

**BEFORE THE PENNSYLVANIA  
HOUSE CONSUMER AFFAIRS COMMITTEE**

**Testimony Of**

**Ron Celentano  
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**Regarding  
Net Metering and House Bill 1349**

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**Chairman Godshall, Chairman Daley  
And Members of the House Consumer Affairs Committee**

Good morning. My name is Ron Celentano, President of Pennsylvania Solar Energy Industries Association ("PASEIA") - a Division of the Mid-Atlantic Solar Energy Industries Association ("MSEIA") where I also serve as Vice President. MSEIA is a not-for-profit trade association made up of businesses and professionals working in Pennsylvania, New Jersey and Delaware involved in the development, manufacturing, design, construction and installation of solar photovoltaic (PV) and solar thermal systems. Thank you for this opportunity to address the Committee regarding Net Metering and House Bill 1349.

Net metering is becoming a hot topic across the country. According to "*The 50 States of Solar: A Quarterly Look at America's Fast-Evolving Distribution Solar Policy Conversation - Q2-2015*", by the North Carolina Clean Energy Technology Center, sixteen states recently enacted or are considering changes to their existing net metering policies. Some states are expanding net metering by increasing aggregate caps or allowing meter aggregation or virtual net metering, while others are examining successor tariffs to net metering, or requiring solar capacity limitations, such as in Pennsylvania.

*One question the committee asked the speakers to address is about The Evolution of Net Metering Since 2004:* Net metering was first introduced in Pennsylvania in 1998 when PECO was the first utility to deregulate. I played a key role in shaping that tariff, as well as the modified interconnection rules. Those tariffs were used as a template across the state as the other major utilities deregulated over the next couple of years. Finally net metering policy was enacted as a law across Pennsylvania in 2004, and amended in 2007, followed by numerous PUC regulations. About 45 states have some form of net metering. On the scale of A through F,

Interstate Renewable Energy Council rated Pennsylvania's net metering policy with a grade "A", along with fourteen other states.

The current net metering law in Pennsylvania under Title 52, starting with Chapter §75.11 – Subchapter B, clearly states that all electric distribution companies ("EDC"), not including rural electric cooperatives or municipalities, are required to credit a customer-generator at the full retail rate, which shall include generation, transmission and distribution charges, for each kilowatt-hour produced by a Tier I or Tier II resource installed on the customer-generator's side of the electric revenue meter, up to the total amount of electricity used by that customer during the billing period. If a customer generator supplies more electricity to the electric distribution system than the EDC delivers to the customer-generator in a given billing period, the excess kilowatt hours shall be carried forward and credited against the customer-generator's usage in subsequent billing periods at the full retail rate. Any excess kilowatt hours shall continue to accumulate until the end of the year. If there is an annual surplus of kilowatt hours, the EDC will credit the customer-generator at the price-to-compare rate for electric supply. This caps the output that qualifies for full retail pricing, greatly reducing the incentive to generate more than the customer-generator consumes.

Up until recent years, there have been basically four very important financial mechanisms that were essential for making the investment work for behind-the-meter solar photovoltaic ("PV") system installations. Two of these included rebates or grants, either from the Pennsylvania Sunshine Program or the Sustainable Development Fund's Solar PV Grant Program; the other was from the Federal Investment Tax Credit of 30%. These two mechanisms substantially brought down the first costs of a solar PV installation. The other two mechanisms kicked in after the solar PV system was in operation, with one being the revenue stream from

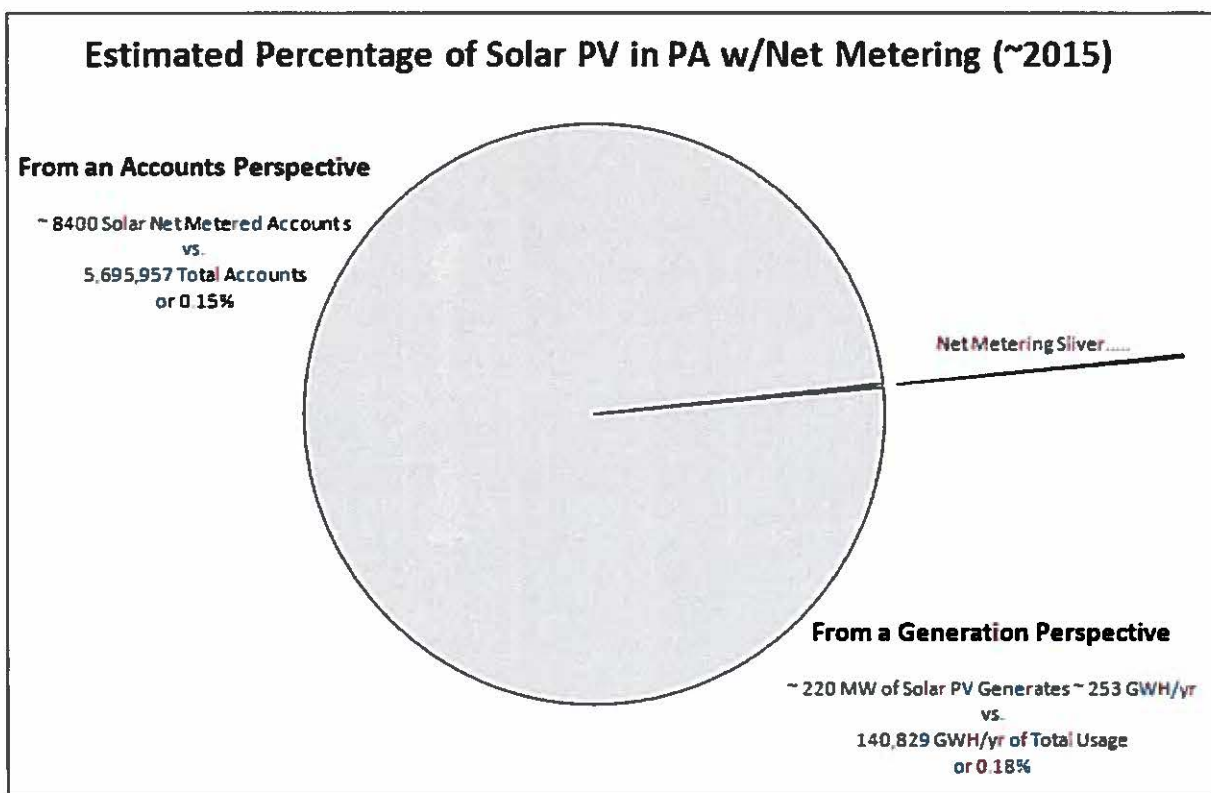
producing and selling the solar renewable energy credits (“SRECs”) into the Pennsylvania Alternative Energy Portfolio Standard (“PA AEPS”) compliance market, and the other from simply offsetting the electric bill through net metering.

Fast forward to now, the incentive programs are gone, and the current Federal Investment Tax Credit is scheduled to sunset at the end of 2016 for residential systems (i.e., 0% tax credit) and drop from 30% to 10% for non-residential systems. Furthermore, the SREC market has been a disaster as Pennsylvania is the only state in the country with open borders, meaning Pennsylvania allows SRECs to be sold into the PA AEPS compliance market from PJM’s 12 other states and the District of Columbia. There is a huge supply of out-of-state solar projects registered to sell their SRECs into Pennsylvania, which has resulted in the SREC prices to collapse over recent years. *Why should the legislature care about this?* Because Pennsylvania ratepayers subsidize the cost for those out-of-state solar projects. Low prices are good only to the point where investments are still viable, then the bottom falls out from under the market and this fragile Pennsylvania solar market will fall even further behind other states. But we are not here to talk about the anemic SREC market, but to emphasize the importance of strong net metering rules if Pennsylvania expects to retain a solar market. Net metering is the last life line for solar investors, particularly for the residential customers who no longer see much value from SRECs and won’t get support through the Federal Investment Tax Credit after next year.

Yet, the solar industry continues to deliver on its promise to lower the cost of solar. Fortunately, the cost of installing solar PV has plummeted about 65% since 2009, which has keep solar projects moving forward. In fact, there has been over a 30% annual increase of residential solar projects installed over recent years across the country – but Pennsylvania has

missed the boat, as very few projects were installed in the Commonwealth over the last three years.

It had always been assumed that net metering was the most stable and secure financial mechanism for solar investments; however, very recently the solar industry and solar system owners feel even this is being threatened. The following pie chart debunks the myth that revenue being lost from net metered solar customers drive-up ratepayers costs.



Even considering the worst case scenario based on data from the Pennsylvania Public Utility Commission's Net Metering & Interconnection Report: 2012-2014 and the AEPS tracking system of installed solar PV systems in Pennsylvania (July, 2015), currently solar net metered customers or the total annual solar generation is less than 0.2% of the total electric accounts or total annual electric usage in Pennsylvania, respectively. Moreover, even after this pie slice

nearly triples to equate to the solar share requirement in the AEPS of 0.5% of total electric usage by 2021, the number of net metered customers will still remain insignificant.

'The financial impacts of customer-sited PV are particularly sensitive to the capacity value and avoided T&D costs of PV, with divergent implications for ratepayers vs. shareholders', based on, "*Financial Impacts of Net - Metered PV on Utilities and Ratepayers: A Scoping Study of Two Prototypical U.S. Utilities*", Lawrence Berkeley National Laboratory, September 2014. This study concluded that with solar PV penetrations of 2.5% by 2020 in the northeast utility scenario, the average rate increase across all ratepayer classes was 0.2%. With Pennsylvania's solar share requirement set at 0.5% penetration by 2021, that would equate to about a 0.04% increase in rates due to net metering, or more simply put - a \$100 electric bill would increase by 4 cents.

In addition, one point that often gets ignored in these discussions is the overall value of solar. There are costs and there are benefits. PASEIA/MSEIA commissioned a study not long ago entitled, "*Value of Distributed Solar Electric Generation to New Jersey and Pennsylvania.*" This study found that solar power delivers a premium value in the range of \$150 to \$200 per MWh (15 cents to 20 cents per kWh), above the value of the solar electricity generated.

The concept of solar value could be illustrated by a simple example of an operating solar PV system on a house. There may be times during the day when the solar system is generating more power than is needed at the house, and the excess back feeds towards the grid; but in reality, the electrons are really going to offset some electric loads in the neighborhood, such as at the neighbor's house. As a result, less power is drawn from the utility distribution wires, thus reducing costly congestion on the lines. The transmission and distribution losses to provide the same power the solar system is generating for the house and the neighbors is being saved, and

the generator itself is using less fuel to generate this power. On very hot days, or when the system peak is high, the solar PV system can ultimately save ratepayers some of the high fuel cost from running very expensive gas turbine generators to provide peak power to the grid.

We are concerned about the latest Commission proposed rules regarding net metering, which were released for comment over the last two years and are still pending: the Proposed Rulemaking Order (2/20/2014) and the Advanced Notice of Final Rulemaking Order (4/23/2015) – Docket No. L-2014-2404361. The legislature may want to considering waiting until the Rules are final before taking any action relative to HB 1349, but I would like to take a minute and share our three main concerns with the Proposed Rule:

- PASEIA opposes the proposed changes to §75.13(k) that would give the Commission the authority to order utilities to charge customer-generators additional fees
- We reject the Commission imposing a 200 percent of annual load limitation on solar PV system capacities, particularly for the residential systems, as the current law already limits this at capacity at 50 kW
- We oppose the proposed change in §75.12 to the definition of “virtual meter aggregation” that adds a requirement that all service locations must have separate existing measurable loads.

*In answer to the Committee’s question regarding what changes/updates to the net metering provisions of AEPS should take place, PASEIA supports two major changes that would advance solar in the Commonwealth. They are:*

- Overhaul and expand the ‘virtual net metering’ definition to fully enable ‘community solar’ applications within an EDC region, including multiple account holders. There

are several community solar models out there, but we like the New York model that is starting to be implemented. Currently in Pennsylvania, there are electric customers who are unable to take advantage of utilizing solar such as renters or facility owners with little or no solar exposure. Community solar provides a way for these electric customers to invest or lease part of a large solar system and the utility provides net metering credit through each of the customers' electric bills. Solar remains very popular in our state and this change could provide many more families and businesses to have solar. It also is part of the answer to making solar more affordable in Pennsylvania. This concept could be further expanded to other large renewable energy resource generators, such as wind turbines, anaerobic digesters, etc.

- The second suggestion would be to expand the net metering requirement to include all electric generator suppliers ("EGSs"), not only the EDCs. Currently the EGSs are not obligated to credit the customer-generator for the excess generation produced by the customer-generator. Expanding this requirement to include all electric suppliers (EDCs and EGSs) could promote more customer-generators to switch from their default service provider (i.e, EDC).

*Finally, I would like to briefly address RE: HB 1349 : PASEIA does not support this bill as it is written, unless it was expanded to include all renewable energy resources – such as solar and wind, and not only methane from anaerobic digesters. Furthermore, it would need to be expanded to all market sectors, including residential, commercial, industrial, government, etc., as well as the agricultural sector. These expansions would avoid picking winners/losers.*

Thank you for this opportunity.