Prepared Testimony of

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before the

The Pennsylvania Senate
Consumer Protection and Professional Licensure Committee
and
The Pennsylvania Senate
Environmental Resources and Energy Committee

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Good afternoon Chairman Tomlinson, Chairman Boscola, Chairman Yaw, Chairman Yudichak, members of the Senate Consumer Protection and Professional Licensure Committee, and members of the Senate Environmental Resources and Energy Committee.

I am Gladys Brown Dutrieuille, Chairman of the Pennsylvania Public Utility Commission (Commission). Also present with me is Joe Sherrick, Supervisor of Policy and Planning within the Commission's Bureau of Technical Utility Services. On behalf of the Commission, I thank you for the invitation to testify on the Commonwealth's Alternative Energy Portfolio Standards Act of 2004.

BACKGROUND

The Alternative Energy Portfolio Standards Act of 2004[1] (AEPS) established a market-driven program that requires electric distribution companies (EDCs) and electric generation suppliers (EGSs) to ensure by 2021 that at least 18% of the total electricity supplied to their customers is generated from qualified alternative energy resources.

The AEPS identifies the energy resources that are eligible for consideration in the program. These resources are classified into two groups; Tier I which includes resources such as wind, solar, and geothermal; and Tier II which includes resources such as waste coal, municipal solid waste, and large-scale hydro. Additionally, although solar photovoltaic (solar) is a Tier I resource, it has a standalone requirement.[2] Prospective alternative energy resources must first become certified by the Commission as AEPS qualified before they may generate Alternative Energy Credits, or AECs.

For each reporting period, EDCs and EGSs are required to retire AECs in quantities equal to the AEPS prescribed percentage of their total retail sales of electricity. Retirement is done by placing the AEC in a special account thereby removing it from the marketplace. The AEPS percentages gradually increase each year, through 2021. At present, the percentages stand at 7.00% for Tier I, including a 0.39% component of solar, and 8.20% for Tier II. This results in a total present AEPS requirement of 15.20%. Each successive 12-month reporting year begins on June 1st and concludes on the following May 31st. Compliance is monitored by the Commission during these reporting-year intervals.

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[1] See generally 73 P.S. § 1648.1 et seq.

[2] Solar credits may be used towards the non-solar Tier I requirement, in addition to the solar requirement.

In 2009, via the passage of Act 129 of 2008, some additional alternative energy resources were added to Tier I, namely municipally-owned low-impact hydropower resources as well as generation resources that utilize by-products from wood pulping and wood manufacturing processes. To account for these additional resources and to hold harmless the other Tier I resources, an annual adjustment or increase to the non-solar portion of the Tier I requirement was added.

More recently, the passage of Act 40 of 2017 (Act 40)[3] amended the AEPS by establishing limitations on systems qualifications for the solar share of AEPS, effectively limiting eligibility of credits from solar systems to those located within Pennsylvania, with the exception of out-of-state solar facilities that were already registered in Pennsylvania and under contract with Pennsylvania EDCs and EGSs. Act 40 became effective on October 30, 2017. The result of this action is an expected increase in future solar credit prices with an associated increase of in-state solar development.

ALTERNATIVE ENERGY CREDITS

AECs are tradable instruments created as the qualified alternative energy resources generate electricity. Save for Tier I Solar credits whose qualifications were modified under Act 40, Pennsylvania EDCs and EGSs are permitted to obtain Tier I and Tier II AECs from resources located within the entire geographic footprint of the of PJM Interconnection, LLC (regional transmission organization).[4] When an alternative energy resource generates one megawatt hour (MWh) of electricity, one AEC is created. The AECs are created, serialized, tracked, and verified via creation of certificates. The credit certificates are serialized for tracking purposes. The AECs can be used and retired by the generating entity itself, sold, or traded to another entity in the marketplace. PJM Environmental Information Services Inc.'s Generation Attribute Tracking System (GATS) is the PUC designated AEC registry used to track generation, ownership, and retirement of AECs. When an EDC or EGS is required to show that a certain percentage of their retail sales includes electricity generated from qualified alternative energy resources, they may acquire AECs and retire them. Retirement of the AECs removes them from the marketplace. AECs are eligible for use during the reporting year in which they were created but if unused, these AECs may be banked for later use during either of the following two reporting years. Unused AECs past their eligibility period cannot be used for AEPS obligations.

[3] Act 40 of Oct. 30, 2017, P.L. 379, No. 40 ("Act 40").

[4] PJM Interconnection, LLC is the regional transmission organization for all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. http://www.pjm.com/about-pjm/who-we-are/territory-served.aspx.

NET METERING AND VIRTUAL METER AGGREGATION

An important element of the AEPS is the ability of customer-generators to net meter the electricity they produce from qualified AEPS resources. In doing so, a customer of an EDC may offset all or a portion of the electricity that otherwise would be received from the electric grid. If the customer-generator's alternative energy system produces more electricity than consumed by the customer in that month, the excess kilowatt-hours (kWhs) will be credited towards the customer's next monthly billing statement. If, at the end of the AEPS compliance year the customer still has excess kWhs, the value of the excess kWhs is monetized and the cash value is applied to the customer's next monthly billing statement. This however does not mean that customers have zero bills, as a portion of the monthly bill is attributed to usage, there are monthly customer charges and certain fees are paid by the customer on a monthly basis regardless of their consumption.

An extension of net metering is virtual meter aggregation, which allows a customer-generator who has multiple accounts/meters at various locations to virtually aggregate the kWhs and apply that electric load to the excess generation from the alternative energy system. This is allowed so long as the customer's meters are all in the same name, are within 2 miles of the customer-generator's alternative energy system and are all within the same EDC service territory. Virtual meter aggregation is often confused with virtual net metering, which is not allowed in Pennsylvania. The two differ in a couple key areas. Both allow crediting of generation from a qualified AEPS resource without the need of that resource to be physically connected to the customer's electric meter(s). However, virtual net metering sets no limitation on the siting or distance from the alternative energy system and the electric meters from which crediting is being sought.

Net metering is an economic asset which, as defined by the AEPS, is limited to a customer-generator that, in essence, is defined as being "behind the meter." The net metering marketplace continues to grow at a meteoric rate. Currently, there are approximately 400 megawatts (MW) of alternative energy being net metered in Pennsylvania by approximately 21,000 customers.[5] The vast majority of these accounts are rooftop solar.

COMPLIANCE SUMMARY

For the 2018 reporting year running from June 1, 2017 to May 31, 2018, each EDC and all but four EGSs met their requirements by acquiring and retiring sufficient AECs. Those four EGSs will be required to comply by making the necessary alternative compliance payments (ACPs). Of the total number of AECs retired,

[5] Commission Net Metering & Interconnection Report for 2016 -2018, dated August 2018.

approximately 50% of the AECs were generated within Pennsylvania. For the Solar requirement, approximately 30% of the retired AEC credits originated in Pennsylvania, 56% came from North Carolina, 10% came from Virginia, 2% came from Ohio, and the remaining balance came from eight other states.[6] For the Tier I requirement, exclusive of Solar requirement, 29% of retired AECs came from Pennsylvania, another 29% came from Illinois, 26% came from Virginia, 6% came from Indiana, 4% came from Ohio, 3% came from West Virginia, and the other 3% came from six other states. For the Tier II requirement, 67% of retired AECs came from Pennsylvania, 19% came from Virginia, 10% came from West Virginia, and the other 4% came from four other states.

COSTS AND BENEFITS

The reported cost for AEPS compliance in reporting year 2018 was approximately $110 million. The approximate weighted average price per credit for 2018 reporting year was $10.15 for Tier I, $31.53 for Tier I solar, and $0.22 for Tier II.[7] As of April 25, 2019, the Commission has preliminarily estimated the statewide costs of AEPS compliance for 2021, the year of maturation for this standard, at between $98 million and $116 million. These estimates are based on two methods of calculation; the first relies upon Commission staff knowledge of historical trends and known futures purchases while the second was calculated using only futures-based prices for 2021. In both cases, the estimated costs are stated in 2019 dollars using a 6% discount rate applied.

Since its inception, the AEPS has resulted in creating and/or sustaining thousands of jobs and business ventures associated with all aspects of renewable and alternative energy generation. The Clean Jobs Pennsylvania 2018 report cites that Pennsylvania has a renewable energy workforce of more than 8,500. [8]

Additionally, while the Commission does not directly monitor the environmental aspects of AEPS, the support the legislation offers carbon-free resources certainly provides the Commonwealth with some benefits in the form of air-quality. Nonetheless, the Commission would respectfully defer to our colleagues at the Department of Environmental Protection for more detailed information on environmental benefits.

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[6] Act 40 of 2017 became effective during this program year – October 30, 2017. So, for at least a portion of the year, credits from out-of-state solar facilities were able to be used towards the Tier I Solar requirement. Following Act 40, only credits from out-of-state facilities with existing contracts or those credits banked but not yet utilized were eligible.

[7] Most up-to-date numbers available to Commission Staff for the 2018 AEPS Compliance year. Note that the full 2018 AEPS Report has not yet been published.

[8] Clean Jobs Pennsylvania 2018 https://www.e2.org/wp-content/uploads/2018/06/Clean-Jobs-Pennsylvania-2018.pdf

Last, the legislation, as enacted in 2004 and modified in 2007, while modest, incentivized an increased diversity of generation resources in the Commonwealth and the PJM region while having a negligible effect on competitive wholesale prices. In turn, AEPS works to offer benefits to the reliability and resiliency of the wholesale energy market. Nonetheless, policy makers should consider the ramifications that any increase or modification to the existing AEPS mandates could have on competitive wholesale markets.

CONCLUSION

Overall, the Commission is proud of the work it has completed to date to facilitate a robust energy landscape in the Commonwealth. This includes the work associated with administering AEPS. The state continues to experience growth in alternative energy systems, particularly solar, while overall energy costs have remained quite stable. The Commission thanks both Committees for the opportunity to testify. It is our intent to work cooperatively and constructively with the General Assembly as you deliberate any policy changes associated with AEPS as well as any other energy related topics. We stand at your service to answer any questions.