

Prepared Testimony of

Gladys Brown Dutrieuille

Chairman, Pennsylvania Public Utility Commission

&

Stephen M. DeFrank

Vice Chairman, Pennsylvania Public Utility Commission

before a public hearing of the

Pennsylvania Senate Consumer Protection and Professional
Licensure Committee

June 20, 2023



Pennsylvania Public Utility Commission

400 North Street

Harrisburg, Pennsylvania 17120

Telephone (717) 787-4301

<http://www.puc.pa.gov>

Introduction

Good morning Chairman Stefano, Chairman Boscola, members of the Consumer Protection and Professional Licensure Committee (Committee), and all others gathered here this morning.

It is our pleasure to join you here today, as Chairman and Vice Chairman of the Pennsylvania Public Utility Commission (PUC or Commission) – on behalf of the dedicated staff at the PUC – to discuss the current state of the Alternative Energy Portfolio Standards Act (AEPS or Act)¹ with a targeted focus on its solar provisions, new solar proposals being considered by lawmakers, and recent case precedent regarding net metering in the Commonwealth.

Solar

Pennsylvania's AEPS Act required that, by 2021 and on, alternative energy credits (AECs) equivalent to 18% of all electric power sold in the Commonwealth be obtained from qualifying resources. The AEPS is broken out into two segments, Tier I and Tier II, with each segment encompassing a portfolio of qualifying resources.² Because the schedule of the Act has been fully implemented for the last three years, the 18% annual requirement remains static now unless the Act is revised. As fully implemented, the percentage requirements of the Act are 8% for Tier I and 10% for Tier II. Of important note, the Tier I category includes a stand-alone solar photovoltaic requirement of 0.5% (referred to herein as Tier I Solar) and is the only resource with a stand-alone requirement.³

¹ 73 P.S. §§ 1648.1-1648.9.

² For more detailed information regarding AEPS resources and the Commission's administration of the Act please see our 2022 AEPS Annual Report - [aeps-2022-report-final-032223-_dm.pdf \(pa.gov\)](#)

³ Solar photovoltaic resources may be used for compliance with Tier I or Tier I Solar requirements.

Electric distribution companies (EDCs) and electric generation suppliers (EGSs) comply with the Act through the acquisition and retirement of alternative energy AECs in quantities equal to the applicable tiered percentage of their total retail sales of electricity in Pennsylvania. Solar AECs represent one megawatt hour of electricity generated by qualifying solar photovoltaic resources, which includes both utility scale and distributed solar. Utility scale solar facilities are those directly interconnected to the bulk transmission grid while distributed solar are directly interconnected to an EDC’s distribution grid.

The weighted average price of Solar AECs used for AEPS compliance in the 2022 Reporting Year was \$41.45 per AEC. For that same reporting year 92.8% of Solar AECs used for compliance were originated within Pennsylvania, with the remainder originating outside the Commonwealth but within the footprint of PJM Interconnection LLC (PJM).^{4, 5}

The solar requirements for other states within PJM vary considerably. For your information, we offer a brief summary of these solar requirements for the 12 other states within PJM along with Washington D.C.

<u>Solar Requirements in PJM RTO⁶</u>
Delaware – 10% by 2035
Washington D.C. – 10% by 2041
Maryland – 14.5% by 2030
New Jersey - 1.1% by 2031
Ohio – 0.5% by 2026
West Virginia – No requirement

⁴ PJM is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all of Pennsylvania, as well as all or parts of 13 states and the District of Columbia.

⁵ Act 40 of 2017 amended the AEPS Act by establishing geographical limits on solar photovoltaic systems, which effectively closed the borders for out-of-state Solar AECs. However, certain grandfathered contracts still exist permitting a small percentage of out-of-state AECs for compliance.

⁶ <https://www.pjm.com/-/media/committees-groups/subcommittees/las/2022/20221129/item-03a---ihs-markit---pjm-solar-and-battery-forecasts.ashx>

Indiana – No requirement
Illinois – 1.5% by 2025
Kentucky – No requirement
Michigan – No requirement
North Carolina – 0.2% by 2020
Virginia – has a direct Megawatt (MW) requirement for its utilities, including 1,100 MWs for Dominion by 2035.

Recently the Legislature has considered bills which would, among other things, increase the Commonwealth’s current solar requirements.⁷ The Commission supports consideration and implementation of reasonably achievable increased solar percentages for Pennsylvania given the Commonwealth has now reached its 0.5% AEPS target. The Commission would be pleased to serve as a resource to the Legislature should it seek to determine new increased percentage targets.

Net Metering

Net metering is established and defined in the AEPS Act.⁸ The Commission has developed technical and net metering interconnection rules to facilitate achievement of the AEPS Act requirements.⁹ Our regulations separate net metered accounts into four distinct interconnection categories based on generation size and circumstance.

- Level 1 – with a nameplate capacity of 10 kilowatts or less
- Level 2 – with a nameplate capacity of 2 MWs or less
- Level 3 – with a nameplate capacity of 5 MWs or less

⁷ Such consideration includes Senate Bill 230 of 2023.

⁸ "Net metering" is "[t]he means of measuring the difference between the electricity supplied by an electric utility and the electricity generated by a customer-generator when any portion of the electricity generated by the alternative energy generating system is used to offset part or all of the customer-generator's requirements for electricity. Virtual meter aggregation on properties owned or leased and operated by a customer-generator and located within two miles of the boundaries of the customer-generator's property and within a single electric distribution company's service territory shall be eligible for net metering." 73 P.S. § 1648.2.

⁹ 52 Pa. Code § 75.1.

- Level 4 – which do not qualify for Level 1 or Level 2 and do not export power beyond the point of common coupling.¹⁰

Net metered accounts which accrue excess generation have the excess reconciled on their next monthly bill. Default service customers with accrued excess generation at the end of annual period¹¹ are paid by the EDC at the full retail value, as required by the AEPS. This expense is then recovered by the EDC from ratepayers. The Commission’s regulations further define the full retail value as the utility’s price-to-compare.¹²

As of May 31, 2022, Pennsylvania EDCs had interconnected 45,987 net metered customer generators totaling 651 MWs. For reference of growth, in 2020 these figures were 38,428 generators and 551 MWs respectively. This represents a 20% growth in customer generators and capacity over those three years. The net metering market continues to grow at a profound pace and the Commission expects this to continue into the future.

In 2012¹³ and 2016,¹⁴ the Commission moved forward with net metering policies and regulations, respectively, rooted in our concerns over merchant generators obtaining retail value for excess energy from oversized net metering systems. On February 17, 2021, the Supreme Court of Pennsylvania invalidated the Commission’s regulations at 52 Pa. Code § 75.12, which defined “virtual meter aggregation” in relation to the independent load of virtual-metered facilities. Further, the Court found the definitions of “customer-generator” and “utility” in 52 Pa. Code § 75.1 to be invalid and unenforceable pertaining to virtual meter aggregation.¹⁵

¹⁰ 52 Pa. Code §§ 75.37-75.40.

¹¹ Annual periods are defined as June 1 through May 31 for purposes of net metering. 52 Pa Code § 75.12 (related to definition of “year” and “yearly”).

¹² 52 Pa Code § 75.13(e). This provision only applies to customers enrolled in default service. Customers with an EGS would be paid consistent with the provisions in their supply contract.

¹³ *Net Metering – Use of Third Party Operators*, Docket No. M-2011-2249441 (Final Order entered March 29, 2012).

¹⁴ *Implementation of the Alternative Energy Portfolio Standards Act of 2004*, Docket No. L-2014-2404361 at 11-20 (Second Amended Final Rulemaking Order entered October 27, 2016).

¹⁵ *Hommrich v. Commonwealth of Pa., Pa. Pub. Util. Comm’n*, 245 A.3d 637 (Pa. 2021), *aff’g* 231 A.3d 1027 (Pa. Cmwlth. 2020).

The Court's decision permits the development of net metered systems up to three MWs that have no electric load on the account but for the project's parasitic load (the lighting and power needed to operate the electric generation system). This presents an enticing ratepayer-subsidized business model whereby the developer can reap retail compensation for what is otherwise operating as a *de facto* wholesale merchant generator. The overturned regulations avoided that type of subsidy from occurring at the expense of increased costs to customers.

We offer the following example of the type of *de facto* merchant generators we are seeing under this new legal backdrop. The Commission reviewed a three MW non-residential solar project estimated to have an annual electric load of approximately 2,000 kilowatt hours (kWh), which is far less than a residential customer would use annually. The proposed system is expected to sell more than 5.5 million kWh at a retail rate, net metering 275,000% of the expected load. The Commission's Technical Utility Services staff estimate that the project will net the owner more than \$500,000 per year. The proliferation of this type of masked subsidy will unnecessarily increase customer rates. In 2022, the Commission received more than 38 net metering requests which our Technical Utility Services staff believe can be characterized as *de facto* merchant generation, totaling 38 MWs of capacity. In just the first five months of 2023, our Staff already received 56 such requests totaling 142 MWs.

As you can see, this issue is now burgeoning. The Commission therefore recommends that the General Assembly consider modifying the structure of net metering by placing reasonable bounds to curb the economic harms of subsidizing excessive *de facto* merchant generation operating in the retail utility space.

Community Solar

While not defined by any law in Pennsylvania at present, community solar is defined by the Federal Department of Energy as "any solar project or purchasing

program, within a geographic area, in which the benefits of a solar project flow to multiple customers such as individuals, businesses, nonprofits, and other groups.”¹⁶ In most cases customers are benefitting from energy generated by solar panels at an off-site array. As such, community solar is a form of virtual net-metering whereby the generation source is not physically connected to the load source. According to the National Renewable Energy Laboratory, community solar projects exist in 39 states, plus Washington D.C., while 22 states, plus Washington D.C., have policies that support it.¹⁷

The AEPS Act presently does not contemplate or permit community solar programs in the Commonwealth. Rather, the AEPS Act provides for virtual meter aggregation which permits “...properties owned or leased and operated by a customer-generator and located within two miles of the boundaries of the customer generator’s property and within a single electric distribution company’s service territory...”¹⁸ to net meter. This provision likely intends to encompass farms and commercial facilities that may have generation on-site, but the generation is connected to a separate building or facility from that of the major source of electric load.

Community Solar offers electric customers who do not own a home or may have a property unsuited for solar panels to otherwise obtain access to solar net metering. Therefore, it may offer access to an untapped source of solar demand. We note this untapped demand may align well with any consideration for increases in Pennsylvania’s solar percentage requirements. We draw attention to the language within the AEPS, as explained above, which currently works to prohibit effective community solar business models in the Commonwealth. Revision of such language alone is a potential path forward to offering community solar in Pennsylvania. The Commission also understands there have been numerous bills considered in recent legislative sessions.¹⁹ We offer the following general guidance as you continue your deliberations.

¹⁶ <https://www.energy.gov/eere/solar/community-solar-basics>, accessed June 8, 2023.

¹⁷ <https://www.nrel.gov/state-local-tribal/community-solar.html>

¹⁸ 73 P.S. § 1648.2 (related to definition of “net metering”).

¹⁹ Such consideration includes Senate Bill 230 of 2023 and Senate Bill 550 of 2023.

- Consider providing the Commission flexibility to revise the value of bill credits.
- Consider providing the Commission flexibility to revise the value of any grid services payments, if applicable.
- Ensure clarification on how to deal with any unsubscribed energy.
- Include reasonable coordination between utilities and project developers without unduly burdensome requirements.

Local Solar

The Commission also understands the Legislature is considering bills to implement what some may call “Local Solar” programs in the Commonwealth.²⁰ These programs appear to be designed in a fashion similar to community solar, insofar as they would both provide increased access to solar for electric customers who do not own a home, are low-income, or have property unsuited for solar development. However, an important distinction we highlight is that the concept of local solar deliberates a distinct program managed by EDCs through the issuance of requests for proposals (RFPs) for solar development within their territory. This is different from community solar, which contemplates setting up a type of marketplace whereby developers can choose to build facilities at their liking based on demand.

The Commission notes that it approved a default service program for Duquesne Light Company (DLC), which permitted DLC to issue a RFP to enter into Power Purchase Agreements (PPA) with solar facilities to be constructed in or near its service territory.²¹ The Commission is pleased to report it has granted DLC the authority to enter into a 20-year PPA designed to construct a 7 MW solar facility in Armstrong County. While DLC does not own or operate the facility, it will purchase all the power and AECs from the facility and will sell this energy back into the PJM market on a real-time basis

²⁰ Such consideration includes House Bill 330, Regular Session 2023-2024.

²¹ *Petition of Duquesne Light Company for Approval of its Default Service Plan for the Period from June 1, 2021 through May 31, 2025*, Docket No. P-2020-3019522 (Order entered January 4, 2021).

and credit these revenues back to default service customers. The power from the facility and the costs for the credits will be used for the benefit of all customers in its territory, as opposed to the concept of local solar, which appears to be based on a subset of electric customers subscribing to a facility and buying all or a portion of their needs from said facility.

The Commission is ready to stand as a resource for any new programs, whether local solar or community solar, which offer electric customers increased access to the benefits of solar. We maintain a steadfast interest in assuring that these programs do not overwhelm EDCs or electric customers with unreasonable and burdensome costs. The Commission is happy to work with the Legislature to ensure that an appropriate balance is struck in any local solar or community solar program design.

Conclusion

In conclusion, the Commission supports the consideration of steps to move the Pennsylvania solar market forward and stands ready as a vested partner for whatever path the Legislature chooses to take. The numerous avenues deliberated by the Legislature and addressed in this testimony all represent means to provide increased demand and access to solar for Pennsylvanians, whether that be increasing the Tier I Solar mandate, permitting community solar, or implementing local solar programs. Finally, we do ask that the Legislature consider the Commission's request to put boundaries on net meter system design and payouts to protect customers from having to pay unjust and unreasonable expenses. We thank you again for the opportunity to testify this morning and look forward to addressing your questions.