33)

In Phase III, the Commission required that each EDC must obtain at least 3.5% of all consumption reduction requirements from GNI entities.[[33]](#footnote-34) The Commission notes that through program year (PY) 10, the third year of the current five-year phase, each EDC has met its GNI target and statewide compliance is at 186% of the Phase III target (Table 8). Statewide, the GNI sector represents 9% of total verified savings through PY10.

**Table 8: Phase III GNI Verified Savings, through PY10**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| EDC | Phase III **GNI****Target** (MWh) | **GNI Verified Savings, Phase III to Date** (MWh) | **% of GNI Phase III Target Achieved** | **GNI, % of Total Phase III Verified Savings** |
| Duquesne Light | 15,432 | 24,847 | 161% | 9% |
| PECO | 68,693 | 94,260 | 137% | 9% |
| PPL | 50,507 | 116,748 | 231% | 10% |
| FE: Met-Ed | 20,977 | 22,082 | 105% | 4% |
| FE: Penelec | 19,816 | 43,945 | 222% | 9% |
| FE: Penn Power | 5,508 | 8,288 | 150% | 5% |
| FE: West Penn Power | 18,935 | 62,465 | 330% | 13% |
| Statewide | **199,868** | **372,635** | **186%** | **9%** |

#### Summary of SWE’s EEPDR Potential Study Findings Regarding Government/ Nonprofit/Institutional Potential

As part of the EEPDR Potential Study, the Commission directed the SWE to determine if the GNI sector could realize cost-effective consumption savings and the extent of those possible MWh savings. The SWE determined that various market segments should be analyzed to determine GNI potential. These segments include education – college/university, health – hospital, and institutional/public service building types for both large and small commercial and industrial (C&I) sectors. The SWE estimated that there is approximately 691,100 MWh of program potential for the GNI sector, which represents 16% of all program potential.[[34]](#footnote-35) The GNI potential by EDC can be seen in Table 9 below.

**Table 9: Program Potential, GNI**

|  |  |  |  |
| --- | --- | --- | --- |
| EDC | 2021-2026 Program Potential (GWh) | **GNI****Program Potential** (GWh) | **GNI****Program Potential, % of Portfolio Program Potential** |
| Duquesne Light | 339.8 | 70.1 | 20.6% |
| PECO | 1,330.1 | 259.2 | 19.5% |
| PPL | 1,214.0 | 159.6 | 13.1% |
| FE: Met-Ed | 451.1 | 50.5 | 11.2% |
| FE: Penelec | 423 | 74.7 | 17.7% |
| FE: Penn Power | 125.3 | 12.0 | 9.6% |
| FE: West Penn Power | 492 | 65.1 | 13.2% |
| Statewide | **4,375.40** | **691.1** | **15.8%** |

#### Commission Proposal

The Commission proposes no specific carve-out for the GNI sector for Phase IV of Act 129. The results of the EEPDR Potential Study indicate that the GNI sector is expected to produce a significant share in Phase IV consumption reductions at a comparable acquisition cost to the broader small and large C&I customer classes without a specific compliance target. Unlike the low-income sector, which would likely be underserved without a carve-out, we aver that the GNI sector can be adequately served by measures offered to other non-residential customers. However, the Commission proposes that the EDCs report savings achieved for the GNI sector in Phase IV and that the EDCs’ EE&C plans highlight how the GNI sector will be served.

Our proposal not to establish a GNI carve-out for Phase IV was informed, in part, by Willingness to Pay and Procurement Policy findings from the 2018 Non-Residential Baseline Study.[[35]](#footnote-36) While conducting site visits at C&I facilities, the SWE asked participating organizations the following five questions regarding equipment purchasing policies and Act 129 program awareness:

1. Does your company have any procurement policies or guidelines to purchase high-efficiency options when they are available and would provide a lower life cycle cost?
2. Do you do capital planning for major equipment replacements and proactively replace equipment when it is toward the end of its useful life (as opposed to waiting until something fails to replace it)?
3. For significant energy-using equipment purchases, does your company routinely analyze the different efficiency and cost options to assess life cycle costs?
4. Are you aware of your utility's energy efficiency rebate program?
5. Have you participated in the program before?

Table 10 shows the percent of respondents who answered “Yes” by segment. The response patterns for questions 1 through 3 indicate that segments corresponding to the GNI sector (Education, Health, Institutional/Public Service) are just as likely to plan for and consider energy efficient upgrades as other non-residential customers. The GNI segments also show similar levels of Act 129 program awareness and historic participation. The Commission’s proposal was also informed by the performance of the GNI sector in Phase III. To date, the GNI sector represents 9% of total verified savings statewide (see Table 8).

**Table 10: Mean Procurement and Program Awareness Response Rates**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Segment | Q1: Procurement | Q2: Capital | Q3: Equipment Purchase | Q4: Rebate Aware | Q5: Program Before |
| Education (n=33) | 18% | 58% | 83% | 66% | 40% |
| Grocery (n=19) | 14% | 25% | 61% | 58% | 29% |
| Health (n=36) | 16% | 42% | 54% | 52% | 41% |
| Industrial Manufacturing (n=75) | 29% | 28% | 56% | 46% | 19% |
| Institutional/ Public Service (n=41) | 38% | 50% | 58% | 48% | 20% |
| Lodging (n=20) | 69% | 35% | 83% | 60% | 31% |
| Miscellaneous/Other (n=54) | 28% | 24% | 38% | 19% | 9% |
| Office (n=50) | 18% | 31% | 36% | 39% | 26% |
| Religious (n=5) | 45% | 23% | 92% | 47% | 0% |
| Restaurant (n=58) | 30% | 27% | 48% | 47% | 15% |
| Retail (n=52) | 28% | 27% | 40% | 21% | 9% |
| Warehouse (n=38) | 29% | 25% | 41% | 75% | 13% |

### Accumulating Savings in Excess of Reduction Requirements

In its Phase II Implementation Order, the Commission recognized that many of the EDCs may achieve their Phase I consumption reduction targets before the end of Phase I. We recognized that a smooth transition between phases was of paramount importance and would help minimize both customer confusion and transition costs. Therefore, the Commission allowed those EDCs that had achieved their Phase I consumption reduction target before the end of the phase to continue their programs and credit all of those savings above the target towards their Phase II targets, so long as those EDCs still had Phase I funds available. We clarified that any savings in excess of the target should, in Phase II, be applied at the particular customer sector level.[[36]](#footnote-37) In our Phase II and III Implementation Orders, we again directed the EDCs to continue their programs through the end of each phase even if they attain their consumption reduction targets, so long as they still had funds available.[[37]](#footnote-38)

For Phase IV, we propose that the EDCs be allowed to count only those savings attained in Phase III in excess of their targets for application towards their Phase IV targets. These carryover savings may only be savings actually attained in Phase III. For example, assume an EDC has a Phase III target of 1,000 MWh and has 100 MWh of carryover savings from Phase II. In order to have carryover into Phase IV, the EDC must attain over 1,000 MWh in Phase III alone, not including the 100 MWh of Phase II carryover. We believe that this approach will encourage EDCs to continue the full implementation of programs and not allow programs to “go dark,” without reaching a scenario where target attainment is achieved solely through multiple phase carryover savings. Regarding to the low-income carve-out savings carryover, the Commission proposes that the EDCs be allowed to carryover low-income carve-out savings only if they have carryover savings for the entire portfolio of programs in Phase III and if they have low-income carve-out savings attained in Phase III in excess of their Phase III carve-out targets for application towards Phase IV targets.

### Process to Challenge Reduction Requirements

In Phase II, the Commission set forth a process through which each EDC could challenge the consumption reduction requirements initially adopted by the Commission.[[38]](#footnote-39) In Phase III, the Commission proposed the same challenge process for both the consumption and peak demand reduction requirements.[[39]](#footnote-40) As in the previous phases, the Commission proposes the same challenge process for both the consumption and peak demand reduction requirements for Phase IV of Act 129.

Specifically, in adopting the Final Implementation Order, the Commission will tentatively adopt the consumption and peak demand reduction requirements for each EDC. These consumption and peak demand reduction requirements will become final for any EDC that does not petition the Commission for an evidentiary hearing within 15 days of the entry of the Final Implementation Order.

If an EDC desires to contest the facts the Commission relied upon in adopting the consumption and peak demand reduction requirements contained in the Final Implementation Order, it has 15 days from the entry of the Final Implementation Order, to file a Petition requesting an evidentiary hearing on its specific consumption and peak demand reduction requirements. The EDC contesting the consumption and peak demand reduction requirements shall have the burden of proof in accordance with 66 Pa. C.S. §332(a). The scope of any such proceeding will be narrow and limited to the consumption and peak demand reduction requirement issues. If an EDC does not file a Petition within 15 days of the entry of the Final Implementation Order, it will have been deemed to have accepted the facts and will be bound by the consumption and peak demand reduction requirements contained in that order for that EDC as there would be no remaining disputed facts.

If an EDC files a Petition within 15 days of the entry of the Final Implementation Order, the matter will be assigned to the Office of Administrative Law Judge for expedited hearings with certification of the record to the Commission by October 23, 2020. Petitions for intervention must be filed within 10 days of an EDC filing a hearing request.

At such hearings, the EDC will have the opportunity to present evidence and argument as to its reasonable consumption and peak demand reduction requirements for Phase IV. While the Commission will not entertain petitions from other parties, any other party may intervene in the EDC-requested hearing and present evidence. Given the narrow scope of the proceeding and time constraints, we believe it is appropriate to have certification of the record rather than issuing a recommended decision. As part of this process, the parties will have the opportunity to file main and reply briefs directly to the Commission rather than filing exceptions to a recommended decision.

Furthermore, we direct the use of administrative counsel from the Commission’s Law Bureau to represent the SWE in the proceedings, to introduce relevant SWE studies into the record, and to assist the SWE in discovery matters. The Commission believes this expedited process is reasonable and necessary to complete all litigation, including that of the EE&C plan filings before June 1, 2021, when Phase IV is to begin.

### Measuring Annual Consumption Reductions

Consumption reduction for Phase IV is addressed at 66 Pa. C.S. § 2806.1(c)(3), which requires that by November 30, 2013, and every five years thereafter, the Commission must adopt additional required incremental reductions in consumption, if the Commission determines that the benefits of the EE&C Program exceed its costs. For Phase IV of Act 129, the Commission proposes to adopt the five-year energy consumption reduction requirements outlined previously in this Tentative Order.

As in Phases II and III, the Commission proposes for Phase IV to continue the use of the same savings approach.[[40]](#footnote-41) This approach develops estimates of the weather-normalized annual energy savings that can be expected over the course of a measure’s expected useful life, absent any dual baseline considerations. This proposal is based on the fact that the results of specific conservation measures are determined by using the deemed or partially deemed approaches outlined in the 2021 TRM, which uses calculations derived from studies or measurement methods that already account for extraordinary weather or loads. Regarding custom measures not included in the 2021 TRM, the Commission proposes for Phase IV of Act 129 that EDC evaluation contractors continue to estimate weather-normalized annual energy savings that consider, and control for, extraordinary weather conditions observed during the measurement and verification period. The Commission continues to believe that this approach negates the need to weather-normalize the consumption reduction requirements or determine what qualifies as extraordinary load.

## Proposed Reductions in Peak Demand

Act 129 required the Commission to, by November 30, 2013, compare the total costs of the EDCs’ EE&C Plans to the total savings in energy and capacity costs to retail customers or other costs as determined by the Commission. If the Commission determined that the benefits of the plans exceeded the costs, the Act required the Commission to set additional incremental requirements for reduction in peak demand for the 100 hours of greatest demand, or an alternative reduction approach approved by the Commission. Any such reductions in peak demand must be measured from the EDC’s peak demand for the period from June 1, 2011 through May 31, 2012. *See* 66 Pa. C.S. § 2806.1(d)(2).

### Summary of SWE’s DDR Potential Study

The SWE performed a DDR Potential Study to determine whether cost-effective potential exists for Act 129 DDR programs. The purpose of the DDR Potential Study was to determine the amount of cost-effective DDR potential available in each of the seven EDCs’ service territories. The Commission directed the SWE to examine the design of Act 129 programs and how the peak demand reductions achieved might be recognized in the wholesale markets operated by PJM. The DDR programs implemented in Phase III of Act 129 operated independently of PJM using a day-ahead load forecast trigger[[41]](#footnote-42) to determine which days DR events would be called. However, customers with DR commitments in PJM’s capacity market were also allowed to participate in Phase III DDR programs and were compensated from both programs for taking the same singular action. The underlying premise of the Phase III design was that the reduced peak loads achieved by Act 129 DDR programs would reduce PJM’s peak load forecasts for the zones served by the EDCs. In turn, this reduced summer peak load forecast would reduce the resource requirements and the amount of generation capacity procured on behalf of the Pennsylvania ratepayers.

While the Phase III design is theoretically sound with respect to the mechanisms by which forward planning and capacity procurement occur at the wholesale level, quantifying and valuing the capacity impacts of Phase III Act 129 DDR programs has been challenging and requires several assumptions. For the Phase IV DDR Potential Study, the SWE elected to model a more coordinated Act 129 DDR program design that leverages the Peak Shaving Adjustment (PSA) mechanism,[[42]](#footnote-43) developed by PJM in 2019. This change provides a clear mechanism for Act 129 DDR to be recognized at the wholesale level, but drastically reduces Act 129 DDR potential from the large C&I customer class because it effectively prohibits dual participation in Act 129 DDR and PJM’s capacity market.

The DDR Potential Study included simulations to determine recommended values for each of the required PSA parameters. Act 129 peak shaving events were assumed to occur from 3pm to 6pm for the months of June through September on days when the real‑time temperature humidity index (THI) reached the values shown in Table 11.[[43]](#footnote-44) These recommended THI thresholds are expected to result in 20-25 hours of peak shaving per summer, on average, based on an analysis of the last twenty years of weather.

**Table 11: Optimal THI for Recommended DDR Program Design, by Zone**

|  |  |  |
| --- | --- | --- |
| **EDC** | **PJM Zone** | **THI Threshold** |
| Duquesne Light | DUQ | 80.0 |
| PECO | PECO | 82.5 |
| PPL | PPL | 81.0 |
| FE: Met-Ed | METED | 82.0 |
| FE: Penelec | PN | 79.5 |
| FE: Penn Power | ATSI | 80.0 |
| FE: West Penn | APS | 80.0 |

The SWE provided the recommended PSA parameters to PJM’s Load Forecasting Group for analysis and received expected forecast reductions for each zone. These forecast impacts were included in the 2021 TRC Test Final Order[[44]](#footnote-45) and used to model the cost-effectiveness in the DDR Potential Study. All other cost-effectiveness analysis in the DDR Potential Study was conducted in accordance with the directives of the 2021 TRC Test Final Order, including assumptions regarding the avoided cost of transmission and distribution (T&D) capacity for DDR programs. The avoided T&D values used in the DDR Potential Study are provided in Tables 12 and 13.

**Table 12: Avoided Cost of Transmission Capacity Forecast, by EDC ($/kW-year)**

| **Year** | **EDC** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **DLC** | **PECO** | **PPL** | **ME** | **PN** | **PP** | **WPP** |
| PY13 (2021-2022) | $18.76 | $14.97 | $0.00 | $15.05 | $18.25 | $0.00 | $0.10 |
| PY14 (2022-2023) | $19.14 | $15.27 | $0.00 | $15.35 | $18.61 | $0.00 | $0.10 |
| PY15 (2023-2024) | $19.52 | $15.58 | $0.00 | $15.65 | $18.98 | $0.00 | $0.10 |
| PY16 (2024-2025) | $19.91 | $15.89 | $0.00 | $15.97 | $19.36 | $0.00 | $0.11 |
| PY17 (2025-2026) | $20.31 | $16.21 | $0.00 | $16.29 | $19.75 | $0.00 | $0.11 |

**Table 13: Avoided Cost of Distribution Capacity Forecast, by EDC ($/kW-year)**

| **Year** | **EDC** | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **DLC** | **PECO** | **PPL** | **ME** | **PN** | **PP** | **WPP** |
| PY13 (2021-2022) | $9.78 | $63.49 | $72.73 | $42.03 | $27.65 | $11.43 | $14.03 |
| PY14 (2022-2023) | $9.97 | $64.76 | $74.18 | $42.87 | $28.20 | $11.66 | $14.31 |
| PY15 (2023-2024) | $10.17 | $66.05 | $75.67 | $43.73 | $28.77 | $11.89 | $14.60 |
| PY16 (2024-2025) | $10.38 | $67.37 | $77.18 | $44.60 | $29.34 | $12.13 | $14.89 |
| PY17 (2025-2026) | $10.58 | $68.72 | $78.72 | $45.49 | $29.93 | $12.37 | $15.19 |

As shown above, T&D benefits varied significantly across the EDCs. This variability was a key factor in the estimated DDR potential. The three EDCs with higher avoided T&D costs (PECO, PPL, and Met-Ed) showed over 90% of the DDR potential for Phase IV because higher avoided costs allow for higher incentive levels without causing the program to fail cost-effectiveness testing. In turn, higher incentive levels produce increased estimates of participation and peak demand reduction.

The SWE examined the following four demand response strategies in the DDR Potential Study and estimated the potential for each, by EDC:

1. Residential Wi-Fi Connected Smart Thermostats
2. Residential Behavioral Demand Response
3. Commercial and Industrial Load Curtailment
4. Behind the Meter Battery Storage

Table 14 shows the average annual DDR potential, along with the associated economics for each EDC and statewide.[[45]](#footnote-46) We would like to note that the SWE’s estimates of DDR potential are at the system level, meaning that they reflect line losses between the generator and customer meter. Table 14 also presents estimates of DDR potential as the average megawatt (MW) value across the five years of Phase IV. However, the estimates of potential vary somewhat by year because of the availability of the avoided cost of generation capacity benefit stream and assumptions about the time it takes an EDC and its CSP to ramp up a DDR program. In recognition of this ramp up time, and the fact that the summer DR season is the first four months of each EE&C Program year, the Commission chose not to order DDR program activity during PY8, the first year of Phase III. Additionally, although each EDC shows a non-zero amount of DDR potential, the Commission notes that the estimates of DDR potential for Penn Power, Duquesne Light, and West Penn Power add up to less than 10 MW/year and represent less than 0.1% of the peak load of those three EDCs.

**Table 14: Phase IV DDR Potential, by EDC**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **EDC** | **DR Potential (MW/year)** | **Budget Requirement ($1,000 Nominal)** | **Percent of EE&C Budget** | **TRC Cost ($1,000)** | **TRC Benefit ($1,000)** | **PVNB ($1,000)** | **TRC Ratio** |
| Duquesne Light | 3.6 | $455 | 0.47% | $394 | $793 | $399 | 2.01 |
| PECO | 83.3 | $29,711 | 6.95% | $26,177 | $40,298 | $14,121 | 1.54 |
| PPL | 70.4 | $21,376 | 6.95% | $18,812 | $31,206 | $12,394 | 1.66 |
| FE: Met-Ed | 25.2 | $9,116 | 7.33% | $8,173 | $10,194 | $2,021 | 1.25 |
| FE: Penelec | 11.3 | $2,550 | 2.22% | $2,295 | $3,098 | $802 | 1.35 |
| FE: Penn Power | 0.5 | $19 | 0.06% | $17 | $34 | $17 | 1.99 |
| FE: West Penn | 3.6 | $352 | 0.30% | $300 | $604 | $304 | 2.01 |
| **Statewide** | **197.9** | **$63,580** | **5.20%** | **$56,168** | **$86,226** | **$30,058** | **1.54** |
| \*Statewide values in this report are summed prior to rounding. Totals may not equal the sum of all rows. | | | | | | | |

Although the Commission maintains that the PSA mechanism is the clearest and most viable way to recognize Act 129 DDR programs at the wholesale level, the DDR Potential Study identified the following administrative and timing challenges associated with nominating Act 129 DDR programs as PSA:

* Act 129 planning timelines will not allow for PSAs to be recognized in the Base Residual Auctions (BRAs) corresponding to the five program years of Phase IV of Act 129. This limits the avoided cost of generation capacity benefit stream. At most, PSAs could be reflected in three of five years depending on how delayed the BRA for the 2023/2024 delivery year is.
* The PSA event trigger is a real-time THI. This is a significant departure from Phase III when EDCs and their CSPs knew with certainty whether the following day would be an event day with over 24 hours’ notice. A real-time THI trigger creates the possibility of an EDC not calling an event when the trigger is met or calling an event when the trigger is not actually met due to inaccuracies in weather forecasts.
* There is no limit to the number of peak shaving events that can be triggered in a summer. In an extreme summer an EDC could experience 15-18 DR events, based on the SWE’s analysis of historic weather data.

### Methodology Used to Set Peak Demand Reduction Targets

In Phase I, Act 129 required the Commission to set additional incremental requirements for reduction in peak demand for the 100 hours of greatest demand, or an alternative reduction approach approved by the Commission. *See* 66 Pa. C.S. § 2806.1(d)(2). The EEPDR and DDR Potential Studies each identified cost effective potential for Phase IV. The two studies produce very different levels of consumption reduction and peak demand reduction per program dollar spent. Questions related to any proposed peak reduction targets include:

* Should Phase IV peak demand reduction targets be designed around DDR programs like in Phase III or, should coincident reductions in peak demand from EE contribute toward peak demand reduction target achievement like in Phase I?
* Should both coincident reduction in peak demand from EE and DDR programs both be utilized to comply with peak demand reduction targets?
* If the peak demand reduction target plans can include DDR programs, what is the program design and event trigger? During which summer(s) are peak demand reductions from DDR programs measured for purposes of determining compliance?
* To what extent should the Commission direct the EDCs to nominate peak demand reductions from EE or DDR for recognition at the wholesale level by PJM and for which years?

In addition to electricity consumption savings, the EEPDR Potential Study was to determine the remaining opportunities for cost-effective annual peak demand reductions related to EE measures. The statewide estimated potential peak demand reductions for the 2021-2026 program period at the system level are 878 MWs of total incremental annual peak demand reduction.[[46]](#footnote-47) As presented above, the DDR Potential Study finds estimated potential annual peak demand reductions of 198 MW.

The EEPDR Potential Study includes a section comparing Phase IV metrics with and without funding for DDR programming.[[47]](#footnote-48) Although the DDR Potential Study finds that the benefits of a Phase IV DDR program would exceed the costs, the DDR potential identified is less cost-effective (TRC ratio = 1.54) than the EEPDR potential (TRC ratio = 1.62). The SWE estimates that a Phase IV design which pursues both EE and peak demand reductions without utilizing DDR would achieve $35 million more net benefits to the Commonwealth than a Phase IV design which includes DDR. This calculation is based on comparing the net TRC benefits columns of Tables 37 and 38 of the EEPDR Potential Study.[[48]](#footnote-49) All TRC benefits and TRC costs are presented in 2021 dollars in the EEPDR Potential Study. The present value of net benefits is calculated by subtracting the TRC costs from the TRC benefits.

* Table 37 of the EEPDR Potential Study shows summary statistics for a Phase IV design with no funding for DDR programming. The cost-effectiveness metrics are:
  + TRC Benefits = $3,073 million
  + TRC Costs = $1,894 million
  + Net TRC Benefits = $1,179 million
* Table 38 of the EEPDR Potential Study shows summary statistics for a Phase IV design with 5.2% of Phase IV EE&C funding allocated to DDR programming and the remaining 94.8% allocated to EE programming. The cost-effectiveness metrics are:
  + TRC Benefits = $2,995 million
  + TRC Costs = $1,852 million
  + Net TRC Benefits = $1,144

The SWE’s calculation of $35 million in additional net TRC benefits is based on the calculation $1,179M - $1,144M = $35 million. TRC benefits are predominately comprised of reduced marginal energy and capacity costs so this $35 million is the net present value (in 2021$) of additional energy and capacity net benefits to the Commonwealth expected from a Phase IV design which does not include DDR programming versus a Phase IV design that does include DDR programming.

The SWE also noted in its EEPDR Potential Study that allocation of 5.2% of Phase IV funding to DDR programming lowers the achievable consumption reductions by 213,000 MWh statewide.[[49]](#footnote-50) Inclusion of DDR programming leads to a net increase of 153 MW of peak demand impact (1,031 MW vs. 878 MW).[[50]](#footnote-51) The DDR programs modeled by the SWE contribute 198 MW of peak demand reduction for each of the five summers of Phase IV, while the reduced EE funding sacrifices 46 MW of coincident peak demand reduction from EE measures.

Although the comparison of peak demand impacts with and without funding allocated to DDR programs is useful for comparison purposes, the Commission notes that all MW impacts are not created equally. Because EE measures typically have multiple years of useful life, their associated incremental annual peak demand reductions will continue to provide value beyond the year in which they are claimed as incremental annual peak demand reductions in EE&C programs. The Commission prefers the lasting peak demand reductions achieved by EE measures for the following reasons:

* Coincident peak demand reductions from EE measures are longer lasting than DDR programming and will persist for years after Phase IV has ended. While the DDR programming modeled by the SWE achieves an average of 198 MW over five consecutive summers, the 46 MW of coincident peak demand reduction from EE measures has a weighted average measure life of 10.7 years.
* Coincident demand reductions from EE measures are available every day rather than just a small number of DR event days. The 2021 TRM[[51]](#footnote-52) defines peak demand reductions from EE as the average demand reduction from 2pm to 6pm on non-holiday weekdays June through August. This means EE measures deliver peak demand reductions on over 60 days per summer compared to the 5-10 days DDR programs are active. Although, the TRM does not provide algorithms and assumptions for winter peak demand impacts, many EE measures also reduce demand coincident with winter peaks. This is an important consideration for EDCs like PPL whose winter peak demand forecast[[52]](#footnote-53) is as high, or higher, than the summer peak demand forecast over the next decade.
* Coincident demand reductions from EE measures can be recognized in PJM’s Forward Capacity Market (FCM). The proceeds from bidding these demand resources can reduce the EE&C plan funding that must be collected via riders.

The Commission also seeks to establish targets and policies that will streamline Phase IV EE&C plans and limit administrative costs. Avoiding the need to establish a separate program type, such as with DDR, and the associated need to hire additional CSPs, allows for greater spending on more economical EE measures that deliver peak demand reduction benefits long after Phase IV has ended.

For Phase IV of Act 129, the Commission proposes steps to better reflect peak demand reductions from EE&C Program at the wholesale level. While the administrative challenges and economics of DDR as PSA do not support establishment of peak demand reduction targets that must be met exclusively with DDR programs, we propose to have EDCs nominate a portion of the peak demand reductions achieved by its EE portfolio as a capacity resource in PJM’s forward capacity auctions. The peak demand reductions achieved by EE measures such as C&I lighting meet both the summer and winter requirements required by PJM and are therefore eligible for recognition and compensation as a supply resource. As discussed in Section I.5: Bidding Peak Demand from Energy Efficiency Resources into the PJM Capacity Market, the Commission posits that the proceeds from these peak demand reductions will help reduce Act 129 collection requirements via rider and limit the rate pressure imposed by establishing a Phase IV program. Winter peak demand is becoming increasingly important in regional planning parameters, so we favor a program type that addresses both summer and winter demand.

### Baseline for Targets

Since Phase I of Act 129, the Commission has utilized the average load for the 100 hours of highest load for the period June 1, 2007 through May 31, 2008 as the reference peak load values against which to express peak demand reductions for each EDC and for the EE&C Program as a whole.[[53]](#footnote-54) Although somewhat dated at this point, the SWE maintained this same baseline when expressing Phase IV reductions on a percentage basis in the EEPDR and DDR Potential Studies. This convention allows for an “apples-to-apples” comparison with targets, on a percentage basis, from prior phases. The Commission proposes to continue to use the average “top 100 hours” peak demand values for each EDC from the period June 1, 2007 through May 31, 2008, as the consumption baseline from which to express incremental savings in Phase IV. Table 15 shows the baseline peak demand values for each EDC and statewide.

**Table 15: Baseline Peak Demand Values from 2007-2008 by EDC**

|  |  |
| --- | --- |
| EDC | MW |
| Duquesne Light | 2,518 |
| PECO | 7,899 |
| PPL | 6,592 |
| FE: Met-Ed | 2,644 |
| FE: Penelec | 2,395 |
| FE: Penn Power | 980 |
| FE: West Penn Power | 3,496 |
| Statewide | **26,524** |

### Proposed Peak Demand Reduction Targets

For Phase IV, the Commission proposes that each EDC’s peak demand reduction target be equal to the expected reduction in coincident peak demand estimated in the EEPDR Potential Study. Table 16 shows the MW values for each EDC, and for the EE&C Program as a whole. We also note that these peak demand reduction values are expressed at the system-level. Therefore, any meter-level demand reduction estimate, like the ones provided in the TRM, would need to be scaled by the applicable line loss factor for reporting.

**Table 16: Proposed Phase IV Peak Demand Reduction Targets**

|  |  |  |
| --- | --- | --- |
| EDC | MW | Percent of 2007-2008 Reference Load |
| Duquesne Light | 67 | 2.7% |
| PECO | 276 | 3.5% |
| PPL | 244 | 3.7% |
| FE: Met-Ed | 85 | 3.2% |
| FE: Penelec | 91 | 3.8% |
| FE: Penn Power | 22 | 2.2% |
| FE: West Penn Power | 95 | 2.7% |
| Statewide | **878** | **3.3%** |

\* Statewide values in this table may not sum due to rounding.

We propose that at the conclusion of Phase IV, in consultation with the Phase IV SWE, the Commission will determine EDC compliance with the peak demand reduction targets listed in Table 16. Verified gross peak demand savings should be evaluated, reported, and compared to the targets in each EDC Annual Report by EDC evaluation contractors. EDCs that fail to meet the peak demand reduction targets, will be subject to penalties under subsection 2806.1(f) of the Act, 66 Pa. C.S. § 2806.1(f). In addition, the Commission proposes that each EDC submit an EE&C Plan that states the measures, programs, and customer classes from which peak demand reductions will be nominated to PJM, along with the projected MW totals. A component of our EE&C Plan review will be to confirm the details of each EDC’s plan to bid peak demand reductions from EE into PJM’s Forward Capacity Market. Section I.5: Bidding Peak Demand from Energy Efficiency Resources into the PJM Capacity Market includes additional discussion on this topic.

#### Annual Peak Demand Reduction Targets

The Commission proposes that the EDCs design their EE&C Plans to achieve at least 15 percent of their peak demand reduction target in each program year. We believe 15 percent is a reasonable goal in designing the EE&C Plans. As with the consumption reduction targets, we propose that this requirement be limited to the Commission’s review and approval of the EE&C Plans and not be a target that would subject the EDCs to the penalty provisions prescribed under 66 Pa. C.S. § 2806.1(f).

### Measuring Peak Demand Reductions

Peak demand for Phase IV is addressed at 66 Pa. C.S. § 2806.1(d)(2), which requires the Commission, by November 30, 2013, to compare the total costs of EE&C plans to total savings in energy and capacity costs to retail customers. If the Commission determines that the benefits of the plans exceed the costs, the Commission shall set additional incremental requirements for reduction in peak demand for the 100 hours of greatest demand or an alternative reduction approved by the Commission. Any such reductions must be measured from the EDC’s peak demand for the period from June 1, 2011 through May 31, 2012. Any additional reductions must be accomplished no later than May 31, 2017.

The Commission proposes for Phase IV of Act 129 that peak demand reductions from EE measures be measured using the savings approach described in Section A.7: Measuring Annual Consumption Reductions, and the definition of peak demand from Phases II and III, as documented in the 2021 TRM.[[54]](#footnote-55) The peak demand period for Act 129 programs is non-holiday weekdays June through August from 2:00 pm to 6:00 pm Eastern Daylight Time. Measures in the 2021 TRM includes algorithms and assumptions for calculating ΔkWpeak. For most measures, the calculation of peak demand savings involves the use of a coincidence factor, which the TRM defines as “[t]he ratio of the (1) sum of every unit’s average kW load during the PJM peak load period (June through August, non-holiday weekdays, 2 pm to 6 pm) to the (2) sum of the non-coincident maximum kW connected load for every unit.”[[55]](#footnote-56) We note that the peak demand savings associated with specific conservation measures are defined by the deemed or partially deemed approaches outlined in the 2021 TRM. For custom measures not included in the 2021 TRM, the Commission proposes that EDC evaluation contractors continue to estimate weather-normalized annual peak demand savings that consider and control for extraordinary weather conditions observed during the measurement and verification period.

Peak demand reductions from EE nominated as capacity resources to PJM will need to follow the measurement and verification requirements of PJM Manual 18B.[[56]](#footnote-57) The Commission notes that there are key differences between the measurement and verification requirements of Act 129 and PJM. With this Tentative Order, we propose that EDCs factor these requirements into their Phase IV evaluation contractor RFPs and the selected evaluation contractors incorporate all incremental measurement and verification requirements into their Act 129 measurement and verification activities.

## Plan Approval Process

The Act requires the Commission to establish procedures for approving EE&C Plans submitted by EDCs. 66 Pa. C.S. § 2806.1(a)(1). For the initial phase of the EE&C Program, the Act dictated that all EDCs with at least 100,000 customers must develop and file, by July 1, 2009, an EE&C Plan with the Commission for approval. 66 Pa. C.S. §§ 2806.1(b)(1) and 2806.1(l). The Commission was to conduct a public hearing on each EE&C Plan that allowed for submission of recommendations by the statutory advocates and the public regarding how the EDC’s EE&C Plan could be improved. 66 Pa. C.S. § 2806.1(e)(1). The Commission was to rule on each EE&C Plan within 120 days of submission. 66 Pa. C.S. § 2806.1(e)(2). If the Commission disapproved of some or all of an EDC’s EE&C Plan, it was to describe in detail its reasons for disapproval, after which the EDC had 60 days to submit a revised EE&C Plan. 66 Pa. C.S. § 2806.1(e)(2). The Commission then had 60 days to rule on the revised EE&C Plan. *Id*.

### Phase IV EE&C Plan Approval Process

In the initial phase of the EE&C Program, we established an EE&C Plan approval process that balanced the desire to provide all interested parties with an opportunity to be heard, with the need to complete the process within the statutory time constraints. We noted that the EE&C Plans were evolutionary in nature as the Act provides for modification of those plans after approval. Finally, we noted that, while we had established a formal approval process, we specifically directed the EDCs to offer and engage in informal discussions with the statutory advocates and interested stakeholders during the pre-filing development of their EE&C Plans.[[57]](#footnote-58)

The approval process established in the initial phase of the EE&C Program was as follows:

The Commission will publish a notice of each proposed plan in the *Pennsylvania Bulletin* within 20 days of its filing. In addition, the Commission will post each proposed plan on its website. An answer along with comments and recommendations are to be filed within 20 days of the publication of the notice in the *Pennsylvania Bulletin*. Each plan will be referred to an Administrative Law Judge (“ALJ”), who will establish a discovery schedule and hold a public input hearing(s) in the EDC’s service territory, as well as an evidentiary hearing(s) on issues related to the EDC’s EE&C plan. Such hearings are to be completed on or before the 65th day after a plan is filed, after which, the parties will have 10 days to file briefs. The EDC will then have 10 days to submit a revised plan or reply comments or both. The ALJ will then certify the record to the Commission.

The Commission will approve or reject all or part of a plan at public meeting within 120 days of the EDC’s filing. The Commission will provide a detailed rationale for rejecting all or part of a plan. Thereafter, the EDC will have 60 days from the entry date of the order to file a revised plan that addresses the identified deficiencies. This revised plan is to be served on OCA, OSBA [Office of Small Business Advocate], OTS [Office of Trial Staff][[58]](#footnote-59) and all other parties to the EDC’s EE&C plan filing, who, along with other interested parties, will have ten days to file comments on the revised plan, with reply comments due ten days thereafter. The Commission will approve or reject a revised plan at a public meeting within 60 days of the EDC’s revised plan filing. This process will be repeated until a plan receives Commission approval.[[59]](#footnote-60)

For Phases II and III, we utilized the same approval process with one revision. Specifically, we eliminated the need for a public input hearing, unless specifically requested, as interested parties have ample opportunity to participate in the proceedings, as well as EDC stakeholder meetings, or are already adequately represented. We directed the EDCs to offer and engage in informal discussions with the statutory advocates and interested stakeholders during the pre-filing development of their EE&C Plans.[[60]](#footnote-61)

The Act requires EDCs to file a new EE&C Plan with the Commission every five years or as otherwise required by the Commission. Such new plans must set forth the manner in which the EDC will meet the required reductions in consumption under subsections (c) and (d) of the Act. *See* 66 Pa. C.S. § 2806.1(b)(1)(ii). Therefore, we propose that the EDCs file new EE&C Plans outlining how they will implement measures/programs necessary to attain the consumption and peak demand reduction targets proposed herein. Additionally, we propose, for the approval of the EDCs’ Phase IV EE&C Plans, the same process that was utilized in Phases II and III. We believe this process balances the needs of all stakeholders while recognizing the time constraints and resource allocation required in the litigation of the Plans.

### Phase IV Planning Timeline

Table 17 shows the Commission’s proposed timeline for the Implementation of Phase IV of the EE&C Program. The Commission proposes this timeline as it believes it balances the needs of all parties. This timeline allows for input from all interested stakeholders and provides all parties with the appropriate level of due process, as well as gives the EDCs adequate time to implement their EE&C Plans in a manner to meet the proposed Phase IV consumption and peak demand reduction requirements.

**Table 17: Phase IV Planning Timeline**

|  |  |
| --- | --- |
| Date | Milestone |
| March 12, 2020 | Tentative Implementation Order on Public Meeting agenda[[61]](#footnote-62) |
| March 28, 2020 | Tentative Implementation Order Notice published in *Pennsylvania Bulletin[[62]](#footnote-63)* |
| April 27, 2020 | Tentative Implementation Order Comment due date |
| May 12, 2020 | Tentative Implementation Order Reply Comment due date |
| June 18, 2020 | Final Implementation Order on Public Meeting agenda |
| July 6, 2020[[63]](#footnote-64) | Petitions for Evidentiary Hearings filing deadline[[64]](#footnote-65) |
| October 23, 2020 | Evidentiary Hearing records certified to the Commission |
| November 30, 2020 | If necessary, EDCs file EE&C Plans |
| March 2021 | If necessary, Commission rules on EE&C Plans |
| June 1, 2021 | Phase IV EE&C Programs begin |

### Standards to Ensure that a Variety of Measures are Applied Equitably to all Customer Classes

The Act requires the Commission to establish standards to ensure that each EDC’s EE&C Plan includes a variety of measures and that each plan will provide the measures equitably to all customer classes. 66 Pa. C.S. § 2806.1(a)(5).[[65]](#footnote-66) The Act defines “energy efficiency and conservation measures” at 66 Pa. C.S. § 2806.1(m).

In Section A.3: Prescription of Low-Income Measures and Carve-Out of this Tentative Order, the Commission proposes a specific carve-out for the low-income sector. Beyond this requirement, we believe that EDCs should develop plans to achieve the most lifetime energy savings per expenditure. The Commission believes the EDCs must offer a well-reasoned and balanced set of measures that are tailored to usage and to the potential for savings and reductions for each customer class. We believe that the overall limitation on cost recovery and the specific limitation tying costs to a benefited class (discussed later in this Tentative Order) will ensure that offerings will not be skewed toward or away from any particular class. There is no single set of measures that will fit all EDCs and the myriad mix of customer classes. It is entirely possible that the most cost-effective programs may not come proportionally from each customer class.

The Commission believes that all classes of customers will benefit from a general approach because it has the best potential to impact future energy prices. For Phase IV of Act 129, the Commission proposes not to require a proportionate distribution of measures among customer classes. However, the Commission proposes that each customer class be offered at least one program. The Commission believes that, as with prior Phases, the initial mix and proportion of programs should be determined by the EDCs, subject to Commission approval. The Commission expects the EDCs to provide a reasonable mix of programs for all customers. The burden is on an EDC to explain and justify its distribution of measures among its customer classes if such distribution is challenged.

### Process to Make EE&C Plan Changes and Recommendations for Additional Measures

The Act requires the Commission to establish procedures through which recommendations can be made as to additional measures that will enable an EDC to improve its plan. 66 Pa. C.S. § 2806.1(a)(6). Furthermore, the Act permits the Commission to direct an EDC to modify or terminate any part of an approved plan if, after an adequate period for implementation, the Commission determines that a measure included in the plan will not achieve the required consumption reductions in a cost‑effective manner. 66 Pa. C.S. § 2806.1(b)(2). Below is the Commission’s proposed procedure for recommending additional measures that enable an EDC to improve its plan. First, it must be noted that interested parties will have an opportunity to make recommendations during the plan approval process described earlier in this Tentative Order.

Regarding approved plans, the Commission will permit EDCs and other interested stakeholders, as well as the statutory advocates, to propose plan changes in conjunction with the EDC’s annual report filing required by the Act at 66 Pa. C.S. § 2806.1(i)(1). These annual reports are to be served on the Office of Consumer Advocate, the Office of Small Business Advocate and the Commission’s Bureau of Investigation and Enforcement. The Commission will also post the annual reports on a web page dedicated to the EE&C Program. The Commission and any interested party can make a recommendation for plan improvement or object to an EDC’s proposed plan revision within 30 days of the annual report filing. EDCs will have 20 days to file replies, after which the Commission will determine whether to rule on the recommended changes or refer the matter to an Administrative Law Judge (ALJ) for hearings and a recommended decision in accordance with 52 Pa. Code §§ 5.41 (relating to petitions generally) and 5.572 (relating to petitions for relief).

EDCs and stakeholders may petition at any time, for changes to approved plans, wherein an EDC or stakeholder petitions the Commission to rescind and amend its prior order approving the plan in accordance with 52 Pa. Code §§ 5.41 (relating to petitions generally) and 5.572 (relating to petitions for relief). This process does not apply to minor plan changes, as described below, wherein the Commission has delegated to staff, the authority to review and approve.

The Commission, in an order adopted on June 9, 2011, at Docket No. M‑2008‑2069887,[[66]](#footnote-67) expedited the review process for approving minor EE&C Plan changes proposed by EDCs. The Minor Plan Change Order defined what a minor change is and delegated authority to staff to approve, modify or reject the proposed minor changes. The Commission continued the EE&C Plan approval processes described in the Minor Plan Change Order in Phase II, with one modification. In Phase II, the Commission allowed the following minor EE&C Plan changes to be reviewed under the expedited review process:

* The elimination of a measure that is underperforming; is no longer viable for reasons of cost-effectiveness, savings or market penetration; or has met its approved budgeted funding, participation level or amount of savings;
* The transfer of funds from one measure or program to another measure or program within the same customer class;
* Adding a measure or changing the conditions of a measure, such as is eligibility requirements, technical description, rebate structure or amount, projected savings, estimated incremental costs, projected number of participants or other conditions so long as the change does not increase the overall costs to that customer class;
* A change in vendors for existing programs that will continue into Phase II; and
* The elimination of programs which are not viable due to market conditions.[[67]](#footnote-68)

For Phase IV, the Commission proposes the continued utilization of this process for the expedited review of minor EE&C Plan changes proposed by EDCs.

## Plan Effectiveness Evaluation Process

The Act requires the Commission to establish an evaluation process that monitors and verifies data collection, quality assurance and the results of each EDC EE&C Plan and the program as a whole. *See* 66 Pa. C.S. § 2806.1(a)(2). While Section 2806.1(b)(1)(i)(C) requires each plan to include an explanation as to how quality assurance and performance will be measured, verified and evaluated, it is apparent that Section 2806.1(a)(2) requires the Commission to monitor and verify this data. This evaluation process is to be conducted every year, as each EDC is to submit an annual report documenting the effectiveness of its EE&C Plan, energy savings measurement and verification, an evaluation of the cost‑effectiveness of expenditures and any other information the Commission requires. *See* 66 Pa. C.S. § 2806.1(i)(1).

### Statewide Evaluator

The Commission believes that to have credible impact and process evaluations available, a SWE must be selected and used in a fashion similar to prior Phases. The SWE will provide expertise in evaluations and remain independent from EDC evaluators. Therefore, in preparation for Phase IV, the Commission proposes to competitively solicit for services to evaluate the EDC programs and identify whether further cost-effective savings can be obtained in future EE&C programs. A Request for Proposal (RFP) will be issued requiring that submitted proposals contain provisions for evaluation framework development; annual audits of EDC programs; market potential study(ies) on EE and peak demand reduction; and an early 2027 review of the entire Phase IV program. In order to prepare for the year beginning June 1, 2021, the Commission proposes a contract period of March 1, 2021 through February 28, 2027. By starting in March 2021, the SWE will have an opportunity to develop plans and prepare for its responsibilities that begin June 1, 2021. As in Phase III, the Commission proposes that the Phase IV SWE contract be funded by a proration from the EDCs.

### Technical Reference Manual

The Commission will continue to utilize the TRM to help fulfill the evaluation process requirements contained in the Act. The TRM was initially adopted by the Commission in the Alternative Energy Portfolio Standards Act (AEPS Act) proceedings at Docket No. M‑00051865 (order entered October 3, 2005). However, as the TRM was initially created to fulfill requirements of the AEPS Act, it had to be updated and expanded to fulfill the requirements of the EE&C provisions of Act 129. As such, the Commission initiated a process to update and expand the TRM to provide for additional energy efficient technologies, under Docket No. M‑00051865. The Commission provided updated editions of the TRM in 2009, 2010, 2011, 2012, 2013, 2014 and 2015 to incorporate changes and improvements that were based on more recent research and data, as well as the needs and experiences of the EDCs. In its 2009 TRM Update Order, the Commission stated that the TRM updating process will occur annually, with a final revised TRM due by December 31 for use effective June 1 of the following year.[[68]](#footnote-69) In Phase II of the EE&C Program, the Commission maintained this annual updating process.[[69]](#footnote-70)

For Phase III, the Commission adopted the 2016 TRM for the entirety of Phase III. The Commission reserved the right to implement a mid-phase TRM update if an update was deemed necessary, such as in instances where major market or technology transformations affect the EE&C Programs and associated savings values. The Commission proposes with this Tentative Order that the 2021 TRM be applicable for the entirety of Phase IV. We, however, reserve the right to implement a mid-phase TRM update if we deem it necessary.

In addition, in the 2021 TRM Final Order, the Commission adopted a new process for incorporating codes, standards, and ENERGY STAR specifications that change during Phase IV without undertaking a full TRM update.[[70]](#footnote-71) Each year of the phase, the SWE will track code updates to federal standards, ENERGY STAR specifications, and state-adopted building energy codes. Based on the extent of code updates that occur, the SWE will recommend whether to open the TRM for a code refresh for the following program year. Code updates that are not finalized and in effect before July 1 of a program year will not be considered for inclusion in the TRM in that update cycle. Changes to the TRM proposed by the SWE through this process will be limited to updating values directly related to codes, standards, and ENERGY STAR specifications. Any modification to the Phase IV TRM would become effective on June 1 of the calendar year following the comment and review process.

### EDC and SWE Reports

In Phases I and II the Commission required the EDCs to submit quarterly reports, a preliminary annual report, and a final annual report. In Phase III the Commission removed the requirement for quarterly reports, opting only for semi-annual, preliminary annual and final annual reports. The Commission believes that the EDCs and participating stakeholders have maintained a well-functioning system of providing and receiving feedback from each other to aid in the implementation of successful EE&C Programs in Phase III. We believe it unnecessary to continue requiring preliminary annual reports in addition to the final annual reports. Therefore, in an effort to streamline the reporting process, we propose eliminating the preliminary annual report. In addition, the Commission has an interest in providing reports to the public in a much timelier fashion. This can be accomplished by the EDCs submitting their final annual reports closer to the end of each program year. Therefore, we propose that the EDCs submit their final annual reports by August 30 of each year, 90 days after the end of the program year. Similarly, we propose that the EDCs submit their semi-annual reports by January 15 of each year. The final annual report will include reported savings for the program year, a cost-effectiveness evaluation (TRC Test), a process evaluation, as well as items required by Act 129 and Commission orders. An example of the proposed EDC and SWE reporting schedule is outlined in Table 18 for PY13 (June 1, 2021 through May 31, 2022) and PY14 (June 1, 2022 through May 31, 2023).

**Table 18: Proposed EDC and SWE Reporting Schedule**

|  |  |
| --- | --- |
| Date | Milestone |
| June 1, 2021 | Beginning of program year 13 (PY13) |
| January 15, 2022 | PY13 EDC Semi-annual Report – report regarding the first six months of PY13 |
| February 28, 2022 | PY13 SWE Semi-annual report – report summarizing and auditing EDC PY13 Semi-annual Reports |
| June 1, 2022 | Beginning of program year 14 (PY14) |
| August 30, 2022 | PY13 EDC Final Annual Report - reported savings for PY13, a cost-effectiveness evaluation (TRC Test), a process evaluation, as well as items required by Act 129 and Commission orders |
| October 30, 2022 | PY13 SWE Final Annual Report – report summarizing and auditing EDC PY13 Final Annual Reports |
| January 15, 2023 | PY14 EDC Semi-annual Report – report regarding the first six months of PY14 |
| February 28, 2023 | PY14 SWE Semi-annual report – report summarizing and auditing EDC PY14 Semi-annual Reports |
| June 1, 2023 | Beginning of program year 15 (PY15) |
| August 30, 2023 | PY14 EDC Final Annual Report - reported savings for PY14, a cost-effectiveness evaluation (TRC Test), a process evaluation, as well as items required by Act 129 and Commission orders |
| October 30, 2023 | PY14 SWE Final Annual Report – report summarizing and auditing EDC PY14 Final Annual Reports |

## Benefit - Cost Analysis Approval Process

Act 129 requires an analysis of the costs and benefits of each EE&C Plan, in accordance with a TRC Test approved by the Commission. *See* 66 Pa. C.S. § 2806.1(a)(3). The Act also requires an EDC to demonstrate that its plan is cost‑effective using the TRC Test and that the plan provides a diverse cross-section of alternatives for customers of all rate classes. *See* 66 Pa. C.S. § 2806.1(b)(1)(i)(I). The Act defines “total resource cost test” as “a standard test that is met if, over the effective life of each plan not to exceed 15 years, the net present value of the avoided monetary cost of supplying electricity is greater than the net present value of the monetary cost of [EE]conservation measures.” 66 Pa. C.S. § 2806.1(m).[[71]](#footnote-72) The purpose of using the TRC Test to evaluate the EDCs’ specific programs is to track the relationship between the benefits to the Commonwealth and the costs incurred to obtain those benefits. The TRC Test has historically been a regulatory test. Sections 2806.1(c)(3) and 2806.1(d)(2), 66 Pa. C.S. §§ 2806.1(c)(3) and (d)(2), as well as the definition of the TRC Test in Section 2806.1(m), 66 Pa. C.S. § 2806.1(m), provide that the TRC Test be used to determine whether ratepayers, as a whole, received more benefits (in reduced capacity, energy, transmission, and distribution costs) than the implementation costs of the EDCs’ EE&C Plans.

### 2021 TRC Test Order

The 2021 TRC Test Final Order[[72]](#footnote-73) was adopted at the December 19, 2019 Public Meeting at Docket No. M‑2019‑3006868. The 2021 TRC Test Final Order provides comprehensive guidance on all aspects of Act 129 benefit-cost calculations for Phase IV of Act 129. The Phase IV EEPDR and DDR Potential Studies were conducted using the benefit-cost methodology detailed in the 2021 TRC Test Final Order. EDCs and their evaluation contractors shall follow the directives of the 2021 TRC Test Final Order when developing EE&C plans for Phase IV of Act 129 and for reporting TRC Test results in Phase IV final annual reports.

The 2021 TRC Test Final Order included a companion Avoided Costs Calculator (ACC) tool. The ACC implements the calculations called for in the 2021 TRC Test Final Order to develop twenty-year forecasts of the avoided cost of electric energy, capacity, and natural gas. The Commission proposes that EDCs use the ACC when developing their Phase IV forecasts of avoided costs and submit a complete ACC as an addendum to their Phase IV EE&C Plans.

The Commission notes that the 2021 TRC Test Final Order is adopted and considered final. Comments pertaining to the TRC Test calculation methodologies will not be considered as part of this proceeding. However, we invite stakeholders to submit comments regarding the application of the 2021 TRC Test Final Order to determine the proposed consumption and peak demand reduction requirements, Phase IV EE&C Plan development, and Phase IV reporting requirements.

### Net-to-Gross Adjustment

An often-raised consideration for determining the cost-effectiveness and real impacts of EE programs is whether adjustments to gross energy savings should be made using a Net-to-Gross (NTG) ratio. An NTG adjustment would adjust the cost-effectiveness results and reported MWh and MW savings so that the results would only reflect those EE gains that are attributed to, and are a direct result of, the EE program in question. Three common factors addressed through the NTG adjustment are “free ridership,” “spillover,” and “market effects.” The Uniform Methods Project (UMP)[[73]](#footnote-74) provides the following relevant definitions:

**Free ridership**: Program savings attributable to free riders (program participants who would have implemented a program measure or practice in the absence of the program).

**Spillover**: Additional reductions in energy consumption or demand that are due to program influences beyond those directly associated with program participation.

**Market Effects**: A change in the structure of a market or the behavior of participants in a market that is reflective of an increase in the adoption of EE products, services, or practices and is causally related to market intervention(s).

An NTG adjustment also excludes the incremental participant costs paid by free riders, since those costs would have been incurred absent the program. For Pennsylvania, the NTG adjustment would reflect only those costs and benefits attributable to Act 129 programs. An NTG adjustment would give EDCs and their evaluation contractors an estimate of savings achieved as a direct result of program expenditures by removing benefits and costs that would have occurred absent the EE&C Program.

During the planning for Phase I and II of the Act 129 programs, the primary discussion pertaining to NTG was whether or not NTG adjustments should be used to determine compliance and/or targets, or whether or not it is more appropriate to use NTG solely for program design, program modifications and planning. At the beginning of Phase I of Act 129, there was an absence of NTG data specific to Act 129 programs and, therefore, the Commission did not require NTG adjustments for the first program year.[[74]](#footnote-75) Subsequently, the 2011 TRC Test Order directed EDCs to conduct NTG research; to collect data necessary to determine the NTG ratio for their programs and to apply the ratio when determining the cost-effectiveness of future modifications of existing programs.[[75]](#footnote-76) The results of this research were to be reported to the SWE and utilized by the EDCs to determine when a measure or program should be removed from the EE&C portfolio because it is no longer cost-effective.

For all prior Phases, any NTG research that was completed was used only for program design, program modifications and implementation; it was not used to adjust the gross verified energy savings that are used for compliance purposes. In addition, during Phase I, the SWE completed a thorough review of how other states use NTG information for planning, evaluation and compliance and recommended that NTG research be used to plan and modify Act 129 programs. The SWE also recommended that MWh and MW savings targets should be based on gross savings.[[76]](#footnote-77)

The Commission’s Phase II Implementation Order directed that NTG research be used to direct program design and implementation, but not for compliance.[[77]](#footnote-78) The Phase II Implementation Order noted that there is no requirement in Act 129 that mandates that savings be determined on a net basis.[[78]](#footnote-79) The Commission thereby determined that the EDCs would continue to use net verified savings in their TRC Test for program planning purposes and that compliance in Phase II be determined using gross verified savings.[[79]](#footnote-80) The Commission’s Phase III Implementation Order maintained the same position on the use of NTG research as in previous phases.[[80]](#footnote-81)

For Phase IV of Act 129, the Commission proposes maintaining the practice used in the prior phases where NTG research results are used for modifications to existing programs, as well as for planning purposes for future phases. Furthermore, we propose that compliance in Phase IV be determined using gross verified savings. Additionally, we propose that the EDCs include in their EE&C Plans net TRC ratios, as well as gross TRC ratios, based on the best available estimates of NTG research for a given program type. We recognize that prospective NTG adjustments will be speculative but believe that adequate data should be available after a decade of EE&C program implementation and evaluation to produce a reasonable projection. The inclusion of NTG-based TRC ratios will provide all stakeholders with additional information regarding the effectiveness of EE&C measures and programs.

## Process to Analyze How the Program and Each Plan will Enable EDCs to Meet Consumption and Peak Demand Reductions Requirements, and How to Ensure Compliance

The Act requires the Commission to conduct an analysis of how the program, as a whole, and how the EDC’s individual EE&C Plans, in particular, will enable an EDC to meet or exceed the required consumption and peak demand reductions. *See* 66 Pa. C.S. § 2806.1(a)(4). Each EDC’s EE&C Plan must include specific proposals to implement measures to achieve or exceed the required reductions. *See* 66 Pa. C.S. § 2806.1(b)(1)(ii).

The Act also requires the Commission to establish procedures to ensure compliance with the consumption and peak demand reduction requirements. 66 Pa. C.S. § 2806.1(a)(9). Regarding the requirements for determining compliance with the Act 129 reduction requirements, each EDC subject to the Act must include in its PY17 (June 1, 2025 through May 31, 2026 – the final year of Phase IV) report, information documenting their consumption and peak demand reductions for June 1, 2021 through May 31, 2026. This filing must provide total savings and savings by class of customer. To be in compliance with the Act, an EDC must demonstrate that, during the June 1, 2021 through May 31, 2026 period, its plan produced total energy savings equal to the consumption reduction target established in Section A: Proposed Additional Reductions in Electric Consumption of this Order.

We note that after-the-fact measurement and verification of energy and peak demand savings remains critical to ensure that an EDC has properly implemented its EE&C Plan, that the projected savings metrics remain accurate, that non-controllable factors such as economic growth or contraction and weather have not skewed results, and that the savings are the result of the EE&C Plan. The Commission will analyze the program as a whole and individual EDC plan effectiveness in meeting or exceeding the goals through the initial review process as described in Section D: Plan Effectiveness Evaluation Process of this Order.

Finally, as discussed previously, the Commission intends to issue an RFP to retain the services of a SWE to perform the annual and end of phase independent evaluation of each EDC plan, develop standardized evaluation protocols, update the TRM, and consolidate plan performance data across all EDC service territories. The SWE will work with the Commission staff and interested parties in the development of the evaluation methods, protocols, data collection formats and databases. The costs for the SWE contracts with the Commission will be recovered from the EDCs consistent with Section 2806.1(h) of the Act. 66 Pa. C.S. § 2806.1(h).

## Procedures to Require Competitive Bidding and Approval of Contracts with CSPs

The Act requires the Commission to establish procedures to require EDCs to competitively bid all contracts with CSPs.[[81]](#footnote-82) The Act further requires the Commission to establish procedures to review all proposed contracts with CSPs prior to execution of the contract.[[82]](#footnote-83) The Act gives the Commission power to order the modification of proposed contracts to ensure that plans meet consumption reduction requirements.[[83]](#footnote-84)

EDCs are reminded that CSPs covered by the competitive bidding and contract approval procedures in this section are those that provide consultation, design, and administration and management or advisory services to the EDC. All entities that provide services directly to customers or the public in general, such as equipment installers or suppliers, are not to be included in the EDC’s competitive bidding process.

With this Tentative Order the Commission is proposing to maintain the status quo by requiring EDCs to file CSP RFP competitive bidding procedures and to bid all CSP contracts [without exception] for Phase IV.

### Competitive Bidding

In Phase III, the Commission required EDCs to file their respective RFP procedures for review and approval. The Commission adopted the following minimum criteria for the CSP competitive bidding review process for Phase III:

* Assurance that EDCs will issue RFPs to all qualified registered CSPs using the current posting of the CSP register on the Commission’s website.[[84]](#footnote-85)
* Effort to acquire bids from “disadvantaged businesses” (i.e., minority-owned, women-owned, persons-with-disability-owned, small companies, companies located in Enterprise Zones, and similar entities) consistent with the Commission’s Policy Statements at 52 Pa. Code §§ 69.804, 69.807 and 69.808.
* Selection criteria and weight assigned to each factor for bid review and selection of overall best bid/proposal (i.e., no requirement to select the lowest qualified bid), that consider:
  + Quality of prior performance;
  + Timeliness of performance;
  + Quality of the proposed work plan or approach;
  + Knowledge, background and experience of the personnel to be utilized; and
  + Other factors as deemed relevant.

The Commission proposes adopting the same minimum criteria for the CSP competitive bidding review process in Phase IV. If Commission staff has not commented upon or disapproved the proposed RFP process within 15 days of its filing, the EDC is permitted to use that process. In order to expedite contractual arrangements relating to proposed CSP contracts, EDCs are encouraged to file their proposed RFP process by August 30, 2020.

### Approval of Contracts

The Act requires each EDC to include in its plan a contract with one or more CSPs selected by competitive bid to implement all or part of the plan as approved by the Commission.[[85]](#footnote-86) This section of the Act establishes that CSPs can perform some or all functions of an EE&C Plan, to include management of the entire plan. Similar to Phases II and III, with this Tentative Order the Commission proposes requiring the EDCs to provide detailed justifications for why it did or did not use a CSP to perform EE&C Plan functions.[[86]](#footnote-87)

It is imperative that EDCs timely file all proposed CSP contracts and contract amendments with the Commission for review prior to the pre-established effective date. The minimum criteria the Commission proposes to utilize for reviewing and approving EDC proposed CSP contracts in Phase IV is the same as established in the Phase III Implementation Order.[[87]](#footnote-88) Following is the proposed minimum criteria for the EDC proposed CSP contract review process for Phase IV:

* Consistent use of standard format contract agreement with legible font size, comprising cover sheet, signatory page, table of contents, headers and sub-titles, page numbers, paragraph numbering, and conventional identification of tables and charts. EDC filing of purchase orders in lieu of the CSP proposed contract agreement will be rejected.
* Separate cover sheet to provide a summary of the following information:
  + Full company name of contractor and CSP registration Docket Number;
  + Brief description of statement of work (SOW);
  + Name of EE&C Plan Program associated with proposed contract and explanation if SOW addresses the Program in its entirety or in part;
  + Estimated total contract cost and statement regarding incentives and rebates, their amount and explanation if total cost includes incentives and rebates;
  + Estimated targeted energy savings associated with contract;
  + Timeframe and duration of contract from start date to completion; and
  + Statement relating to the number of bids that were received, justification for selection of CSP contractor/subcontractor if based on receipt of less than three bids for any particular program, and identification and explanation for non-selection of low-bid CSP, if applicable.
* Assurance that the CSP’s work product in the EDC’s plan will meet the requirement for reduction in demand and consumption.
* Legal issues, enforceability, and protection of data privacy and ratepayer funds for poor performance or non-compliance, and similar issues.
* Maintenance of CSP registration and liability insurance throughout contract duration.
* Maintenance of CSP registration for all CSP subcontractors with an annual contract cost that equals or exceeds ten percent of the CSP’s total annual contract cost to perform services pursuant to an EDC EE&C Plan.
* Adequate provisions and procedures for monitoring quality assurance, auditing and verification that relate to interactions with the customer and interface with the EM&V consultant and the SWE, to include the following at a minimum:
  + CSP contractor/subcontractor agrees to fully cooperate with and make program data available to the Company, Company Program Evaluation CSP (if applicable), the SWE and the Commission upon request; and
  + CSP contractor/subcontractor agrees to retain all program data and records for five years.
* Clearly stated language that contractual payments will be performance-based for measures implemented or otherwise installed.
* Assurance that measures installed, customer privacy and other processes are conducted in accordance with EE&C Plan and laws, regulations and Commission Orders relating to the Program’s customer interactions and rate of progress.
* Certification that the proposed CSP is not an EDC affiliate.
* Provision that EDC will immediately terminate the CSP contract agreement and timely notify the Commission if over the course of the contract agreement an EDC/CSP merger, acquisition or similar business partnership should occur.
* CSPs agree that employees and contractors who will enter a customer’s home or have personal contact with a customer will undergo criminal and other pertinent background checks.

If the Commission Staff has not commented upon or disapproved an EDC’s proposed contract within 45 days of it being submitted to the Commission for review, then the EDC is permitted to proceed with the contract without modification. EDCs are reminded that a contract stipulation that ultimately re-directs a contract, subcontract, or any provision thereof to the EDC for any reason, requires the EDC to file an amended contract with the Commission for review.

As discussed earlier in this section, Commission approval of any EDC-proposed CSP contract or contract amendment does not constitute a determination that such filing is consistent with the public interest and that the associated costs or expenses are reasonable or prudent for the purposes of cost recovery. These issues will be addressed by the Commission in any appropriate plan approval and cost recovery proceedings.

## Participation of Conservation Service Providers

The Act establishes a requirement for the participation of CSPs in all or part of an EDC EE&C Plan.[[88]](#footnote-89) The Act requires the Commission to establish, by March 1, 2009, a registry of approved persons qualified to provide conservation services to all classes of customers, that meet experience and other qualifying criteria established by the Commission.[[89]](#footnote-90) The Act further requires the Commission to develop a CSP application and permits the Commission to charge a reasonable registration fee.[[90]](#footnote-91) The Commission initiated a separate stakeholder process to establish the qualification requirements CSPs must meet to be included in the CSP registry. On February 5, 2009, the Commission adopted an order establishing the CSP registry at Docket Number M-2008-2074154.[[91]](#footnote-92) In the *CSP Registry Order,* we established the minimum qualifications of CSPs, a CSP application, fees and life of qualification.

By Orders entered July 16, 2013 and May 8, 2015, the Commission adopted a CSP registration process and an application package that reflected the minimum requirements for registration.[[92]](#footnote-93) The Commission also directed that all CSP subcontractors with an annual contract cost that equals or exceeds ten percent of the CSP’s total annual contract cost to perform services pursuant to an EDC EE&C Plan, must also be registered as CSPs.[[93]](#footnote-94) We propose to continue using the conditions and processes of the July 16, 2013 and May 8, 2015 Orders in Phase IV.

## EDC Cost Recovery

The Act directs the Commission to establish a cost recovery mechanism that ensures that approved measures are financed by the customer class that receives the direct energy and conservation benefit of the measure. 66 Pa. C.S. § 2806.1(a)(11). All EDC plans must include cost estimates for implementation of all measures. 66 Pa. C.S. § 2806.1(b)(1)(i)(F). Each plan must also include a proposed cost recovery tariff mechanism, in accordance with Section 1307 (relating to sliding scale or rates; adjustments), to fund all measures and to ensure full and current recovery of prudent and reasonable costs, including administrative costs, as approved by the Commission. 66 Pa. C.S. § 2806.1(b)(1)(i)(H). In addition, each plan must include an analysis of administrative costs. 66 Pa. C.S. § 2806.1(b)(1)(i)(K). The Act dictates that the total cost of any plan must not exceed two percent of the EDC’s total annual revenue as of December 31, 2006, excluding Low‑Income Usage Reduction Programs established under 52 Pa. Code § 58 (relating to residential Low-Income Usage Reduction Programs). 66 Pa. C.S. § 2806.1(g). Finally, all EDCs, including those subject to generation or other rate caps, must recover on a full and current basis from customers, through a reconcilable adjustment clause under Section 1307, all reasonable and prudent costs incurred in the provision or management of its plan. 66 Pa. C.S. § 2806.1(k). The following sections detail the Commission’s proposed handling of EDC cost recovery issues for Phase IV based on our interpretation of the relevant provisions of Act 129 and experience obtained during prior Phases.

### Determination of Phase IV Allowable Costs

The Act allows an EDC to recover all prudent and reasonable costs relating to the provision or management of its EE&C Plan, but limits such costs to an amount not to exceed two percent of the EDC’s total annual revenue as of December 31, 2006, excluding Low-Income Usage Reduction Programs established under 52 Pa. Code § 58. 66 Pa. C.S. § 2806.1(g). The annual and Phase IV budget limits, assuming a five-year phase, are presented in Table 19**Table**.

**Table 19: EDC Annual EE&C Budget Limits Based on 2% of 2006 Revenue**

|  |  |  |
| --- | --- | --- |
| EDC | Annual Budget | Phase IV 5-Year Budget Limit |
| Duquesne Light | $19,545,952 | $97,729,760 |
| PECO | $85,477,166 | $427,385,830 |
| PPL | $61,501,376 | $307,506,880 |
| FE: Met-Ed | $24,866,894 | $124,334,470 |
| FE: Penelec | $22,974,742 | $114,873,710 |
| FE: Penn Power | $6,659,789 | $33,298,945 |
| FE: West Penn Power | $23,562,602 | $117,813,010 |

The budget values shown in Table 19**Table** are identical to prior phases of Act 129 and the calculation of dollar amounts from 2006 revenues has been addressed in previous Orders. In particular, the treatment of 2006 revenues collected by an EDC for generation service on behalf of an EGS were determined to be part of the 2006 revenue calculation[[94]](#footnote-95) and we see no reason to revisit the issue in this Tentative Order. The budget values shown in Table 19 are a core input to the EEPDR Potential Study and the proposed consumption reduction requirements in Section A.2: Proposed Reductions in Consumption.

The level of costs that an EDC will be permitted to recover in implementing its EE&C Plan was established in the Phase I proceedings.[[95]](#footnote-96) For Phase IV, we propose requiring each EDC to include a calculation of the total amount of EE&C costs it will be permitted to recover (exclusive of expenditures on Low-Income Usage Reduction Programs established under 52 Pa. Code § 58) based on the two percent limitation as set forth in the Act. This will represent the maximum level of spending on EE&C programs that will be recoverable under the EDC’s plan.

We also propose requiring each EDC to provide a careful estimate of the costs relating to all EE&C programs and measures as set forth in its plan. All EE&C program costs can be classified as either incentive or administrative (e.g. non-incentive). Administrative costs may include capital expenditures for any equipment and facilities that may be required to implement the EE&C Plan, as well as depreciation, operating and maintenance expenses, a return component based on the EDC’s weighted cost of capital and taxes. Administrative costs would also include, but not be limited to, costs relating to plan and program development, CSP non-incentive program delivery fees, cost-benefit analysis, measurement and verification and reporting. The EDC must also provide ample support to demonstrate that all such costs are reasonable and prudent in light of its plan and the goals of the Act, keeping in mind that the total level of these costs must not exceed the two percent limitation as previously articulated.

A common critique of EDC EE&C Plans is the share of budgets that are distributed to program participants in the form of incentives. The 2021 TRC Test Final Order[[96]](#footnote-97) provided instructions regarding categorization of program costs as incentives versus administration. With these clarifications regarding categorization of costs in mind, we propose for Phase IV that EDCs be required to submit an EE&C Plan which shows at least 50% of all spending allocated to incentives and less than 50% of all spending allocated to non-incentive cost categories. However, we propose this requirement be limited to the Commission’s review and approval of the EE&C Plans and not as a target subjected to the penalty provisions at subsection 2806.1(f) of the Act, 66 Pa. C.S. § 2806.1(f).

As in prior Phases, we propose for Phase IV that EDCs be permitted to recover both the ongoing costs of its plan, as well as incremental costs incurred to design, create and obtain Commission approval of the plan. However, all costs submitted for recovery in an EDC’s plan would be subject to review by the Commission to determine whether the costs are prudent and reasonable and are directly related to the development and implementation of the plan. Furthermore, EE&C measures and associated costs that are approved by the Commission would again be subject to after-the-fact scrutiny. In this regard, we note that the Act provides that:

The Commission shall direct an [EDC] to modify or terminate any part of a plan approved under this section if, after an adequate period for implementation, the Commission determines that an [EE] or conservation measure included in the plan will not achieve the required reductions in consumption in a cost-effective manner under [66 Pa. C.S. §§ 2806.1(c) & (d)].

66 Pa. C.S. § 2806.1(b)(2). Thus, plan measures and their associated costs that may be tentatively approved, will, in fact, be subject to ongoing review and possible modification or termination if it is determined that such measures are not or have not been cost effective.

Regarding the two percent limitation provision of the Act, we propose for Phase IV to continue to use the interpretation of “total cost of any plan” as an annual amount, rather than an amount for the full, proposed five-year period. Since the statutory limitation in this subsection is computed based on annual revenues as of December 31, 2006, we believe it is reasonable to require that the resulting allowable cost figure be applied on an annual basis as well. In addition, we note that the plans are subject to annual review and annual cost recovery under the Act, 66 Pa. C.S. §§ 2806.1(h) and (k). The SWE market potential studies used to inform the proposed Phase IV reduction requirements were conducted using this modeling assumption. The proposed reduction requirements would clearly not be attainable if the two percent funding limitation were spread across the entirety of Phase IV because EDCs would only have 20% of the EE&C funding assumed in the market potential studies.

While the cost of an individual EDC’s plan is limited by Act 129 to two percent of the EDC’s total annual revenue as of December 31, 2006, 66 Pa. C.S. § 2806.1(g), the SWE expense is not a cost component of the EDCs’ individual plans, but a cost the Commission incurs in implementing the program. The Commission is to recover costs related to implementing the program from the EDCs. In prior Phases the Commission recovered the SWE expenses, which were not subject to the two percent cap on the cost of each plan, through a proration from the EDCs, and the EDCs were permitted to recover the expenses on a full and current basis. The Commission proposes to fund the SWE contract in the same manner for Phase IV.

Finally, with respect to the recovery of revenues lost due to reduced energy consumption or changes in demand, we note that the Act clearly states that such revenue losses shall not be a recoverable cost under a reconcilable automatic adjustment clause. 66 Pa. C.S. § 2806.1(k)(2). The Act does provide, however, that “[d]ecreased revenue and reduced energy consumption may be reflected in revenue and sales data used to calculate rates in a distribution-base rate proceeding filed by an electric distribution company under [66 Pa. C.S. § 1308] (relating to voluntary changes in rates).”

66 Pa. C.S. § 2806.1(k)(3).

We note that in June of 2018, Act 58 was signed into law, which amended Chapter 13 of the Code, 66 Pa. C.S. §§ 1301 *et seq*. (relating to rates and distribution systems). Specifically, Act 58 added Section 1330, 66 Pa. C.S. § 1330 (relating to alternative ratemaking for utilities), that permits the Commission to approve an application by a utility to establish alternative rates and rate mechanisms. In particular, Section 1330(b)(1) states the following:

Notwithstanding any other provision of law, including, but not limited to, sections 2806.1(k)(2) (relating to energy efficiency and conservation program) . . ., the commission may approve an application by a utility in a base rate proceeding to establish alternative rates and rate mechanisms, including, but not limited to, the following mechanisms:

1. decoupling mechanisms;
2. performance-based rates;
3. formula rates;
4. multiyear rate plans; or
5. rates based on a combination of more than one of the mechanisms in subparagraphs (i), (ii), (iii) and (iv) or other ratemaking mechanisms as provided under this chapter.

66 Pa. C.S. § 1330(b)(1).

On April 25, 2019, the Commission adopted an Implementation Order at Docket No. M‑2018‑3003269 in which the Commission stated that Section 1330(b)(1), 66 Pa. C.S. § 1330(b)(1) requires “utilities seeking to obtain Commission approval of an alternative rate or rate mechanism under Section 1330 of the code, to do so initially through a Section 1308(d), 66 Pa. C.S. § 1308(d) (relating to voluntary changes in rates), general rate proceeding.”[[97]](#footnote-98) Accordingly, the Commission will not address or consider alternative rates or rate mechanisms permitted by Section 1330 of the Code, such as decoupling mechanisms or performance‑based rates, in this proceeding.

### Application of Excess Phase III Budget

In Section A.5: Accumulating Savings in Excess of Reduction Requirements of this Tentative Order, the Commission proposes that those savings generated in Phase III that are in excess of an EDC’s consumption reduction target be applied towards that EDC’s Phase IV consumption reduction target. The issue of savings in excess of the targets also raises issues regarding Phase III and Phase IV budgets. Specifically, if an EDC has excess savings that carry into Phase IV, the Commission must decide whether that EDC should then have a reduced budget for Phase IV as it needs to acquire fewer savings to meet its consumption reduction targets. Additionally, if an EDC has achieved its Phase III target with budget left over, the Commission must decide how that excess budget should be handled (e.g. used in Phase IV or paid back to ratepayers).

The Commission proposes with this Tentative Order to allow the EDCs the full Phase IV budget, regardless of Phase III spending and consumption reduction target attainment. This proposal is consistent with the proposed targets, which are the product of the Phase IV acquisition costs ($/MWh) determined by the EEPDR Potential Study and the full two percent spending limit for each EDC. The Commission recognizes that the EDCs are at risk of potential penalties should they fail to meet their targets and a reduction in budget without a commensurate reduction in targets would significantly increase this risk. Additionally, the Commission recognizes the importance of a smooth transition from Phase III to Phase IV and the importance of the EDCs’ specific programs not “going dark.” As such, the Commission believes it would be more beneficial to all parties, including ratepayers, for the EDCs to be allowed to spend Phase III budgets to attain savings in excess of compliance targets, which could then be used in Phase IV for compliance, without a commensurate reduction in Phase IV budgets.

The Commission recognizes that program measures installed and commercially operable on or before May 31, 2021, as well as CSP or administrative fees related to Phase III are considered Phase III expenses. As such, the Commission proposes allowing EDCs to utilize their Phase III budgets past May 31, 2021 to account for program measures installed and commercially operable on or before May 31, 2021, and to finalize CSP, EM&V, and reporting expenditures related to Phase III.

The Commission proposes that EDCs begin Phase IV utilizing solely their Phase IV budgets. We do not believe it to be sound policy to continue spending Phase III budgets in Phase IV on Phase IV plan implementation when those monies could be refunded back to the appropriate rate classes. To clarify, we propose that on June 1, 2021, the EDCs would only use Phase III budgets to close out program delivery, EM&V, and reporting obligations for measures installed and commercially operable on or before May 31, 2021. The EDCs would not be allowed to use Phase III funds for Phase IV plans.

Similarly, the Commission proposes that an EDC be allowed to continue spending Phase IV budgets on their EE&C Program even if that EDC attains its consumption reduction goal before May 31, 2026. Again, we propose allowing EDCs to utilize their Phase IV budgets past May 31, 2026, solely to account for those program measures installed and commercially operable on or before May 31, 2026, and to finalize the CSP and administrative fees related to Phase IV. Upon the completion of EDC accounting for Phase IV, the Commission proposes that its Bureau of Audits reconcile Phase IV funds collected by the EDCs compared to Phase IV expenditures and direct the EDCs to refund all over-collections to the appropriate rate classes. To clarify, we propose that on June 1, 2026, the EDCs would only use Phase IV budgets to finalize any measures installed and commercially operable on or before May 31, 2026, and to finalize any contracts and other Phase IV administrative obligations. The EDCs would not be allowed to use Phase IV funds for any potential Phase V plans.

### Rebate Application Deadlines

Applications for EE&C measure rebates are typically submitted following the installation of the efficient equipment. For administrative efficiency, and to limit the use of EE&C program funds on measures that were not influenced by the EE&C Program, it is beneficial for rebate applications to be submitted and processed within a finite period following the in-service date of the measure. During the proceedings for many of the EDCs’ Phase II EE&C Plans, the Commission recognized the need for such deadlines and directed the EDCs to amend their Plans accordingly.[[98]](#footnote-99)

We propose with this Tentative Order that the EDCs be required to develop deadlines for their programs within their Phase IV EE&C Plans. We propose that the EDCs have the flexibility to determine whether such deadlines should differ at the end of the phase, but that all deadlines (both within the phase and at the end) must be outlined in the EE&C Plans. The Commission will still retain the authority to approve or deny the proposed deadlines as part of the EE&C Plan proceedings. We suggest that the EDCs consider 180 days as a maximum length of time for an application to be submitted as we believe any longer may affect reporting and reconciliation timeframes. The Commission proposes that, if an EDC includes a deadline longer than 180 days in their EE&C Plan, that EDC has the burden to provide clear and reasonable rationale for the longer timeframe. The timeline for EDC Final Annual Reports proposed in Section D.3: EDC and SWE Reports may affect EDC thinking on this topic as the earlier due date for EDC Final Annual Reports would shorten the amount of time available to EDC evaluation contractors to conduct EM&V activities on measures installed within given program years.

Lastly, we propose that EDCs include clear deadlines on all rebate forms and applications to ensure that participating customers are aware of the deadlines associated with the program. We propose that program delivery CSP contracts clearly delineate responsibilities for maintaining up-to-date forms and website information in the event of rebate deadline changes.

### Allocation of Costs to Customer Classes

The Act requires that all approved EE&C measures be financed by the customer class that receives the direct energy and conservation benefit of such measures. *See* 66 Pa. C.S. § 2806.1(a)(11). In order to ensure that all approved EE&C measures are financed by the customer classes that receive the benefit of such measures, it will be necessary to first assign the costs relating to each measure to those classes to whom it benefits. Therefore, once the EDC has developed an estimate of its total EE&C costs as directed above, we propose that the EDC be required to allocate those costs to each of its customer classes that will benefit from the measures or programs to which the costs relate. Those costs that demonstrably and exclusively relate to measures or programs that have been dedicated to a specific customer class should be assigned solely to that class. Those costs that relate to measures or programs that are applicable to more than one class, or that can be shown to provide system-wide benefits, should be allocated using reasonable and generally acceptable cost of service principles as are commonly utilized in base rate proceedings.[[99]](#footnote-100) Administrative costs should also be allocated using reasonable and generally acceptable cost-of-service principles.

Regarding the assignment of EE&C costs to low-income customers, the Act requires EE&C measures to be financed by the same customer class that will receive the direct energy and conservation benefits from them. 66 Pa. C.S. § 2806.1(a)(11). The Act does not provide for the exclusion of low-income customers from EE&C cost recovery, and in any event, it would be difficult to determine a way to exclude such customers from the allocation of EE&C costs within their customer class. Although we have great concern for the difficulties experienced by low‑income customers in paying their energy bills, we propose with this Tentative Order that such customers are not exempted from contributing toward the recovery of fairly allocated EE&C costs. We point out that low‑income customers will stand to benefit financially from well-designed EE&C measures implemented by the EDCs. Moreover, such customers can take advantage of the many programs currently available to help low-income and payment-troubled customers pay their energy bills.

### Bidding Peak Demand from Energy Efficiency Resources into the PJM Capacity Market

Peak demand savings from qualified EE resources may be bid into the PJM capacity market as supply alongside traditional generators if those projects meet the criteria and requirements set by PJM.[[100]](#footnote-101) The issue of whether EDCs should be required to bid qualified resources into the PJM FCM must be addressed for Phase IV. Additionally, if those resources are to be bid into the PJM FCM, the disposition of revenues from resources that clear the auctions must be addressed.

In prior Phases, we have not required EDCs to bid the peak demand reductions of their EE&C Plans into PJM’s FCM, but allowed EDCs the flexibility to voluntarily bid them in. In such cases, we ordered that the EDC be required to allocate the revenue received from successful bidding of resources to the customer class from which the savings were acquired.[[101]](#footnote-102)

In preparation for the 2021 TRC Test Order the Commission requested the SWE to review how peak demand reductions from other states in organized markets like PJM and ISO-New England are handled. Table 20 provides a list of states in these markets with EE&C programs and our understanding of how peak demand reductions from at least a subset of their programs are treated in those states. Pennsylvania appears to be in the minority on this issue, which suggests further consideration of the advantages and disadvantages of the status quo position is warranted.

**Table 20: EE Forward Capacity Market Participation by State**

|  |  |
| --- | --- |
| States Where EE Programs are Bid into FCM | States Where EE Programs are Not Bid into FCM |
| Maryland | Pennsylvania |
| Maine | Kentucky |
| Illinois (ComEd) | Indiana |
| Connecticut | New Jersey (under consideration) |
| Massachusetts |  |
| Rhode Island |  |
| Vermont |  |
| New Hampshire |  |
| Delaware |  |
| Washington D.C. (DC SEU) |  |
| Ohio |  |

The EEPDR Potential Study estimates that the associated peak demand reduction programs will generate 878 MW of incremental annual coincident peak demand reduction statewide. We recognize that not all the measures and programs included in the study or an EDC’s EE&C plan would be well-suited to bidding into PJM’s FCM. Additionally, the 2021 TRM utilizes a summer peak demand definition, while PJM’s FCM uses a definition of peak that includes both summer and winter. However, the Commission asserts that certain measure categories like C&I lighting would be extremely well-suited to FCM bidding based on the expected contribution to Phase IV EE&C plans and a review of the 8760 load shapes[[102]](#footnote-103) developed by the SWE as part of the 2014 Commercial and Residential Light Metering Study.[[103]](#footnote-104) The Commission believes C&I lighting programs will be large and homogenous enough that the FCM proceeds will more than offset the incremental measurement and verification costs associated with FCM resources.

The Commission proposes that for Phase IV the EDCs be required to nominate at least a portion of the expected peak demand reductions of their EE&C Plan. We propose that the proceeds from resources that clear in the PJM FCM be used to reduce Act 129 surcharges and collections for customer classes from which the savings were acquired, via the reconciliation for over-under collections process proposed in the following section. Resources that clear in the PJM FCM and are not installed or determined to under-perform by PJM are subject to deficiency charges[[104]](#footnote-105) from PJM. We propose that any such PJM deficiency charges be handled symmetrically with FCM proceeds and be borne by the relevant customer class. We encourage the EDCs to carefully consider their nomination levels and adopt a conservative bidding strategy to limit the likelihood of deficiency charges or nominated resources not clearing. Lastly, we propose that each EDC clearly identify in their Phase IV EE&C Plan the programs, measure categories, or solutions from which they intend to nominate peak demand reduction into PJM’s FCM along with the projected MW totals to be bid by year.

We anticipate that stakeholders will suggest that proceeds from PJM FCM bids should be used to increase EE&C plan budgets rather than reduce collections from ratepayers. Our proposal to use FCM proceeds to offset customer payments to the EDCs will place downward pressure on free riders, which is a common concern among stakeholders in the non-residential sector.

### Cost Recovery Tariff Mechanism

The Act allows all EDCs to recover, on a full and current basis from customers, through a reconcilable adjustment clause under 66 Pa. C.S. § 1307, all reasonable and prudent costs incurred in the provision or management of its plan. The Act also requires that each EDC’s plan include a proposed cost‑recovery tariff mechanism, in accordance with 66 Pa. C.S. § 1307 (relating to sliding scale of rates; adjustments), to fund all measures and to ensure a full and current recovery of prudent and reasonable costs, including administrative costs, as approved by the Commission.

The Commission proposes the use of a standardized reconciliation that will enable the EDCs and ratepayers to compare the cost recovery of program expenditures of all EDCs on an equal basis. We also believe it is beneficial to the EDCs and ratepayers that, with the implementation of Phase IV, the annual surcharge should be based on the projected program costs that the EDC anticipates will be incurred over the surcharge application year to attain the conservation targets.

The development of the surcharge using the projected program costs rather than the authorized budget amount will mitigate over- or under-recoveries of costs during the surcharge application period. Additionally, we believe that actual expenses incurred should be reconciled to actual revenues received. Furthermore, for transparency purposes, the 1307(e) reconciliation statement should clearly identify PJM FCM proceeds as cost reductions and PJM FCM deficiency charges as cost increases. A reconciliation methodology based upon actual expenditures is pursuant to Section 1307(e) of the Public Utility Code, 66 Pa. C.S. § 1307(e) and allows for the provision of interest on over- or under-recoveries. We believe these measures will mitigate the over- or under-recovery of costs during the surcharge application period. As such, consistent with our determination in the Phase III Final Implementation Order,[[105]](#footnote-106) the Commission proposes for Phase IV to not require the provision of interest on over- or under-recoveries.

To further standardize the filing process, we propose that the EDCs file by May 1, the annual rate adjustment for the rate to become effective June 1. Concurrent with the annual rate adjustment, the EDCs would submit, in a separate filing, the annual reconciliation statement thirty days following the end of the reconciliation period in accordance with Section 1307(e) of the Public Utility Code, 66 Pa. C. S. § 1307(e).

The Commission agrees with comments filed on this topic in prior proceedings that surcharges should be combined into a single surcharge and tariff with the implementation of Phase IV. In order to transition from Phase III, ending May 31, 2021, to Phase IV, beginning on June 1, 2021, we propose that each EDC reconcile its total actual recoverable EE&C Plan expenditures incurred through March 31, 2021, with its actual EE&C Plan revenues received through March 31, 2021.[[106]](#footnote-107) In addition, each EDC should include, as part of the calculation of the Phase IV rates to become effective June 1, 2021, as clearly identified separate line items, projections of the expenses to finalize any measures installed and commercially operable on or before May 31, 2021; expenses to finalize any contracts; and other Phase III administrative obligations. The Phase III rate that becomes effective June 1, 2020 will remain effective through May 31, 2021. The revenues and expenses of the remaining two months of Phase III (i.e., April 2021 and May 2021); expenses to finalize any measures installed and commercially operable on or before May 31, 2021; expenses to finalize any contracts; and other Phase III administrative obligations should be included, as clearly identified separate line items, in the reconciliation for the period April 1, 2021 through March 31, 2022.

We propose that the standardized reconciliation process and the calculation of the annual surcharge will be set forth by each EDC in a supplement or supplements to the EDC’s tariff to become effective June 1, 2021, be accompanied by a full and clear explanation as to their operation and applicability to each customer class. The EE&C rates are subject to continuous Commission review and audit as well as reconciliation reports in accordance with Section 1307(e) of the Public Utility Code, 66 Pa. C.S. § 1307(e). Lastly, we propose that under no circumstances will an EDC be permitted to recover, in the automatic adjustment clause, any EE&C Plan-related costs that have been claimed and permitted recovery in base rates.

# CONCLUSION

With this Tentative Order, the Commission begins the process of establishing the Phase IV EE&C Program that requires electric distribution companies with at least 100,000 customers to adopt and implement cost‑effective plans to reduce energy consumption and peak demand within this Commonwealth. This Tentative Order proposes required consumption and peak demand reductions for each electric distribution company, as well as guidelines for implementing Phase IV of the EE&C program. The Commission seeks comments on these proposals. This Tentative Order will be made available to the public on the Commission’s Act 129 Information web page;[[107]](#footnote-108) **THEREFORE,**

**IT IS ORDERED:**

1. That a copy of this Tentative Order shall be served upon the Office of Consumer Advocate, the Office of Small Business Advocate, the Commission’s Bureau of Investigation and Enforcement, the jurisdictional electric distribution companies subject to the EE&C Program requirements and all parties of record at Docket Number M-2020-3015228.

2. That the Law Bureau shall deposit a notice of this Tentative Order with the Legislative Reference Bureau for publication in the *Pennsylvania Bulletin*.

3. That interested parties shall have thirty (30) days from the date the notice of this Tentative Order is published in the *Pennsylvania Bulletin* to file written comments referencing Docket Number M-2020-3015228 with the Pennsylvania Public Utility Commission, Attn: Secretary Rosemary Chiavetta, Commonwealth Keystone Building, Second Floor, 400 North Street, Harrisburg, Pennsylvania 17120. Comments may also be filed electronically through the Commission’s e-File System.

4. That interested parties shall have forty-five (45) days from the date the notice of this Tentative Order is published in the *Pennsylvania Bulletin* to file written reply comments referencing Docket Number M-2020-3015228 with the Pennsylvania Public Utility Commission, Attn: Secretary Rosemary Chiavetta, Commonwealth Keystone Building, Second Floor, 400 North Street, Harrisburg, Pennsylvania 17120. Reply comments may also be filed electronically through the Commission’s e-File System.

5. That a Word-formatted copy of comments and reply comments shall be electronically mailed to Joseph Sherrick at [josherrick@pa.gov](mailto:josherrick@pa.gov) and to Adam Young at [adyoung@pa.gov](mailto:adyoung@pa.gov). Attachments may not exceed three (3) megabytes.

6. That this Tentative Order and all filed comments and reply comments related to this Tentative Order be published on the Commission’s website at <http://www.puc.pa.gov/filing_resources/issues_laws_regulations/act_129_information/energy_efficiency_and_conservation_ee_c_program.aspx>.

7. That the contact person for technical issues related to this Tentative Order is Joseph Sherrick, Bureau of Technical Utility Services, 717-787-5369 or [josherrick@pa.gov](mailto:josherrick@pa.gov). The contact person for legal and process issues related to this Tentative Order is Adam Young, Law Bureau, 717-783-3968 or [adyoung@pa.gov](mailto:adyoung@pa.gov).

**BY THE COMMISSION**

Rosemary Chiavetta

Secretary

(SEAL)

ORDER ADOPTED: March 12, 2020

ORDER ENTERED: March 12, 2020

1. *See Energy Efficiency and Conservation Program* Implementation Order, at Docket No. M‑2008‑2069887, (Phase I Implementation Order), entered January 16, 2009. [↑](#footnote-ref-2)
2. *See Implementation of Act 129 of 2008 – Total Resource Cost (TRC) Test* Order, at Docket No. M‑2009-2108601, entered June 23, 2009. [↑](#footnote-ref-3)
3. *See Implementation of the Alternative Energy Portfolio Standards Act of 2004: Standards for the Participation of Demand Side Management Resources – Technical Reference Manual Update* Order, at Docket No. M-00051865, entered June 1, 2009. [↑](#footnote-ref-4)
4. *See Energy Efficiency and Conservation Program Implementation Order*, page 24, at Docket Nos. M‑2012‑2289411 and M‑2008‑2069887, entered Aug. 2, 2014. [↑](#footnote-ref-5)
5. *Id.* at 32, 33, 42 and 43. [↑](#footnote-ref-6)
6. *See Phase III Final Implementation Order,* page 12, at Docket No. M-2014-2424864, entered June 19, 2015. [↑](#footnote-ref-7)
7. *See Pennsylvania Act 129 - Phase IV Energy Efficiency and Peak Demand Reduction Market Potential Study Report,* submitted by Optimal Energy, Inc., *et. al.*, February 28, 2020.

   *Pennsylvania Act 129 - Phase IV Demand Response Potential Study*,submitted by Demand Side Analytics, Inc., *et. al.*, February 2020. [↑](#footnote-ref-8)
8. *See Release of the Act 129 Statewide Evaluator Energy Efficiency and Peak Demand Reduction Market Potential and Demand Response Potential Studies and Stakeholder Meeting Announcement* Secretarial Letter, at Docket No. M-2020-3015229, served March 2 , 2020. [↑](#footnote-ref-9)
9. *See* *EEPDR Potential Study* at page 1. [↑](#footnote-ref-10)
10. *See Pennsylvania Act 129 2018 Residential Baseline Study*, submitted by NMR Group, Inc., February 12, 2019. <http://www.puc.pa.gov/Electric/pdf/Act129/SWE-Phase3_Res_Baseline_Study_Rpt021219.pdf>. [↑](#footnote-ref-11)
11. *See Pennsylvania Act 129 2018 Non-Residential Baseline Study*, submitted by Demand Side Analytics *et al.*, February 2019. <http://www.puc.pa.gov/Electric/pdf/Act129/SWE-Phase3_NonRes_Baseline_Study_Rpt021219.pdf>. [↑](#footnote-ref-12)
12. *See Release of the Statewide Evaluator Baseline Studies* Secretarial Letter at Docket No. M-2019-3006866 (served February 14, 2019). <http://www.puc.pa.gov/pcdocs/1606178.docx>. [↑](#footnote-ref-13)
13. *See the 2021 TRC, Avoided Cost Calculator* at <http://www.puc.pa.gov/pcdocs/1648144.xlsx>. [↑](#footnote-ref-14)
14. *See the 2021 TRC Test Final Order,* Docket No. M-2019-3006868 at <http://www.puc.pa.gov/pcdocs/1648126.docx>*.*  [↑](#footnote-ref-15)
15. *See* *EEPDR Potential Study* at page 2. [↑](#footnote-ref-16)
16. *Id.* [↑](#footnote-ref-17)
17. *See* *EEPDR Potential Study* at page 3. [↑](#footnote-ref-18)
18. *See* *EEPDR Potential Study* at page 3. [↑](#footnote-ref-19)
19. *See* *EEPDR Potential Study* at page 3*.* [↑](#footnote-ref-20)
20. *See* 66 Pa. C.S. § 2806.1(c). [↑](#footnote-ref-21)
21. *See EEPDR Potential Study* at page 3. [↑](#footnote-ref-22)
22. *See Phase II Implementation Order* at page 23; *Phase III Implementation Order* at page 50. [↑](#footnote-ref-23)
23. *See EEPDR Potential Study* at page 3. [↑](#footnote-ref-24)
24. *See Phase III Implementation Order* at page 61. [↑](#footnote-ref-25)
25. *See* 66 Pa. C.S. § 2806.1(b)(1)(i)(G) and *Phase II Implementation Order* at page 54. [↑](#footnote-ref-26)
26. *See Phase II Implementation Order* at page 54; *Phase III Implementation Order* at page 69. [↑](#footnote-ref-27)
27. *See Phase II Implementation Order* at page 54; *Phase III Implementation Order* at pages 69-70. [↑](#footnote-ref-28)
28. *See Pennsylvania Act 129 - Phase IV EEPDR Study Report,* submitted by Optimal Energy, Inc., *et. al.*, February 28, 2020. [↑](#footnote-ref-29)
29. *See Report of the Act 129 Low-Income Working Group* at Docket No. M-2009-2146801, Table 1 at page 6, that was adopted by the Commission in an April 27, 2010 Secretarial Letter at the same Docket. [↑](#footnote-ref-30)
30. *See Phase II Implementation Order* at pages 53-58; *Phase III Implementation Order* at pages 61-70. [↑](#footnote-ref-31)
31. The Commission notes that we are not proposing a low-income carve-out for the peak demand reduction requirements. [↑](#footnote-ref-32)
32. *See Phase II Implementation Order* at page 45. [↑](#footnote-ref-33)
33. *See Phase III Implementation Order* at page 72. [↑](#footnote-ref-34)
34. *See Pennsylvania Act 129 - Phase IV EEPDR Potential Study Report,* submitted by Optimal Energy, Inc., *et. al.*, February 28, 2020. [↑](#footnote-ref-35)
35. *See* *Pennsylvania Act 129 2018 Non-Residential Baseline Study*, submitted by Demand Side Analytics, et al. February 14, 2019 pages 106-107. [↑](#footnote-ref-36)
36. *See Phase II Implementation Order* at pages 58-60. [↑](#footnote-ref-37)
37. *Id.* at 25-26; *Phase III Implementation Order* at page 83. [↑](#footnote-ref-38)
38. *See Phase II Implementation Order* at pages 30-32. [↑](#footnote-ref-39)
39. *See Phase III Implementation Order* at page 86. [↑](#footnote-ref-40)
40. *See Phase II Implementation Order* at page 85; *Phase III Implementation Order* at page 108. [↑](#footnote-ref-41)
41. *See Phase III Clarification Order* pages 13-14. Public Meeting of August 20, 2015 at Docket No. M-2014-2424864 [↑](#footnote-ref-42)
42. *See* <https://www.pjm.com/-/media/committees-groups/subcommittees/las/20181127/20181127-item-04-peak-shaving-forecast-adjustments.ashx> [↑](#footnote-ref-43)
43. *See* *Demand Response Potential Study* at page 11. [↑](#footnote-ref-44)
44. *See 2021 TRC Test Final Order* at page 96. [↑](#footnote-ref-45)
45. *See* *Demand Response Potential Study* at page 16. [↑](#footnote-ref-46)
46. *See EEPDR Potential Study* at page 3. [↑](#footnote-ref-47)
47. *See* *EEPDR Potential Study* at page 57. [↑](#footnote-ref-48)
48. *See* *EEPDR Potential Study* at pages 57-58. [↑](#footnote-ref-49)
49. *See* *EEPDR Potential Study* at page 58. [↑](#footnote-ref-50)
50. *See* *EEPDR Potential Study* at pages 57-58. [↑](#footnote-ref-51)
51. *See* *2021 Technical Reference Manual, Volume 1*, page 10 at <http://www.puc.pa.gov/pcdocs/1630967.docx> [↑](#footnote-ref-52)
52. *See* PJM 2020 Load Forecast Report. <https://www.pjm.com/-/media/library/reports-notices/load-forecast/2020-load-report.ashx> [↑](#footnote-ref-53)
53. *See Phase I Implementation Order* at page 9. [↑](#footnote-ref-54)
54. *See 2021 Technical Reference Manual, Volume 1* at page 10. [↑](#footnote-ref-55)
55. *See 2021 Technical Reference Manual, Volume 1* at page 5. [↑](#footnote-ref-56)
56. *See* <https://www.pjm.com/-/media/documents/manuals/m18b.ashx> [↑](#footnote-ref-57)
57. *See Energy Efficiency and Conservation Program Implementation Order*, at Docket No. M‑2008‑2069887 (entered January 16, 2009) (*Initial Implementation Order*) at page 10. [↑](#footnote-ref-58)
58. OTS is a reference to the Commission’s former Office of Trial Staff. As of August 11, 2011, OTS was eliminated and its functions and staff transferred to the newly created Bureau of Investigation and Enforcement. *See Implementation of Act 129 of 2008; Organization of Bureaus and Offices*, Final Procedural Order, entered August 11, 2011, at Docket No. M-2008-2071852, at pages 4-5. [↑](#footnote-ref-59)
59. *See Phase I Implementation Order* at pages 12-13. [↑](#footnote-ref-60)
60. *See Phase II Implementation Order* at page 61; *Phase III Implementation Order* at pages 89-91 [↑](#footnote-ref-61)
61. The timing of Commission approval of a Public Meeting agenda item is tentative and may change at any time at the Commission’s discretion, unless a statutorily mandated timeline is associated with that agenda item. [↑](#footnote-ref-62)
62. This proposed date reflects the Commission’s intent to submit this Tentative Order by the deadline necessary for publishing in the March 28, 2020 issue of the *Pennsylvania Bulletin*. It does not reflect deadlines/timelines binding on the Legislative Reference Bureau. [↑](#footnote-ref-63)
63. The proposed filing deadline for Petitions for Evidentiary Hearings is 15 days following the entry date of the Final Implementation Order, which would be July 3, 2020, if the Final Implementation Order is entered on June 18, 2020. Because July 3, 2020 is a holiday, we propose July 6, 2020 as the filing deadline. [↑](#footnote-ref-64)
64. Such filings are at the EDCs’ discretion. [↑](#footnote-ref-65)
65. The program must include “standards to ensure that each plan includes a variety of energy efficiency and conservation measures and will provide the measures equitably to all classes of customers.” [↑](#footnote-ref-66)
66. *See Energy Efficiency and Conservation Program*, Final Order at Docket No. M-2008-2069887 (entered on June 10, 2011) (Minor Plan Change Order). [↑](#footnote-ref-67)
67. *See Phase II Implementation Order* at page 91. [↑](#footnote-ref-68)
68. *See Implementation of the Alternative Energy Portfolio Standards Act of 2004: Standards for the Participation of Demand Side Management Resources – Technical Reference Manual Update*, TRM Annual Update Order, Page 17, (*2009 TRM Update Order*) at Docket No. M-00051865, entered June 1, 2009. [↑](#footnote-ref-69)
69. *See Phase II Implementation Order* at pages 72-75. [↑](#footnote-ref-70)
70. *See 2021 TRM Final Order* at pages 6-8. <http://www.puc.pa.gov/pcdocs/1631001.docx> [↑](#footnote-ref-71)
71. After November 30, 2013, and every five years thereafter, we are to evaluate the costs and benefits of the program established under 66 Pa. C.S. § 2806.1(a) and of approved EE&C plans using a total resource cost test or a cost-benefit analysis of our determination. 66 Pa. C.S. § 2806.1(c)(3). [↑](#footnote-ref-72)
72. <http://www.puc.pa.gov/pcdocs/1648126.docx> [↑](#footnote-ref-73)
73. Violette, Daniel and Pamela Rathbun, “Chapter 21: Estimating Net Savings: Common Practices,” in *The Uniform Methods Project: Methods for Determining Energy Efficiency Savings for Specific Measures.* Prepared for the National Renewable Energy Laboratory, October 2017. <https://www.nrel.gov/docs/fy17osti/68578.pdf> [↑](#footnote-ref-74)
74. *See Implementation of Act 129 of 2008 – Total Resource Cost (TRC) Test* Order, at Docket No. M‑2009-2108601 (2009 TRC Test), entered June 23, 2009,at page 27. [↑](#footnote-ref-75)
75. *See Implementation of Act 129 of 2008 – Total Resource Cost (TRC) Test - 2011 Revisions* Final Order, at Docket No. M-2009-2108601 (2011 TRC Test Order), entered August 2, 2011, at page 25. [↑](#footnote-ref-76)
76. *See* Pennsylvania Statewide Evaluation Team, report titled “Net Savings: An Overview,” prepared by the Pennsylvania Phase I Statewide Evaluation Team, October 2011. In this 2011 report, the Phase I SWE “recommended that NTG studies be conducted for Act 129 EE&C programs for the purposes of acquiring data to improve program effectiveness and electricity savings.” The report recommended using verified gross savings to set kWh and kilowatt (kW) savings goals and to determine whether these goals have been attained. The SWE did not recommend using net savings to determine if program goals/savings targets have been attained, or to determine if a utility should get a financial incentive reward or penalty. [↑](#footnote-ref-77)
77. *See Phase II Implementation Order* at pages 82-83. [↑](#footnote-ref-78)
78. *Id.* at 82. [↑](#footnote-ref-79)
79. *Id.* at 83. [↑](#footnote-ref-80)
80. *See* *Phase III Implementation Order* at page 107. [↑](#footnote-ref-81)
81. *See* 66 Pa. C.S. § 2806.1(a)(7). [↑](#footnote-ref-82)
82. *See* 66 Pa. C.S. § 2806.1(a)(8). [↑](#footnote-ref-83)
83. *Id*. [↑](#footnote-ref-84)
84. The CSP registry is available on the Commission’s website at <http://www.puc.pa.gov/utility_industry/electricity/conservation_service_providers_registry.aspx> [↑](#footnote-ref-85)
85. See 66 Pa. C.S. § 2806.1(b)(1)(i)(E). [↑](#footnote-ref-86)
86. *See Phase II Final Implementation Order* at pages 93-94 and *Phase II Final Implementation Order* at page 125. [↑](#footnote-ref-87)
87. *See Phase III Implementation Order* at pages 126-127. [↑](#footnote-ref-88)
88. *See* 66 Pa. C.S. § 2806.1(a)(10). [↑](#footnote-ref-89)
89. *See* 66 Pa. C.S. § 2806.2(a). [↑](#footnote-ref-90)
90. *See* 66 Pa. C.S. § 2806.2(b). [↑](#footnote-ref-91)
91. *See Implementation of Act 129 of 2008 Phase 2 – Registry of Conservation Service Providers*, Final Order at Docket No. M-2008-2074154 (entered February 5, 2009) (*CSP Registry Order*). [↑](#footnote-ref-92)
92. *See Implementation of Act 129 of 2008 – Registry of Conservation Service Providers,* Final Order(2013 and 2015 CSP Registry Orders) at Docket No. M-2008-2074154, entered on July 16, 2013 and May 8, 2015. [↑](#footnote-ref-93)
93. *See 2013 CSP Registry Order* at 8-10. [↑](#footnote-ref-94)
94. *See Phase III Implementation Order* at pages 133-134. [↑](#footnote-ref-95)
95. *See Phase I Implementation Order* at pages 32-36. [↑](#footnote-ref-96)
96. *See 2021 TRC Test Final Order* at pages 73-75 and 77-78 [↑](#footnote-ref-97)
97. *See Implementation of Act 58 of 2018 Alternative Ratemaking for Utilities*, Implementation Order at Docket No. M‑2018‑3003269 (entered April 25, 2019) at 9-10. [↑](#footnote-ref-98)
98. *See Petition of Duquesne Light Company for Approval of its Energy Efficiency and Conservation Phase II Plan* Opinion and Order, at Docket No. M-2012-2334399, entered March 14, 2013, at page 48. *See Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company for Consolidation of Proceedings and Approval of Act 129 Phase II Energy Efficiency and Conservation Plans* Opinion and Order, at Docket Nos. M‑2012‑2334387, *et al.*, entered March 14, 2013, at pages 41-42. *See Petition of PECO Energy Company for Approval of its Act 129 Phase II Energy Efficiency and Conservation Plan* Opinion and Order, at Docket No. M-2012-2333992, entered February 28, 2013, at pages 38-39. *See Petition of PPL Electric Utilities Corporation for Approval of its Act 129 Phase II Energy Efficiency and Conservation Plan* Opinion and Order, at Docket No. M-2012-2334388, entered March 14, 2013, at page 85. [↑](#footnote-ref-99)
99. As the General Assembly declared in its Act 129 policy statement “[i]t is in the public interest to adopt [EE&C] measures and to implement energy procurement requirements designed to ensure that electricity obtained reduces the possibility of electric price instability, promotes economic growth and ensures affordable and available electric service to all residents.” [↑](#footnote-ref-100)
100. *See PJM Manual 18B: Energy Efficiency Measurement and Verification*. <https://www.pjm.com/-/media/documents/manuals/m18b.ashx> [↑](#footnote-ref-101)
101. *See Phase III Implementation Order*. Pages 142-144 [↑](#footnote-ref-102)
102. *See* <http://www.puc.pa.gov/Electric/xls/Act129/SWE-Light_Metering_Study-AppendixB-Commercial_Load_Shapes.xlsx> [↑](#footnote-ref-103)
103. *See* <http://www.puc.pa.gov/pcdocs/1340978.pdf> [↑](#footnote-ref-104)
104. *See* *PJM Manual 18* pages 157-158. <https://www.pjm.com/-/media/documents/manuals/m18.ashx> [↑](#footnote-ref-105)
105. *See Phase III Implementation Order* at page 149. [↑](#footnote-ref-106)
106. Due to the timing of the filing, the reconciliation statement will contain 10 months of revenues and expenses. The remaining two months of Program Year 12 will be reconciled with the Program Year 13 revenues and expenses. [↑](#footnote-ref-107)
107. <http://www.puc.pa.gov/filing_resources/issues_laws_regulations/act_129_information/energy_efficiency_and_conservation_ee_c_program.aspx>. [↑](#footnote-ref-108)