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April 27, 2020

VIA ELECTRONIC FILING

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
P.O. Box 3265
Harrisburg, PA 17105-3265

**Re: Energy Efficiency and Conservation Program
Docket No. M-2020-3015228**

Dear Secretary Chiavetta:

Enclosed for filing please find the Comments of PPL Electric Utilities Corporation on the Tentative Implementation Order issued in the above-referenced proceeding.

Copies are being provided electronically only, as indicated on the Certificate of Service, due to the current closure of all non-life sustaining businesses in the Commonwealth upon direction of Governor Wolf.

Respectfully submitted,

Devin Ryan

DTR/jl
Enclosure

cc: Certificate of Service
Joseph Sherrick (*Via E-mail*)
Adam Young (*Via E-mail*)

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

VIA E-MAIL ONLY

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I. BACKGROUND

PPL Electric is a public utility and an electric distribution company (“EDC”) as defined in Sections 102 and 2803 of the Pennsylvania Public Utility Code, 66 Pa. C.S. §§ 102, 2803. PPL Electric furnishes electric distribution, transmission, and default supply services to approximately 1.4 million customers throughout its certificated service territory, which includes all or portions of 29 counties and encompasses approximately 10,000 square miles in eastern and central Pennsylvania.

Pursuant to Act 129 of 2008, P.L. 1592, 66 Pa. C.S. §§ 2806.1 and 2806.2 (“Act 129”), PPL Electric designed and implemented Phase I and Phase II EE&C Plans.

On July 1, 2009, PPL Electric filed its Phase I EE&C Plan with the Commission in accordance with to Act 129 and various related Commission orders. The Commission approved PPL Electric’s Phase I EE&C Plan, with modifications, on October 26, 2009,² and further revisions were approved on February 17, 2010.³

On November 15, 2012, PPL Electric filed its initial Phase II EE&C Plan. The Commission approved PPL Electric’s initial Phase II EE&C Plan, with modifications, on March 14, 2013.⁴ PPL Electric’s subsequent compliance filing was approved by the Commission on July 11, 2013.⁵

On November 30, 2015, PPL Electric filed its initial Phase III EE&C Plan with the Commission pursuant to Act 129 and various related Commission orders. The Commission

² See *Petition of PPL Electric Utilities Corporation for Approval of its Energy Efficiency and Conservation Plan*, Docket No. M-2009-2093216 (Order Entered Oct. 26, 2009).

³ See *Petition of PPL Electric Utilities Corporation for Approval of its Energy Efficiency and Conservation Plan*, Docket No. M-2009-2093216 (Order Entered Feb. 17, 2010).

⁴ See *Petition of PPL Electric Utilities Corporation for Approval of its Act 129 Phase II Energy Efficiency and Conservation Plan*, Docket No. M-2012-2334388 (Order Entered Mar. 14, 2013).

⁵ See *Petition of PPL Electric Utilities Corporation for Approval of its Act 129 Phase II Energy Efficiency and Conservation Plan*, Docket No. M-2012-2334388 (Order Entered July 11, 2013).

approved PPL Electric's initial Phase III EE&C Plan, with modifications, on March 17, 2016.⁶ Pursuant to the *March 2016 Order*, PPL Electric submitted a compliance filing on April 22, 2016. The Company subsequently filed an Errata to its compliance filing on May 24, 2016. The Commission approved PPL Electric's compliance filing, as amended, on June 27, 2016.⁷

PPL Electric's Phase I, Phase II, and Phase III EE&C Plans have included a broad portfolio of energy efficiency and energy education programs and initiatives. PPL Electric's portfolios of programs were designed to provide customer benefits and to meet the energy reduction goals set forth in Act 129. All of these EE&C Plans have included a range of energy efficiency programs that included every customer segment in PPL Electric's service territory. For Phase I, the Company achieved 1,642,067 MWh/yr of verified gross energy savings and 340.9 MW of verified gross peak demand reduction, well in excess of its compliance targets of 1,146,4310 MWh/yr and 297 MW respectively. For Phase II, PPL Electric achieved 1,194,372 MWh/yr of verified gross energy savings (698,736 MWh/yr from energy efficiency programs and 495,636 MWh/yr from carryover in Phase I), which was in excess of the compliance target of 821,072 MWh/yr. For Phase III, PPL Electric is currently on track to achieve its compliance targets of 1,443,035 MWh/yr and 92 MW/yr.

PPL Electric continues to support Act 129 EE&C Programs and appreciates the opportunity to provide input regarding this matter. As an EDC operating an EE&C Program, PPL Electric believes that its comments will provide the Commission with a valuable perspective in its evaluation of Phase IV of the EDCs' EE&C Programs.

⁶ See *Petition of PPL Electric Utilities Corp. for Approval of its Act 129 Phase III Energy Efficiency and Conservation Plan*, Docket No. M-2015-2515642 (Order Entered Mar. 17, 2016) ("*March 2016 Order*").

⁷ *Petition of PPL Electric Utilities Corp. for Approval of its Act 129 Phase III Energy Efficiency and Conservation Plan*, Docket No. M-2015-2515642 (Tentative Order Entered June 9, 2016) ("*June 2016 Order*"); Secretarial Letter, Docket No. M-2015-2515642 (June 27, 2016) ("*June 2016 Secretarial Letter*") (stating that PPL Electric's compliance EE&C Plan had become final without further action by the Commission).

II. TENTATIVE IMPLEMENTATION ORDER

With the Tentative Implementation Order, the Commission begins the process of establishing the Phase IV EE&C Program that requires EDCs to adopt and implement cost effective plans to reduce energy consumption and peak demand throughout the Commonwealth. Tentative Implementation Order, pp. 4-5. The Tentative Implementation Order proposes required consumption and peak demand reductions for each EDC, as well as guidelines and requirements for implementing Phase IV of the EE&C Program. *Id.* The Commission seeks comments on these proposals.

III. COMMENTS OF PPL ELECTRIC

PPL Electric generally agrees with many of the proposals in the Tentative Implementation Order but has some significant comments about the proposed energy consumption and peak demand reduction targets for the Commission's consideration.

In the following sections, PPL Electric addresses these topics in the same order as the topics in the Tentative Implementation Order. The Company's Comments do not address all topics.

A. PROPOSED REDUCTIONS IN ELECTRIC CONSUMPTION

1. Proposed Reductions in Consumption (Tentative Implementation Order, Sections A.1 and A.2)

PPL Electric agrees with the general approach of the SWE's EEPDR Potential Study, as it appears to be reasonable and consistent with other national potential studies that follow best practices.

Overall, the Statewide Evaluator ("SWE") concluded that PPL Electric's energy efficiency potential to be 1,250 GWh over five years within the Company's maximum allowable five-year budget of approximately \$307.5 million under Act 129. *See* Tentative Implementation

Order, p. 11. Under the Tentative Implementation Order, the Commission has proposed an overall energy consumption reduction target that equals the SWE's calculated 1,250 GWh of energy efficiency, assuming the maximum budget of \$307.5 million. *See id.*, p. 15.

Since the SWE Stakeholder Meeting was canceled due to the COVID-19 outbreak, PPL Electric has several unanswered questions about the SWE's assumptions in developing the projected energy efficiency potential for PPL Electric. Moreover, in light of the adverse impact the COVID-19 outbreak will likely have on both Phase III and Phase IV performance, it is difficult to confirm whether this overall energy consumption reduction target is achievable within the allowable budget. Thus, before establishing this overall savings target, PPL Electric maintains that the SWE and the Commission need to provide clarification on the following:

1. Reasonableness of Setting a Target Based on the Maximum Energy Efficiency Potential Determined by the SWE and the Company's Maximum Allowable Budget. PPL Electric generally has a concern with the Commission establishing an overall energy consumption reduction target that is based on the maximum energy efficiency potential determined by the SWE and the Company's maximum allowable budget under Act 129. Even with carryover savings from Phase III, it is very difficult to determine, at this time, whether such an overall savings target can be achieved due to the outbreak of COVID-19 and its severe impact on the EE&C industry. While PPL Electric was projected to have approximately 200,000 MWh/yr of carryover savings before the COVID-19 outbreak, the Company cannot currently develop an accurate estimation of the carryover savings it may have. Moreover, it is extremely difficult, if not impossible, to determine whether the COVID-19 outbreak will be completely over and no longer affecting the implementation and performance of EE&C programs by the launch of Phase IV, *i.e.*, June 1, 2021. For example, the Commission has continually

emphasized the increased use of comprehensive measures. *See* Tentative Implementation Order, pp. 15-16. However, such measures necessarily require the ability for contractors to enter homes and business to install those measures. And even after the COVID-19 outbreak concludes, it is indeterminable whether the EE&C industry will have sufficiently-available contractors to perform this work and whether the outbreak will affect customers' willingness to participate in these programs, especially when the programs involve contractors entering their homes. Thus, PPL Electric does not believe it is reasonable to establish, especially at this time, an overall savings target that is based on the maximum energy efficiency potential determined by the SWE and the Company's maximum allowable budget under Act 129.

2. Whole Building Measures. Within the residential sector, approximately 45% of the program potential comes from "whole building" measures that mainly represent weatherization measures. EEPDR Potential Study, Figure 5, p. 29. However, it is unclear whether "whole building" measures include home energy reports and, if so, what proportion of those "whole building" measures the home energy reports comprise.

3. Assumptions Used in the SWE's Weatherization Savings Methodology. The measure savings for weatherization had a considerable percentage savings for heating and cooling end uses and appear to contribute to the large amount of "whole building" potential. While it is not possible to verify the magnitude or underlining assumptions without additional SWE EEPDR Study data, attic insulation primary percent savings were assumed to be 62% of the heating and cooling end use (baseline R-18.6 and measure R-49). EEPDR Potential Study, Appendix D1, Table D2: PPL – Measure Characteristics Summary, Meas# 10922, page D1-9. Wall insulation primary percent savings were assumed to be 41% heating and cooling end use (baseline R-8.6 and measure R-14.6). *Id.* While the study appeared to account for interactions

between measures, the primary percent savings on aggregate appear to be considerably high. For PPL Electric to determine whether it can achieve residential program goals (where weatherization contributes to a large portion of the available potential) and to help ensure the targets are based on realistic assumptions, the Commission needs to provide clarification on the SWE's assumptions.

4. Future Changes in Codes and Standards. It is unclear whether the SWE accounted for future changes in codes and standards in developing the EEPDR Study. For example, the following changes to codes and standards are projected to or will occur during Phase IV: (1) the residential central air conditioner 2023 standard; (2) the residential air source heat pump 2023 standard; (3) the small, large, and very large commercial package air conditioner and heat pump 2023 standard; and (4) the residential pool pumps tentative agreement 2021 standard.⁸ These future changes in codes and standards will affect program savings and performance.

5. Combined Heat and Power ("CHP"). In the SWE's EEPDR Potential Study, the SWE estimated 41.4 GWh of energy savings potential and 5.4 MW of peak demand reduction potential for CHP over the five-year period for Phase IV, which equates to approximately 8.3 GWh and 1.1 MW per year, respectively. The SWE based this estimate on an assumed budget cap of 1% of all Act 129 funds. However, the SWE's study fails to describe how it incorporated the budget cap. To that end, PPL Electric requests that the SWE and the Commission provide the following clarifications on the SWE's estimates for CHP:

⁸ See U.S. Department of Energy (DOE) Federal Register 82 FR 1786 Table I-1 for residential central air conditioner and air source heat pumps, DOE Federal Register 81 FR 2420 Table I-1 for small, large, and very large commercial package air conditioner and heat pumps, DOE 10 CFR Part 431 Docket Number EERE-2015-BT-STD-0008 RIN 1904-AD52 and "Joint Statement of Joint Stakeholder Proposal for Energy Conservation Standards for Dedicated-Purpose Pool Pump Motors," August 14, 2018, for residential pool pumps.

- a. How did the SWE apply the 1% spending allocation for CHP to the CHP program potential to derive the overall Act 129 potential?
 - b. Did the SWE assume that CHP would contribute to the demand reduction target of 244 MW? If so, what portion does CHP contribute?
- 2. Low-Income Measures and Carve-Out (Tentative Implementation Order Section A.3)**

Overall, the SWE estimated 79.1 GWh of five-year low-income program potential for PPL Electric, which is approximately 15.8 GWh per year. The Tentative Implementation Order set a five-year low-income target of 72.5 GWh for PPL Electric (Table 7, Tentative Implementation Order), approximately 14.5 GWh per year.

PPL Electric continues to support offering low-income measures and programs to those customers and believes that such measures and programs are an important part of the EE&C portfolio. In fact, prior to the COVID-19 outbreak, PPL Electric projected that it would have approximately 20,000 MWh/yr of low-income carryover savings from Phase III to Phase IV.

However, PPL Electric has questions about the assumptions used in developing the low-income savings carve-out for Phase IV and whether the Commission's proposed carve-out of 5.8% is appropriate under the current circumstances. For starters, the SWE's EEPDR Potential Study and the Tentative Implementation Order do not indicate which measures or end uses account for the estimated potential or will make up targeted savings. In the past, PPL Electric has significantly leveraged lighting measures in its Act 129 Winter Relief Assistance Program ("WRAP"), which has resulted in relatively low acquisition cost for that offering. For example, the PY10 acquisition cost for Act 129 WRAP was \$0.46/kWh, which largely offered light-emitting diode ("LED") light bulbs, smart strips, energy education, and water flow measures such as aerators. Although the PY10 acquisition cost is similar to the cost assumed by the SWE

and the Tentative Implementation Order (*i.e.*, \$0.50/kWh), it is uncertain whether lighting measures will continue to offer savings throughout Phase IV due to Energy Independence and Security Act's ("EISA") lighting provisions. *See* EEPDR Potential Study, p. 16.

As a result, PPL Electric's ability to meet the 5.8% low-income savings carve-out under the Tentative Implementation Order with approximately 13% of the overall portfolio budget depends on future availability of relatively low-cost measures, including LED lighting. If PPL Electric needs to meet its low-income target with higher cost measures, such as weatherization, appliance, or audits, which have been historically offered through the Company's Low-Income Usage Reduction Program ("LIURP") WRAP, the acquisition costs necessary to meet the Tentative Implementation Order's target could be significantly higher. For example, the average LIURP WRAP acquisition cost was \$1.46/kWh in 2016 and 2017 for full cost jobs, which include higher cost measures. Similarly, the average acquisition cost for Act 129 WRAP was \$1.51/kWh when that offering included relatively fewer low-cost jobs.

It is axiomatic that more expensive acquisition costs could significantly raise the percent of the portfolio budget needed to meet the 5.8% low-income savings target. For instance, assuming PPL Electric could maintain the current low-income acquisition cost \$0.46/kWh, the Company would need to devote approximately 11% of its total \$307.5 million portfolio budget to meet the 72.5 GWh target. However, if the low-income acquisition cost were \$1.46/kWh (*i.e.*, an increase of \$1 per kWh), PPL Electric would need to allocate over 34% of its budget to the low-income programs in order to meet the target. Even a mid-point acquisition cost of \$0.96/kWh (*i.e.*, an increase of \$0.50 per kWh) would require almost 23% of the Company's maximum allowable budget.

Further complicating matters is that the SWE's EEPDR Potential Study does not provide the low-income potential estimates by end use or measure category. The methodology does indicate that lighting savings are likely minimal, as the Study makes traditional assumptions about EISA lighting provisions and assumed no savings potential from GSL. However, without significant LED lighting measures, the assumed acquisition cost in the Potential Study appears to be low.

Given the uncertainty about this apparently low acquisition cost as well as about the factors considered for estimating low income potential, PPL Electric believes that the SWE and the Commission need to provide the following clarifications before setting the low-income savings carve-out at 5.8% low-income savings:

1. What is the low-income program potential in PPL Electric's service territory disaggregated by end use?
2. What low-income population did the SWE assume to estimate program potential in PPL Electric's service territory?
3. What measures were assumed to generate the low-income acquisition costs in the SWE's EEPDR Potential Study?
4. How did the SWE account for barriers to accomplishing low-income savings, relative to the same measures in the non-low-income segment?

In the absence of such information, as well as the general concerns PPL Electric has about the targets proposed before the outbreak of COVID-19, the Company believes that the 5.8% low-income savings carve-out should be lowered.

3. Accumulating Savings in Excess of Reduction Requirements (Tentative Implementation Order Section A.5)

PPL Electric generally agrees with the Commission’s proposal for Phase III carryover savings. However, as noted in Section B, *infra*, the Commission is transitioning in Phase IV to counting the associated demand reductions from energy efficiency measures to the overall peak demand reduction target. Moreover, PPL Electric has serious concerns about the methodology and assumptions used in the SWE’s DDR Potential Study to develop the Commission’s proposed peak demand reduction target. Those concerns are amplified by the uncertain impact the COVID-19 outbreak may have on program performance in Phase IV.

For these reasons, PPL Electric recommends that the Commission permit EDCs to carryover the demand reductions associated with any excess Phase III energy savings to Phase IV and count those carryover demand reductions toward the overall demand reduction target.

B. PROPOSED REDUCTIONS IN PEAK DEMAND

1. Proposed Peak Demand Reduction Targets (Tentative Implementation Order Sections B.1 through B.5)

PPL Electric has several questions about the methodology and assumptions used in the SWE’s DDR Potential Study to develop the Commission’s proposed peak demand reduction target of 70.4 MW/yr of dispatchable demand response capacity or 1% of summer peak demand (using 2007-2008) peak demand as a baseline.

Over the five years of Phase IV, the nominal acquisition cost for PPL Electric would be \$60/kW/yr. For comparison, in PY10 of Phase III, PPL Electric’s ex-post demand response acquisition cost was \$25/kW/yr. The difference in costs is largely attributable to the participation of Large Commercial and Industrial (“C&I”) customers, who generally have lower acquisition costs. However, in Phase III, the SWE’s DDR Potential Study assumes that residential and small commercial customers, who have larger acquisition costs, will provide

100% of the dispatchable demand response capacity. Specifically, the SWE anticipates that Phase IV dispatchable demand response potential will come from residential smart thermostats (23.6 MW/yr), behavioral demand response (19.2 MW/yr), and Small C&I customers (27.6 MW/yr). *See* DDR Potential Study, Tables 3, 5, and 7. Potential was calculated from the top-down by identifying how much potential demand response capacity can be obtained for less than the cost of generating capacity. This demand response capacity maximizes the net benefits from demand response investments.

However, a challenge in evaluating PPL Electric's demand response potential for Phase IV is that PPL Electric has little or no experience administering DR programs to residential and small commercial customers. Indeed, PPL Electric's sole demand response program for Phase III has been its C&I Load Curtailment Program, which consists of Large C&I customer participation (33% of participants), Small C&I customers (48%), and GNE (19% of participants). In PY10, between 93% and 95% of the reported demand savings for each of the six events were achieved by Large C&I customers. As a result, there is little PPL Electric-specific data to inform the calculations of potential, thereby creating significant uncertainty about the projected participation and acquisition costs for Phase IV.

Before setting the Company's peak demand reduction target, the Company believes that the SWE and the Commission need to clarify the following points so that PPL Electric can adequately determine the reasonableness of the proposed peak demand reduction target and the methodology and assumptions used to develop that target:

1. Connected Thermostats. The SWE's DDR Potential Study finds that about 34% of PPL Electric's dispatchable demand response capacity would come from smart thermostats and that the acquisition cost would be \$92/kW/yr. The Study assumes that each year PPL

Electric would enroll an average of about 7,000 new customers in a bring-your-own-thermostat (“BYOT”) program and an average of about 17,200 new customers in a new install program.

The Company has the following questions about these assumptions for connected thermostats:

- a. The Company currently provides rebates for the installation of smart thermostats through two delivery channels of the Energy Efficient Home Program (the Online Marketplace and prescriptive rebates of smart thermostats). PPL Electric also provides thermostats at no cost to participants in the income qualified WRAP. Through 45 months (February 2020) of Phase III, PPL Electric has provided incentives toward the purchase of 2,434 smart thermostats associated with 1,818 customers (~0.2% of residential customers) for an average incentive of \$73 per thermostat. The SWE’s DDR Potential Study assumes that 5% of households with central air conditioning without a connected thermostat will enroll in the new install program after an initial marketing campaign in Phase IV. *See* DDR Potential Study, p. 48. Even assuming an aggressive marketing campaign in Phase IV, it is wholly unclear whether such a large uptick in smart thermostat adoption could be reasonably and cost-effectively achieved.
- b. The potential smart thermostat savings per home are based on data from 9,000 Ecobee smart thermostat customers. *Id.*, p. 49. It is unclear whether those customers are representative of PPL Electric’s customers who would enroll in a smart thermostat demand response program. For example, research performed by The Cadmus Group, who is PPL Electric’s

Evaluation, Measurement, and Verification (“EM&V”) Conservation Service Provider (“CSP”), and other evaluators has established that smart thermostat adopters tend to be more affluent and younger than non-adopters. Similar demographic differences are likely to be present between adopters different brands of smart thermostats. The use of data from more expensive Ecobee smart thermostats could result in overestimating the amount of dispatchable demand response potential from smart thermostats if Ecobee customers tended to be more affluent and, therefore, have larger homes and greater air conditioning loads. Also, the data used by the SWE was from customers who donated their data, which also may not be representative of the broader customer base.

- c. On page 47 of the DDR Potential Study, it states the SWE assumed that EDCs will market to customers with greatest potential savings from smart thermostats: “the SWE assumed that EDCs would leverage AMI data or connected thermostat runtime data to target program marketing to those accounts with the largest air conditioning loads during typical DR hours.” However, PPL Electric’s automated metering infrastructure (“AMI”) meters only record the total usage at a customer’s location. The meters are incapable of determining whether a specific appliance in a home or business is being used or not. Such appliance-specific data is only available to customers who voluntarily elect to activate the ZigBee radio and install a Home Area Network (“HAN”). Even then, however, only the customer is able to view the appliance-specific usage information. Thus,

it is entirely unclear why the SWE assumed that PPL Electric could target program marketing in the way it described in the DDR Potential Study.

- d. PPL Electric has a significantly smaller percentage of customers with central AC than other EDCs, which suggests that its customers have a lower demand for air conditioning. This calls into question the SWE's assumption that one in 15 thermostats is replaced annually and that the probability of replacement with a smart thermostat is the same for PPL Electric as the other EDCs. Therefore, the potential may need to be adjusted downward to account for the fact that many PPL Electric customers likely use air conditioning less than customers of other Pennsylvania EDCs.

2. Behavioral Demand Response. According to the DDR Potential Study, behavioral demand response will account for 27% of PPL Electric's demand response potential. Behavioral demand response requires no customer incentives, and the nominal acquisition cost will be \$43/kW/yr.⁹ PPL Electric asks for clarification on the following:

- a. Potential Study assumes that for all EDCs, the average behavioral demand response customer will save 0.05 kW and that the EDCs will target the top 50% of electricity consumers. Given the significantly lower air conditioning saturation for PPL Electric (relative to the other EDCs), it is unclear whether the assumption of 0.05 kW per treated customer is realistic.

⁹ Table 5. Statewide BDR Potential and Budget Requirement Summary. SWE Phase IV Demand Response Potential Study, p. 13 (2020).

- b. Behavioral demand response requires a means of notifying customers of impending events through email, text, or robocalls. However, the SWE simply assumed that EDCs would have email or cell phone numbers for 70% of targeted homes. It is wholly unclear what information the SWE based on that assumption on and whether such a percentage is an accurate assumption for all EDCs.
- c. When calculating potential from residential behavioral demand response and smart thermostats, it is unclear how the SWE accounted for overlap in potential participants. In the DDR Potential Study, both programs would target the highest use households, and presumably participation in both programs would not be allowed.

3. C&I Load Curtailment. Small C&I load curtailment will account for 39% of PPL Electric's demand response potential and the nominal acquisition cost will be \$46/kW/yr. The higher acquisition costs for Phase IV relative to Phase III are due to the expected participation of Small C&I customers. Again, PPL Electric requests clarification on certain points related to the SWE's assumption for Small C&I load curtailment:

- a. The SWE calculated the price elasticity of peak electricity demand from Phase III data. However, research shows that the price elasticity of electricity demand varies by customer type. Did the SWE consider estimating separate elasticities for Small C&I and Large C&I? This may be important because of the presumed nonparticipation of Large C&I customers in Phase IV and the fact that most Phase III load curtailment participants were Large C&I customers.

- b. The price elasticity formula used in the calculation of demand response potential seems to ignore the distinction between short and long run elasticities. In the elasticity formula, the price of consuming on peak is the retail rate plus the capacity payment per kW, which would be foregone. This seems like an accurate characterization of the short run price elasticity of demand and the cost of consuming on peak for a participant in an upcoming demand response event. However, it does not appear that it would accurately characterize the long run price elasticity of demand (or really, the supply of demand response capacity) and the cost of providing demand response capacity for a prospective program participant. Potential participants face unknowns about the weather and, therefore, the number of events as well. In addition, potential participants may be required to make investments to participate in demand response events. For example, a prospective Small C&I participant can invest in a smart thermostat or energy management system to facilitate load shifting, though such an investment would not be feasible for a participant on the day before the event. The elasticities in the DDR Potential Study reflect short run supply decisions for Large C&I customers when inputs are fixed. But the relevant elasticities for PPL Electric in Phase IV are long run elasticities for Small C&I customers. A suggestion for estimating long run supply elasticities of demand response capacity would be to correlate the kW capacity commitments of participants with their capacity payments.

C. PROCEDURES TO REQUIRE COMPETITIVE BIDDING AND APPROVAL OF CONTRACTS WITH CSPS

1. Competitive Bidding (Tentative Implementation Order Section G.1)

As stated previously, PPL Electric agrees with the Comments being submitted by the EAP, including the EAP's recommendation that the Commission forego the requirement to bid all CSP contracts without exception and allow the Commission's Bureau of Technical Utility Services ("TUS") to waive that requirement based on reasonable cause, including the number and availability of potential providers and prior cost-effective performance.

PPL Electric believes this is a reasonable approach and, if adopted, the Company plans on seeking an exemption to competitively bid its EM&V CSP Contract and the CSP Contract for its tracking system. Given the vast uncertainties surrounding Phase IV due to the COVID-19 outbreak, it is vital that the Company take the most efficient and cost-effective path in developing and implementing its Phase IV EE&C Plan. To that end, PPL Electric believes that the most prudent course of action is to continue using its current EM&V CSP, who already has developed all of the necessary software and has the requisite personnel that are needed. Moreover, PPL Electric has a tremendous working relationship with the EM&V CSP. This familiarity and already-established infrastructure will be critical to the Company's development and implementation of the Phase IV EE&C Plan. Therefore, no reason exists for re-bidding this CSP Contract for Phase IV.

Similarly, the Company would like to retain its current tracking system CSP without competitively bidding that contract. PPL Electric maintains that such an approach is more efficient and cost-effective because the Company will be able to leverage its prior investment in the tracking system. Moreover, the Company previously tried to use a different tracking system CSP at the start of Phase III. However, issues arose with the new tracking system's

development, and PPL Electric did not have a tracking system for the first year of Phase III. Ultimately, the Company had to re-hire the tracking system CSP from Phase II. When transitioning from Phase III to Phase IV, PPL Electric believes it would be best to prevent such an issue from occurring again by retaining its current tracking system CSP.

IV. CONCLUSION

For the reasons set forth above, PPL Electric Utilities Corporation respectfully requests that the Commission take these comments into consideration in preparing its Final Implementation Order.

Respectfully submitted,



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Date: April 27, 2020

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