

**BEFORE THE
SENATE CONSUMER PROTECTION AND
PROFESSIONAL LICENSURE COMMITTEE**

Testimony of

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Regarding
Public Hearing on Solar Energy's Impact on Pennsylvania Ratepayers

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**Senate Consumer Protection And Professional Licensure Committee
Public Hearing on Solar Energy's Impact of Pennsylvania Ratepayers**

Good morning, Chairman Stefano, Chairman Boscola, and Members of the Senate Consumer Protection and Professional Licensure Committee. My name is Christine Maloni Hoover, Deputy Consumer Advocate at the Pennsylvania Office of Consumer Advocate. Thank you for the opportunity to testify this morning about solar energy's impact on Pennsylvania ratepayers.

The Pennsylvania Office of Consumer Advocate (OCA) was created in 1976 to serve as an advocate for Pennsylvania consumers before the Public Utility Commission (PUC) on all matters that are properly before the PUC. This includes issues related to solar energy and the impact on Pennsylvania's ratepayers.

Overview

The OCA supports access to distributed energy resources in general including rooftop, community, and local solar if consumer protections¹ are in place for subscribers and for other consumer ratepayers who do not subscribe. The proposed legislation includes the prohibition on enrollment fees for subscribers and applies the protections of Chapter 14 of the Code and Chapter 56 of the PUC's regulations, for example. Developing the right set of consumer protections and ensuring that the Public Utility Commission has full authority to enforce these consumer protections, will be critical to the success of any program. There are several aspects to solar programs that raise consumer protection issues and concerns, some of which are unique to community and local solar and some of which are similar to offers for rooftop solar systems.

¹ It is important to ensure that the existing protections under the Public Utility Commission and the Office of Attorney General are not undermined or eliminated by the proposed legislation.

Both the community/local and solar models will be fairly new to Pennsylvania and may not be well understood by consumers. In addition, it may not be easy to comparison shop for community solar projects if more than one is located in a service territory. The promises and expectations of savings or benefits may depend on a variety of factors that will need to be clearly explained and disclosed to the consumer. It is important for any community or local solar program for legislation to require that the PUC develop a standardized disclosure form for subscriptions. I view this as a critical consumer protection. Consumers will not be familiar with this new resource and may not have a clear, readily available means to compare the offer to other service offerings. A standard disclosure form that clearly informs consumers of the key elements of the transaction will promote understanding and informed choice.

A disclosure form, however, is only one part of the necessary consumer protections. Any legislation should also specify that the Commission is to adopt regulations that, at a minimum, address the full requirements for disclosure; the acceptable contract terms and conditions, including standard contract term language; the standards for sales and marketing conduct; the procedures for enforcement of the regulations, and penalties for non-compliance. This is not unlike the PUC regulations for the sale of energy by third party energy generation suppliers. *See* 52 Pa. Code Ch. 54.

Rooftop solar

Systems are sold or leased to customers to be installed on customer owned property to generate electricity for their consumption and to sell excess electricity generated back to the electric distribution company (EDC). The terms and conditions of the sales or leases of these systems are not governed by or regulated by the PUC. Instead, they are subject to general consumer protection statutes.

Pursuant to the Alternative Energy Portfolio Standards Act (AEPS Act)², which incentivizes alternative energy producers to generate their own energy utilizing, among other approved alternative energy sources, solar and to sell any excess to the EDC, the PUC is required to develop technical and net metering interconnection rules for customer-generators.³ Interconnection is the ability of the solar customers to connect to the utility grid, this is necessary for a solar facility to sell energy in excess of what they use for their own electricity requirements.

Interconnection is what allows net metering, which is in effect a policy that allows solar customers to sell electricity back to the grid and allows the customer to “zero” their bill. Section 5 of the AEPS Act⁴ requires EDCs to purchase any net energy produced at the “full retail value.” This is a significant concern because it allows rooftop solar customers to be paid not only for electricity generation costs, but also for the transmission and distribution costs. This means that these customers often get to avoid paying anything for the very system that allows them to sell energy back to the electric distribution company. In fact, these customers may use the distribution system twice (to buy and sell) and are often more dependent (not less) on the grid because they need to offload energy at certain times and take energy at other times. The costs for this are paid by other ratepayers.

Although we do not have a good quantification of costs currently, the number of interconnection requests and customer generators is growing. For example, in 2013 there were less than 10,000 total customer generators. In 2022, there were more than 45,000.⁵

² Act of November 30, 2004, P.L. 1672, *as amended*, 73 P.S. §§ 1648.1-1648.8

³ *See generally* 73 P.S. § 1648.1 et seq. and also 52 Pa Code § 75.

⁴ 73 P.S. § 1648.5

⁵ Pa PUC, Net-Metering & Interconnection Report, 2020-2022 at Figure 1E.

https://www.puc.pa.gov/media/2174/net_metering_interconnection_report_2020-2022.pdf

The net metering concerns are heightened because Act 35 of 2007 amended the definition of net metering. Prior to that, there was a requirement that the system be intended to primarily offset the customer's electricity requirements, but the act changed that language noting that net metering is available when "any portion" of the electricity generated is used to offset the customer's electricity requirements. This has given rise to interconnection requests by customer generators who utilize very little load themselves – often simply to run the system – and then sell all their "excess" capacity back to the EDC at "full retail value".⁶

Summary of concerns

- Traditional roof top solar customers typically cost the utility more – more transformers, heavier bi-directional use of distribution system, for example.
- Less secondary benefits of being able to strategically locate in less crowded circuits, for example.
- Concerns about sales practices are similar to many consumer products sold directly to consumers.

Needed reforms:

- Change 73 P.S. Section 1648.5 compensation model to only avoided costs not full retail value. The simplest method would be to peg it to the EDC's price to compare.
- In the alternative, the PUC could establish a value of solar (VOS) rate. This would in effect be a buy all sell all model. Rather than net metering, a customer would pay for all the energy that they purchase from the EDC at full retail price (all generation, transmission,

⁶ For further discussion of this problem *see generally*, *Hommrich v. Commonwealth*, 231 A.3d 1027 (Commw. Ct. 2020).

and distribution) and then sell all of the energy that they produce at a VOS rate that is established by the PUC. They are credited this VOS rate on their bill.

- Currently, Austin, TX (municipal) and Minnesota are the jurisdictions that have a VOS rate.
- Benefits of VOS over net metering include:
 - Customers pay for transmission and distribution services embedded in the retail rate of the electricity they purchase, thereby addressing cross-subsidization concerns associated with net energy metering (NEM) policies.
 - Utilities can better understand customer load, timing, and volume because a VOS tariff or rate separates electricity generated by the consumer from electricity consumed.
 - Customers receive compensation based on utility-specific benefits and costs of their electricity generation, instead of fixed retail rates.

Community Solar

Community solar provides the option for a broader group of consumers, particularly consumers who may not be able to afford individual rooftop solar, who rent their home, or whose property is not appropriate for a solar installation, to obtain the benefits of this renewable resource. In addition, community solar facilities *could* provide benefits to the electric grid such as increasing the reliability and resiliency of the grid, while also reducing carbon emissions. While Pennsylvania has seen the development of individual “rooftop solar” facilities over the past few years, the deployment of community solar has the potential to significantly, if not exponentially, increase the amount of solar on our utility systems. As we move forward, we must be sure that our solar

projects benefit all ratepayers in a fair and balanced way, and that appropriate consumer protections are in place.

The U.S. Department of Energy (DOE) defines community solar 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.”⁷ In most cases, customers subscribe to solar energy subscriptions from energy generated by solar panels in a solar array that is located in their community but not on their property.⁸ Community solar projects generally have three defining elements: 1) a group of participants (generally referred to as “subscribers”) voluntarily pay for a share of the electricity generation from a solar array that is located external to their properties; 2) the electricity produced flows into the electric grid; and 3) the subscribers receive the benefits for the electricity produced by their share of the solar array through a credit on their EDC bill.⁹

Community solar, if designed appropriately and accompanied by appropriate consumer protections, can provide benefits to all consumers. Specifically, a community solar project¹⁰ should be located in the same service territory as the subscribers and connected to the grid of that local electric distribution company.

⁷ See National Community Solar Partnership, “What is Community Solar” at <https://www.energy.gov/communitysolar/community-solar>

⁸ In some cases, such as multifamily properties, including apartments or condominiums, the community solar array may be located on the property owned or shared by the subscribers.

⁹ Solar Electric Power Association, *Community Solar: Program Design Models*, at page 21 (Nov. 2015) (2015 SEPA Report).

¹⁰ Both SB 550 and SB 230 allow for projects up to 5 MW.

Risks to Low Income Customers

Community solar can provide an important way for low income customers to receive the benefits of solar development even if they cannot afford to place a solar array on their home. But I am concerned that this not come at the expense of affordability of service for low income customers, or a diversion of scarce resources from other residential ratepayers that support critical Customer Assistance Programs (CAP) and Low Income Usage Reduction Programs (LIURP). I would not support provisions of any proposed legislation that would result in CAP customers paying more than the utility default service price for their service or charging any excess costs to other ratepayers, many of whom also struggle to pay their electric bills. To that end, I would recommend that the proposed legislation include a provision that ensures that residential customers in the Customer Assistance Program (CAP) have a bill no higher than the utility default service bill if subscribing to a community solar program.

Specific concerns about SB 230 and SB 550

SB 550 is a straight community solar bill, adding a new Chapter 30A on Community Solar to the Public Utility Code. SB 230, by contrast, amends the Alternative Energy Portfolio Standards (AEPS) Act. In addition to prescribing new, higher, annual Tier I targets through 2031 (including specific targets for community solar, customer-owned solar, and non-customer-generator/non-community solar) and changes to the alternative compliance payment, SB 230 includes new community solar provisions as part of the AEPS Act.

Virtually all of the community solar provisions of SB 230 are similar or identical to those contained in SB 550. SB 550, however, contains provisions that are unique to it and not contained in SB 230. Some positives to these bills include that prices are set at the price to compare (PTC)

rather than full retail rate or full retail value; there are protections about subscription costs and that failure to pay a community solar subscription will result in loss of the subscription but will not result in the loss of electric service from the EDC.

However, there are some concerns, including that both bills allow EDCs to recover the reasonable costs of administering a community solar program. The bills also provide that the EDC should be allowed (assuming Commission approval) to recover “any additional costs from the bill credits after using the energy, capacity and avoided distribution and transmission value provided by community solar facilities to offset the purchase requirements from PJM.”¹¹ Although we are not sure what those costs will be, this provision allows an opening that will cost other ratepayers.

In addition, there could be significant wholesale market effects because significantly less load will be bid on through default service contracts. This will likely have upward pressure on default service rates. Since that is the price that is paid to community solar subscriber bill credits, it will have upward pressure on those payments too. In addition, it is unclear how or whether any of the customers who subscribe could choose an alternative supplier.

SB 550 also addresses grid services payments. EDCs must file tariff provisions providing for grid services payments to community solar facilities that have installed smart inverters having certain settings. These settings are to be aimed at “preserving reliability without negatively affecting the operation of the community solar facility.” SB550 defines grid services that a smart inverter should provide as dynamic reactive and real power support, Voltage and Frequency Ride-Through capability, ramp rate controls, and communication systems. A community solar facility will only be entitled to grid services payments if 75% of its nameplate capacity is subscribed.

¹¹ See SB 230, Section 3.2 (e)(3), p. 19, line 17; SB 550, Section 30A03 (d)(3), p. 12, line 10.

The payment for grid services for the first five years of the solar facility's operation are to equal 18 cents per watt of nominal DC capacity output per year. It is not clear what the basis is for the 18 cents per watt. After the first five years, the amount of the grid services payment is to be set by the Commission at a rate and term that "will ensure the reasonable continuation of the community solar market". This is a rather vague standard.¹²

SB 550 provides that the EDCs will be able to recover the cost of grid services payments from customers. The EDCs will be permitted to defer the grid services payment costs as a regulatory asset to be amortized over the useful life of the smart inverter, provided the Commission approves the prudence and reasonableness of the costs. Once approved, the recovery of the regulatory asset "may not be limited, altered, impaired or reduced."

Recommendations: There are concerns about the calculations for the grid service payments that I raised above. In addition, compensation for the grid services should be considered only if the savings they produce can be identified and quantified. The experts at the PUC should develop appropriate compensation structures that do not overcompensate providers at the expense of ratepayers.

Local Solar

Local solar is substantially similar to community solar, except this type of solar project is typically more centrally controlled because the developer of the solar project builds the project under a contract with an electric distribution company. There have been many such bills in recent

¹²For reference purposes, a 5 MW facility that ran flat out for the year (which would never happen) would be entitled, at the 18 cent rate, to a grid services payment of \$900,000 per year; a 2 MW unit would receive \$360,000 if it ran flat out. This is in addition to the money paid for energy. It is essentially an ancillary services payment.

years before the General Assembly (such as [HB1161 \(2021-2022\)](#)). The EDC contracts for some, most, or all the load served by the local solar facility through a long-term power purchase agreement. Terms can vary, but recently legislation has pegged it at 15-25 years. The developer is responsible for all local interconnection costs and interconnection costs with PJM, as well as other settlement charges.

This type of solar project has significant advantages from a load management perspective for EDCs, and thus, customers in terms of costs. EDCs will be able to manage better the load coming on to the system. In addition, customer pricing can be more tightly managed so that subscribers are not overpaying, and non-subscribers do not pay for costs of unsubscribed energy.

I submit that the PUC can and should limit the EDC's cost recovery for the administrative costs of the program to those that are reasonable, prudently incurred, and necessary, consistent with ratemaking principles. However, there are some of the same default service concerns that exist now. It is unclear what it will do to overall default service plan costs, but if it is part of the prudent mix then it may be easier to manage than straight community solar. These issues should be explored during this process.

Thank you for the opportunity to submit testimony on these critical issues. I am available to respond to any questions you have about my testimony.