

333 Market  
Honors Suite of Education Bldg.

DEP Listening Session  
9/25/2014  
Ron Celentano  
215-836-9958

### PASEIA/MSEIA Response to EPA's Clean Energy Plan

Good Morning, my name is Ron Celentano and I am here today on behalf of the Pennsylvania Solar Energy Industries Association (PASEIA) and the Mid-Atlantic Solar Energy Industries Association (MSEIA); PASEIA is a division of MSEIA, which includes Pennsylvania, New Jersey and Delaware. MSEIA is a Chapter of National Solar Energy Industries Association (SEIA), the solar industries' leading trade association representing over 1,100 solar companies throughout the industry from developers and manufacturers to installers. First I would like to thank the members assembled here and the PA Department of Environmental Protection for providing this forum to elicit comments on the EPA's Clean Power Plan, as we applaud the EPA for their hard work and diligence in crafting this immensely important regulation.

PASEIA/MSEIA supports EPA's Clean Power Plan and is in support of an approach that allows states to take advantage of solar as part of a diverse compliance portfolio. Additionally we are very pleased to have solar and other outside the fence measures included in the definition of the Best System of Emission Reduction (BSER) as we believe solar has a large role to play, as a competitively priced CO<sub>2</sub> offset, in helping states reach compliance

In 2014 alone solar is expected to generate more than 20,000 GWh. With one GWh of solar generation eliminating 690 metric tons of CO<sub>2</sub> emissions, solar can be expected to avoid 13.8 million metric tons of CO<sub>2</sub> in 2014. Because of this and other avoided pollutants solar avoids many of the health issues caused by fossil fuel emissions including bronchitis, asthma, heart disease, water pollution, land degradation, and climate change. Solar energy in Pennsylvania already offsets <sup>over</sup> ~~nearly~~ 175,000 metric tons of CO<sub>2</sub> a year. The potential for solar energy to offset even more CO<sub>2</sub> is immense under EPA's Clean Power Plan provided the right policies are in place. In addition to being an excellent CO<sub>2</sub> offset for Pennsylvania and other states, solar energy has experienced plummeting costs that are only getting lower, making solar energy an attractive compliance method. Nationally, the average price of a residential PV installation declined 9 percent in a single year, between Q4 2012 and Q4 2013. Over the last eight years, between 2006 and 2013, the capacity-weighted average installed price of PV fell over 67%, from \$7.90/W<sub>dc</sub> to \$2.59/W<sub>dc</sub>.

Solar's falling installation costs and capacity for generating huge CO<sub>2</sub> reductions make it an attractive component of a diverse compliance plan, but the benefits don't stop there.

PASEIA/MSEIA finds that solar has the potential for numerous other benefits outside of complying with EPA's Clean Power Plan. For instance solar helps reduce water consumption in comparison to traditional fossil fuel sources; solar also reduces emissions of acid gases and air toxins that help attain, for example, ambient air quality standards for the ozone, helping states meet other Clean Air Act requirements.

Recently there have been several valuation studies conducted to quantify the benefits of implementing solar technologies, including The Minnesota Department of Commerce Value of Solar Study, The Value of Distributed Photovoltaics Study for Austin Energy and an independent study commissioned by the Nevada Public Service Commission. Another recent study done, specific to this region, includes The Value of Distributed Solar Electric Generation to New Jersey and Pennsylvania, commissioned by PASEIA/MSEIA, which 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. These value of solar studies are important because the analysis evaluates the benefits of solar to ratepayers, taxpayers and to society, such as from market price reduction, avoided generation, distribution and transmission capacity costs, avoided environmental costs, as well as other cost saving components.

Due the wide variety of solar technologies, solar is a perfect fit for every state and can be installed rapidly with custom scalability, relative to meeting compliance deadlines.

Right here in Pennsylvania the solar industry has consisted of several thousand of employees at several hundred companies over recent years. These companies have been at every level of the solar supply chain representing manufacturers, contractors, project developers, and engineers. And even though solar installation has slowed down in Pennsylvania over the last few years, there are many more highly trained workers than are currently working in solar in Pennsylvania and they could easily gear back up under the EPA Best System of

Emissions Reduction (BSER) plan. According to The Solar Foundation's Solar job Census 2013, there are nearly 143,000 solar workers in the U.S., a 20 percent increase over employment totals in 2012. This growing trend of solar jobs, coupled with EPA's Clean Power Plan, would clearly reinvigorate a strong economic impact in Pennsylvania.

Due to Solar's capacity for CO<sub>2</sub> reduction, falling prices, job creation and more is why we believe that solar energy is critical to helping meet EPA's strong and diverse compliance plan. Therefore, we urge DEP to include solar as part of Pennsylvania's State Implementation Plan, including both Distributive Generation Solar and Grid Supply Solar, as well as Solar Water Heating, and Solar Space Heating and Cooling.

Pennsylvania can meet the 49% emissions reduction with renewable energy resources, including solar, wind, biomass and hydro-electric, while also incorporating energy storage, energy pricing for solar (tariffs) and enhancing the state's current Alternative Energy Portfolio Standard, particularly the solar share requirement. All of these resources together can meet the challenge through competitive market forces that will produce results at no or little cost for consumers while cleaning up our air and providing good jobs with real growth potential, as these technologies continue to improve and their installations costs continue to decline.

Throughout the finalization of this rule, PASEIA/MSEIA looks forward to working with the PA DEP, as well as the EPA - as a resource to Pennsylvania stakeholders who have questions about how to include solar in Pennsylvania's implementation plan. PASEIA/MSEIA members are ready to meet the challenge and we applaud DEP for holding this session which we trust will lead to the inclusion of solar as a logical, clean and cost effective resource to assist Pennsylvania in meeting EPA's final standards.