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Concerning: Docket L-2014-2404361

**Comments to the Pennsylvania Public Utility Commission from Vincent Cahill & Claire Hunter, concerning 52 PA. CODE CH. 75, [Docket L-2014-2404361], Titled; Implementation of the Alternative Energy Portfolio Standards Act of 2004 [44 Pa.B. 4179] [Saturday, July 5, 2014]**

We are homeowner electrical generators. Our existing photovoltaic (PV) system is rated as 10 kW. We recently contracted for the installation of 5 kW to account for the inevitable system degradation and potential increase in energy consumption in the future. We were unaware of the Pennsylvania Public Utility Commission's (PPUC) proposed rule, which would directly and negatively impact us. We became aware of the proposed PPUC when a friend, who is a member of the Sierra Club, sent us that organization's alert concerning the proposal. I know of others who this rule change will adversely impact who were also unaware of the PPUC's rule change.

In addition to concurring with the positions of the Sierra Club with respect to other provisions of the proposed rule change, we want to make the Commission aware of our specific concerns.

We object to the proposed rulemaking as being detrimental to the environment of the Commonwealth in that it creates an economic disincentive that will discourage consumer generators from installing electrical generating capacity. It ignores and does not account for the economic and strategic value and improved efficiency of decentralized consumer electrical generation.

The 110% limitation does not account for the economic realities involved in Pennsylvanian homeowners investing in clean electrical generation. It also ignores the physics of photovoltaic (PV) cell degradation. PV cells typically lose about 0.7 to 1% of efficiency and generation capability for each year of use. Property owners planning their purchase of a PV system will have to account for electrical use for the life of the system, which is typically 25 to 30 years. Also, homeowners often would be purchasing a PV system at a time in their lives when they have the most expendable income, i.e. in the decade before retirement, in preparation for the time when they will have the least expendable income, i.e. during retirement. In order to account for the system's natural degradation in efficiency, the homeowner would have to design a system that provides about 130% of their current electrical usage, not 110%. The argument that they could add capability as their demand increases ignores older homeowners typical change in economic

circumstances in retirement and disregards the economic and logistical issues associated with the incremental addition of electrical capacity.

We also note that despite improved efficiency in lighting and some household appliances, average household energy use is likely to increase. A number of vehicle manufacturers have introduced plug-in all electric and electric-gasoline hybrid vehicles that significantly improve operating efficiencies substituting electrically generated energy for gasoline or diesel fuel. As a case in point, General Motors (GM) currently manufactures an electric hybrid, the Volt, which can operate on electrical charge for about 38 miles before switching to its gasoline engine. GM has announced plans to produce a similar vehicle that will be able to operate for 200 miles before switching to operate its gasoline engine. Other manufacturers have announced similar plans for vehicles using electric plug-in energy. Homeowners planning for the future in the design of their PV system when they have expendable income will want to account for the coming electric plug-in vehicles and their energy requirements. It would be much more cost effective and economically possible for the homeowner to build a larger system to address projected needs rather than to build a system piecemeal. We calculate that accounting for system degradation and increased electrical demand would require from 150 to 160% of current usage.

The proposed 110% rule would restrict the ability and freedom of property and homeowners to plan for the future while generating electricity for themselves and their communities from clean, renewable and sustainable sources. It would also constitute a taking of the clean energy value from those who have invested in generating it and awarding it to those who have not made the investment. *The 110% rule is unreasonable and environmentally destructive. It aims to constrain the costs of electricity to those who rely on the burning of environmentally contaminating hydrocarbons that threaten the well being of our planet and take from those who have invested in generating electricity for themselves and their communities with clean and sustainable means.*

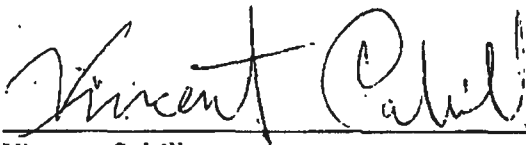
We have been told that the Pennsylvania PUC has proposed its 110% rule because other states have also employed restrictive rules using that number. I know of homeowner generators in one of those state that attests to the burden and unwarranted theft the rule imposes on them and that it has held others back from investing in PV systems. The fact that other states have adopted benighted rules does not justify Pennsylvania in following them. *It is time for Pennsylvania to lead with enlightened rules. I suggest that, in this time when science has directly related the effects of burning hydrocarbons to climate change and environmental deterioration, rewarding those who are creating the problem with electricity generated from burning hydrocarbons at the expense of those who are generating a surplus of electricity from clean sources is the opposite of what the rule needs to be.*

Currently, our grid provider charges us a monthly administrative fee for our PV system being connected to their grid. As a result, my neighbors have use of our clean locally generated electrons with minimal lose of energy due to transportation. Hydrocarbon-generated electrons from a centrally located power plant and lose a far greater percentage of their energy efficiency due to transporting them over long distances, while also generating pollution. Centralized electrical generation also presents a strategic point of vulnerability to attacks from enemies, terrorists, human error and the forces of nature. Distributed electrical generation practically eliminates these risks.

Europeans as a group use less than half the energy per capita as Americans, because their fuels cost much more than ours due to significantly higher taxes on hydrocarbon fuels. If we are to reduce our use of fossil fuels and the resulting pollution and environmental deterioration, energy from fossil fuel will and should have to cost more. The proposed 110% rule change might have some short-term economic benefit for those who rely of hydrocarbon electricity generation, but in the long run will cost significantly more due to its negative environmental impact. The costs of burning hydrocarbons tax all of us. It shifts these costs, these externalities, to current and future taxpayers and citizens.

I request an environmental impact study and statement before this rule takes effect to assess its impact. I propose that the Commission table or reject this rule until such time as environmental science, the Commission and the public can evaluate its impact. I oppose any percentage cap, but caps less than 160% would impose an unwarranted burden on homeowners and their timely accounting for system degeneration and anticipated electric use including automotive applications.

We are attaching the comments of The Sierra Club, with which we concur.



Vincent Cahill

August 27, 2014  
Date



Claire Hunter

Aug. 27, 2014  
Date

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### **Addendum**

A transition to solar power is critical to protecting the health of Pennsylvanians, the natural beauty of the Commonwealth, and avoiding the worst impacts of climate disruption. Net metering is one of the most important policies we have to bring about this transition. Unfortunately, the proposed changes to net metering rules would make it more expensive to install solar systems, and would allow utilities to create additional barriers to going solar. Our specific concerns with the proposal are as follows:

1. The Commission should NOT have the authority to allow utilities to charge a new special monthly fees to customers with solar. This new fee would violate the AEPS guarantee that net

metered customers receive the full retail rate for all generation of their solar installation up to their annual usage. A fee would erode that right to full retail rate.

2. The proposed new definition for "utility" threatens the third-party ownership model (such as solar leasing and power purchase agreements) for solar and other distributed generation. The Commission should amend the definition of "utility" so it explicitly excludes third-party ownership of solar.

3. New system generation should not be limited to 110% of the customer-generator's annual electric consumption. There are already size limits on net-metered systems. This additional generation limit is unnecessary and only adds additional uncertainty and regulatory cost. There is no incentive to over-size systems since any annual surplus production does not receive net metering treatment and is compensated at the lower price-to-compare rate. The new size limit would be difficult to apply (especially in new construction or gut rehab projects) and could present additional time and expense for customers. It is also unclear from the language what would happen if a customer-generators electric demand shrinks over time due to conservation or changes in building use.

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