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November 1, 2019

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

Re: 2021 Total Resource Cost (TRC) Test Tentative Order, Docket M-2019-3006868

Dear Secretary Chiavetta:

Enclosed for filing at the above-referenced docket, please find the comments of the Energy Association of Pennsylvania to the 2021 Total Resource Cost (TRC) Test Tentative Order.

Sincerely,

A handwritten signature in black ink that reads "Donna M.J. Clark".

Donna M.J. Clark
Vice President & General Counsel

Enclosure

CC: David Edinger, TUS, at dedinger@pa.gov
Louise Fink Smith, Esq., at finksmith@pa.gov

BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION

2021 Total Resource Cost (TRC) Test : M-2019-3006868

**COMMENTS OF THE
ENERGY ASSOCIATION OF PENNSYLVANIA
TO THE 2021 TOTAL RESOURCE COST (TRC) TEST
TENTATIVE ORDER**

On September 11, 2019 in connection with planning for a potential Phase IV Act 129 Energy Efficiency and Conservation (“EE&C”) Program¹, the Pennsylvania Public Utility Commission (“PUC” or “Commission”) entered a Tentative Order² proposing guidance for the Pennsylvania Total Resource Cost (“TRC”) Test that will be used in planning for and implementing a next phase of Act 129 that, if approved, would begin on June 1, 2021.³ The TRC Test is integral to the analyses undertaken by the Commission and its technical consultants, the Statewide Evaluator (“SWE”), at a number of junctures in the planning process. Initially, as

¹ The Act 129 EE& C Program is currently in a five-year Phase III that will conclude on May 31, 2021.

² 2021 Total Resource Cost (TRC) Test, Docket No. M-2019-3006867, entered on September 11, 2019 (Tentative Order).

³ Act 129 requires electric distribution companies (“EDCs”) with 100,000 or more customers to adopt an energy efficiency and conservation (“EE&C”) plan approved by the Commission to reduce electric consumption and further requires, *inter alia*, those EDCs to demonstrate that its particular EE&C plan is cost-effective using a TRC test established by the Commission. *See*, 66 Pa. C. S. §§ 2806.1 (b)(1)(ii), 2806.1 (b)(1)(i)(I) and 2806.1 (I). The initial TRC test was established by the Commission for Phase I of Act 129 in an order adopted on June 23, 2009 at Docket M-2009-218601. That TRC test was subsequently updated on August 2, 2011 at the same docket and again in August of 2012 at Docket M-2012-2300653. The Commission’s last update of the TRC test occurred on June 22, 2015 at Docket M-2015-2468992 and is the TRC test for the duration of the current Phase III of Act 129.

explained by the Commission, the TRC Test established for use during a potential Phase IV “will set constraints that the Phase III SWE will need in order to finalize the Phase IV market potential study.” Tentative Order at p. 4. And, in fact, the Phase III SWE is in the midst of preparing the market potential study for the Commission to use in setting mandatory targets for a potential Phase IV of Act 129.⁴ Additionally, the TRC Test is “a critical measuring tool” used to prepare, evaluate and approve an EDC EE&C plan at the outset of a phase and, thereafter, to monitor implementation of the EE&C plan during the phase and measure the EDC EE&C plan’s overall cost-effectiveness. *Id.* The TRC Test provides the basis for a benefit/cost analysis and is “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 EE&C plans.” Tentative Order at p. 5. The Tentative Order indicates that the TRC Test under consideration for a potential Phase IV would be applicable throughout that phase which could potentially end on May 31, 2026. *Id.* at pp. 7-8.

On behalf of its EDC members subject to the provisions of the Act 129 EE&C Program⁵, the Energy Association of Pennsylvania (“EAP”) submits the following comments limited to Section G (Demand Response) of the Tentative Order.⁶ These comments are made in concert

⁴ Beginning approximately two years prior to the initiation of a new phase of Act 129 EE&C programs, the SWE undertakes a series of studies, i.e. Residential and Commercial & Industrial Baseline studies, a Demand Response Potential study and an Energy Efficiency Market Potential study, that are the basis for determining key parameters and mandatory targets for the next phase. Regarding a potential Phase IV Act 129, the SWE has completed baseline studies and is on course to complete the potential studies for review by Commission staff by the end of 2019.

⁵ EAP EDC members subject to the Act 129 EE&C Program, i.e. Pennsylvania EDCs with 100,000 customers or more, are Duquesne Light Company, Metropolitan Edison Company, PECO Energy Company, Pennsylvania Electric Company, Pennsylvania Power Company, PPL Electric Utilities Corporation and West Penn Power Company.

⁶ The Tentative Order states that “[c]omments are to follow the outline numbering established herein.” Tentative Order at p. 4.

with and in addition to any comments submitted to the Tentative Order by EAP's individual member EDCs named in footnote five (5) *supra*.

I. COMMENTS

For a number of reasons outlined below, EAP has significant concerns regarding the proposed methodology for determining the cost-effectiveness of demand response ("DR") as set forth in Section G of the Tentative Order and respectfully requests that: (1) this methodology not be used by the SWE in connection with the market potential and demand response potential studies currently underway to determine targets for a potential Phase IV of Act 129; and (2) to the extent the Commission determines to mandate demand reduction targets for the next phase, EDCs should not be required to nominate Phase IV Act 129 DR program reductions to PJM as Peak Shaving Adjustments. *See generally, Report on Summer Peak Shaving Adjustment Resources in PJM*, Prepared for CAPS by Demand Side Analytics, LLC, March 2019 ("Demand Side Analytics Report")⁷.

EAP contends that the proposed approach unnecessarily exposes the EDCs to an unacceptable degree of risk where, *inter alia*, the mandated target must be met precisely and the statute provides no leeway or discretion for the Commission to consider whether an EDC used best and/or reasonable efforts to achieve reductions in consumption and/or demand prior to

⁷ The Demand Side Analytics Report, dated March 2019, includes a description at Table 1 of the design components for the PJM Peak Shaving Adjustment program, analyzes the risks and benefits of the program and details a number of conclusions/recommendations for consideration in deciding whether or not to participate in the program. *See, <https://www.demandsideanalytics.com/2019/03/21/summer-demand-response-changes-at-pjm/>* In May 2019, the Federal Energy Regulatory Commission ("FERC") accepted certain revisions to the PJM Open Access Transmission Tariff which included the requirements necessary to participate under the PJM Peak Shaving Adjustment program at PJM Tariff, Attachment DD-2 (Procedures for Peak Shaving Adjustment). *See, PJM Interconnection L.L.C., Docket Nos. ER19-511-002.*

assessing a penalty of not less than \$1,000,000 and not more than \$20,000,000 when targets are missed. 66 Pa. C. S. § 2806.1 (f).

EAP is concerned that the approach proposed here - i.e., to dictate that EDCs nominate to PJM any Phase IV DR program reductions as Peak Shaving Adjustments and then monetize benefits at 60% of the avoided cost of generation, transmission and distribution capacity based upon an analysis that relies solely on the forecasted data of a single non-Pennsylvania utility's Peak Shaving Adjustment program⁸ – assumes avoided cost benefits that are uncertain and could lead to a flawed and unsupported decision regarding the inclusion of DR mandates for Phase IV. EAP maintains that the risk and significant uncertainty assumed to implement cost-effective Act 129 DR programs so as to purportedly “lower the zonal peak load forecast and capacity obligation of a zone” is not justifiable where that same benefit is achievable with greater certainty via non-Act 129 DR programs. EAP contends that consideration of the significant risks and uncertainties regarding DR program performance and cost-effectiveness supports a conclusion that DR should be excluded from a potential Phase IV.

Alternatively, and without establishing mandatory demand reduction targets in Phase IV, EAP suggests the option of voluntary DR pilot program(s) to allow the Commission, PJM, EDCs and other Pennsylvania stakeholders to possibly gain experience with the proposed Peak Shaving Adjustment program and determine whether it will lead to a cost-effective load reduction methodology suitable for inclusion in future Act 129 EE&C programs. *See discussion infra.* at pp. 8 - 10.

⁸ *See*, Tentative Order at pp. 44-49.

A. The PJM Peak Shaving Adjustment DR Program is New and Unproven and Should Not Be the Basis for Valuing DR Benefits in a Potential Phase IV DR Program.

For the purposes of the Tentative Order, the Commission assumed that DR targets would be mandated for a potential Phase IV and provided that its “position is that Phase IV DR programs, if any, should be nominated to PJM as Peak Shaving Adjustments.” Tentative Order at p. 46. Nominations of DR programs to PJM as Peak Shaving Adjustments (“PSAs”) would thus become the sole methodology used for monetizing the DR benefits in determining cost-effectiveness both in the context of setting mandatory targets and with respect to implementation. EAP believes that establishing this new and untested PJM program as the only method for determining Phase IV DR cost-effectiveness is premature and not reasonably quantifiable. If Phase IV includes DR targets, EDCs should retain flexibility to design DR programs, similar to the process in prior phases, and should not be directed to nominate said programs into the PJM PSA program as the only acceptable means to measure and demonstrate cost-effectiveness.

Additionally, relying upon the future PSAs of Baltimore Gas and Electric (“BGE”) to conclude that Pennsylvania EDCs should use 60% of the avoided cost of generation capacity for a program year to monetize DR impact⁹ as part of cost-effectiveness testing is not supported by any discussion or analysis of BGE’s summer program criteria. For example, the specific months of participation, the Temperature Heat Index (“THI”) trigger used in the BGE DR program for each event, the applicable technology deployed, the applicable customer class(es)/rate schedule(s), the anticipated duration of each event, and identifying an adequate pool of customers to participate in the BGE summer DR program, are all factors necessary to adequately

⁹ See, Tentative Order at pp. 46 – 47.

evaluate the effectiveness of the BGE approach to DR.¹⁰ The fact that the PJM PSA program has not been fully implemented by any PJM DR market participant or by PJM itself and that, as a consequence, the BGE estimated load forecasts have not been validated raises serious questions regarding the use of said forecasts as the basis for quantifying Pennsylvania avoided costs - a key component in establishing both potential Phase IV DR targets and program design.

B. Use of the PJM Peak Savings Adjustment May Not be a Cost-Effective Use of Ratepayer Funds as Compared to Other Cost-Effective Act 129 Program Options.

EAP asks that the Commission carefully consider the impact on customer costs and potential benefits that will likely result from the implementation of the proposal to require that any potential Phase IV DR programs be nominated to PJM as PSAs. Provided that the PJM PSA customer cannot also be a PJM DR customer,¹¹ EAP contends that most, if not all, of the existing PJM DR customers will remain participants in the PJM DR program. The existing PJM Emergency DR programs require less frequent participation than any DR program in any phase of Act 129. In addition, the Emergency DR programs are mature programs with established parameters and acceptable risks and are more lucrative for customers as compared to the new and untested PJM PSA program. These conditions will limit the pool of large commercial and industrial (“C&I”) customers willing to participate in any potential Act 129 Phase IV DR program. This, in turn, will force EDCs to achieve mandated DR targets via programs aimed at

¹⁰ Demand Side Analytics Report, Table 1 at p. 5.

¹¹ Demand Side Analytics Report, Table 1 at p. 5. *See also*, discussion at page 6 providing that the “prohibition of dual participation may prove especially important for some states. ... For example, Pennsylvania’s Act 129 demand response programs deliver 450 – 500 MW of peak shaving on hot summer afternoons. However, many of the large industrial customers that participate in this state program also have commitments in the PJM DR programs (as supply). Regulators, and EDCs in Pennsylvania would have to carefully consider the amount of eligible peak shaving capability in existing programs before nominating a Peak Shaving Adjustment.”

residential and small C&I customers and, as detailed below, unnecessarily increase the costs of the Phase IV DR programs to the detriment of ratepayers and EDCs.

Experience has demonstrated that DR programs costs for residential and small C&I customers are higher to implement and maintain when compared to the costs of large C&I DR programs.¹² As a result, the majority of Pennsylvania EDCs would have to either install or update infrastructure in order to incorporate residential and small C&I customers into their potential Phase IV DR programs. Costs for vendor or conservation service providers¹³ (“CSP”) to market, install and manage such a potential Phase IV DR program should be factored into the benefit/cost analysis underpinning the TRC Test. Additionally, dependent on the THI used for the PJM PSA program, residential and small C&I customers could be exposed to multiple interruptions during a hot, humid summer and would understandably expect to be paid an amount commensurate to their participation. Failure to properly value the cost of that experience/participation would likely cause those customers to drop out, raising both the amount that must be paid to the participant and the risk to EDCs of noncompliance.

In order for an EDC to offer DR programs to residential and small C&I customers (excluding behavioral programs), it would likely have to provide customers with some equipment controls or hardware or install the device at no charge to the customer and pay the customer for each event participation. Assuming a suitable pool of customers willing to participate, based on DR program costs from prior phases of Act 129, costs would be significant

¹² See, e.g. Act 129 Statewide Evaluator – Final Annual Report, Phase I: June 1, 2009 – May 31, 2013, <http://www.puc.pa.gov/pcdocs/1274547.pdf>

¹³ As defined in Act 129, a conservation service provider is “an entity that provides information and technical assistance on measures to enable a person to increase energy efficiency or reduce energy consumption and that has no direct or indirect ownership, partnership or other affiliated interest with an electric distribution company.

to achieve the necessary customer load reduction as compared to costs for equivalent large C&I load reductions. *See, fn. 12, infra.*

Furthermore, cost-effectiveness would be further reduced when, as proposed in the Tentative Order, only a portion of the physical load reduction savings achieved would be attributable to zonal load forecast reductions. Although under the PJM PSA program, the expected MW load forecast reductions for each zone will be calculated, there is no guarantee that the program MW will be realized, creating additional risks of having the load forecast adjustments further reduced by PJM in future years. It is important to note that the success or failure of the PJM PSA programs will have a direct impact on the Capacity Resource MW purchased in PJM's Capacity Market and safeguards would be needed to ensure continued system reliability is not jeopardized.

Careful consideration is needed to ensure that budget dollars designated for Act 129 Phase IV programs are not improperly spent on potentially non-cost-effective DR programs. EAP believes that the Commission should consider whether the costs of requiring EDCs to nominate Phase IV DR program savings into PJM PSA programs is a reasonably quantifiable cost-effective benefit to customers/ratepayers as compared to other Act 129 program options.

C. PJM Peak Shavings Adjustment Program Nominations Will not be Possible for the Entire Potential Act 129 Phase IV.

As detailed below, EAP contends that EDCs will not have the ability to nominate demand reduction resources into the PJM PSA program during, at least, the initial year of a potential Phase IV Act 129 Program beginning on June 1, 2021 and perhaps not until September 2022. PJM requires a PSA program to be submitted at least ten (10) business days prior to September 30th in order for the PSA to be offered into a Base Residual Auction (BRA) or Incremental

Auction (IA) for the applicable delivery year, i.e., ten (10) business days prior to September 30, 2020 for the initial year of Phase IV.¹⁴ EDC Act 129 Phase IV EE&C plans will not have been either submitted or approved by September of 2020; the tentative implementation schedule for Phase IV targets the end of November 2020 for the submission of EDC Act 129 Phase IV EE&C plans with final consideration by the Commission slated for early March 2021.

Further, based on the time required to contract with CSPs, to market and recruit customers, and to deploy the equipment likely needed by residential and small C&I customers to participate in any DR program offered in Phase IV, it is conceivable that EDCs will be unable to submit a PSA program to PJM ten (10) days prior to September 30, 2021.¹⁵ The result would be a severely truncated program with significant risk and negative impacts for EDCs depending on the DR target mandated by the Commission. Given the complexities and uncertainties created by the timeframes set forth in the PJM Tariff, Attachment DD-2 (Procedures for Peak Shaving Adjustment), EAP contends that the value of requiring that Phase IV DR program savings be nominated to PJM as Peak Savings Adjustments is highly uncertain.

D. The PJM Peak Savings Adjustment Program Precludes Participation in other PJM DR Programs and Would Impact the Willingness of Eligible Customers to Participate in Act 129 DR Programs.

Act 129 DR programs have presented implementation and cost-effectiveness challenges to the Commission, EDCs and other stakeholders beginning in Phase I with the statutory requirement that the “weather-normalized demand of the retail customers of each electric

¹⁴ See, PJM Tariff, Attachment DD-2 (Procedures for Peak Shaving Adjustment).

¹⁵The PJM procedures for its PSA program require that the submission include the “expected peak shaving value in MWs by Zone.” *Id.* Optimally, an EDC would need reasonable certainty regarding the potential peak shaving value it could anticipate from customer participation in its DR programs prior to committing to nominate resources to PJM.

distribution company shall be reduced by a minimum of 4.5% of annual system peak demand in the 100 hours of highest demand.” 66 Pa. C. S. § 2806.1 (d). The Phase I SWE concluded that “Act 129 DR programs were not cost effective as offered in 2012”¹⁶ and the difficulty in identifying a cost-effective DR program replacement given statutory time constraints convinced the Commission to forego mandating a DR target for Phase II of Act 129. In the planning process preceding Phase III of Act 129, the Commission again considered whether to mandate DR targets and proposed that EDC DR programs developed to meet any mandatory DR targets should not allow for dual participation in both PJM and Act 129 DR programs. *See, Tentative Implementation Order Re: Energy Efficiency and Conservation Program*, Docket No. M-2014-2424864 (entered on March 11, 2015) at pp. 37 – 38.

During the Phase III Act 129 stakeholder process, however, it became clear to both the EDCs and the Commission that PJM DR customers would not forego participation in the PJM DR programs to participate solely in proposed Act 129 DR programs. Subsequently in its Final Implementation Order,¹⁷ the Commission acknowledged the importance of allowing dual participation to enable EDCs to achieve mandatory DR targets and subsequently permitted participation in both PJM and Act 129 DR programs with certain limitations.¹⁸

Currently in Act 129 Phase III, PJM DR participants comprise almost 100% of the C&I customers participating in EDC Act 129 DR programs. To now implement a new TRC mechanism which prohibits dual participation by customers contradicts experience to date, will

¹⁶ *See*, Act 129 Statewide Evaluator – Final Annual Report, Phase I: June 1, 2009 – May 31, 2013, <http://www.puc.pa.gov/pcdocs/1274547.pdf>, at p. 177. *Id.* at pp. 177 – 180 for a discussion of the Phase I SWE findings and recommendations detailed in the SWE Demand Response Study prepared in Phase I.

¹⁷ *Final Implementation Order Re: Energy Efficiency and Conservation Program*, Docket No. M-2014-2424864 (entered on June 19, 2015).

¹⁸ *Id.* at pp. 42 – 43.

create customer confusion and will result in competing or overlapping programs that force customers to choose one program over another with no commensurate increase in benefits to ratepayers. Such a fundamental change in customer participation criteria will also unnecessarily increase the compliance risk to EDCs.

This modification dictated by the PJM Tariff, Attachment DD-2 (Procedures for Peak Shaving Adjustment) would effectively eliminate all C&I DR customers that had participated in earlier phase Act 129 DR programs, increasing the costs and risks associated with compliance. EAP requests that the Commission reverse its position to require potential Phase IV DR program resources be nominated to PJM as Peak Shaving Adjustments. As an alternative, EAP suggests consideration of an optional pilot program without mandatory Act 129 DR targets that an EDC could choose to voluntarily include in its Phase IV EE&C plan. A pilot could provide all parties, including PJM and the Commission, experience in implementing and participating in the new PJM PSA program without exposing the EDCs to an unreasonable degree of compliance risk.

E. The Proposal to Use Sixty Percent (60%) of the Avoided Capacity, Transmission and Distribution Costs to Monetize DR Impacts is Unreasonable and Not Supported by Relevant Experience.

While EAP acknowledges that the avoided cost benefits attributable to the Act 129 Phase III DR programs may have been overstated in the *2016 TRC Test Order*, Docket M-2015-2468992, neither EAP nor the EDCs agree that using sixty percent (60%) of the avoided capacity, transmission and distribution costs to monetize the benefits of demand reduction for purposes of determining cost-effectiveness is fair or reasonable. As detailed previously (in section I.A.), the avoided cost of capacity for each nomination of DR resources into the PJM PSA program will be largely dependent on the particular Act 129 DR program design. Event

duration, summer months, event frequency, program technology details and program participants are unknown at this point. Further, PSAs which use a lower THI will operate more frequently and provide greater savings than PSAs using a higher THI. This circumstance highlights the incongruity that could occur if the Commission makes a premature determination to use sixty percent (60%) avoided costs of capacity to monetize DR impacts for all potential Phase IV DR programs. In addition, using the PSAs forecasted by BGE as the proxy for potential Phase IV DR avoided costs in Pennsylvania is unreasonable because it is not supported by any details or analysis concerning the BGE program that would allow for evaluation or comparison to current Act 129 DR program criteria or for comparison of its use and applicability in Pennsylvania.

Finally, EAP and the EDCs oppose the use of any transmission and distribution (“T&D”) avoided costs for DR program valuation under any program design (Phase III or PJM PSA) that does not have specific program criteria to target specific T&D growth or peak system related issues. EAP believes that doing so overstates the avoided cost benefits and recommends that avoided T&D costs not be used or applied with regard to any potential Phase IV DR programs unless a program is designed to target and address T&D issues. In considering this issue, it is important to note that such a program design, benefits and costs, are highly variable and dependent on the discrete areas and customers potentially impacted by such targeted T&D issues.¹⁹

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¹⁹ See, Section 3.3, Demand Side Analytics Report at p.19.

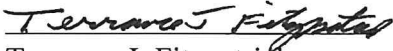
II. CONCLUSION

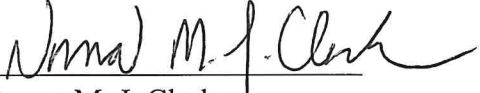
For all the reasons detailed above, EAP has significant concerns regarding the proposed methodology for determining the cost-effectiveness of demand response as set forth in Section G of the Tentative Order and respectfully requests that: (1) this methodology not be used by the SWE in connection with the market potential and demand response potential studies currently underway to determine targets for a potential Phase IV of Act 129; and (2) to the extent the Commission determines to mandate demand reduction targets for the next phase, EDCs should not be required to nominate Phase IV Act 129 DR program reductions to PJM either as Peak Shaving Adjustments or as part of a Price Responsive Demand program.

EAP does not support the inclusion of mandatory DR targets for a potential Phase IV Act 129. While Phase III Act 129 DR programs may appear to be cost-effective under current TRC test criteria, given the implementation complexities, the proposed TRC test changes and the significant uncertainty surrounding the benefits of Act 129 DR programs, EAP contends that ratepayer dollars are better invested in energy efficiency programs. EAP urges the Commission to consider the overall experience of Act 129 DR programs over the last ten (10) years of EE&C plans and use its discretion under the statute to forego mandating further DR programs.

In the event the Commission determines that distinct demand reduction programs under Act 129 are reasonable and necessary to supplement the robust DR programs available through PJM, EAP suggests the use of limited pilot programs with no mandatory targets. Voluntary pilot programs could help to reasonably quantify the impact, viability, benefits and costs associated with nominating demand reduction savings to PJM as Peak Savings Adjustments without wasting ratepayer dollars and without exposing EDCs to an unreasonable degree of compliance risk in the context of implementing the new and untested PJM Peak Savings Adjustment program.

Respectfully Submitted:


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Dated: November 1, 2019