

## **Testimony of Karan Ireland**

Program Director, WV SUN

U.S. Senate Committee on Environment and Public Works

Subcommittee on Clean Air and Nuclear Safety

Field Hearing in Logan, WV

October 5, 2016

### **“Examining the Local Impacts of EPA’s Climate Regulations”**

My name is Karan Ireland. I am the Program Director of WV SUN. WV SUN is a project of Community Power Network (CPN), a national nonprofit that helps communities start their own solar co-ops, protect their right to produce power, and implement policies and project models that expand access to solar energy. I am here today to testify about economic opportunities related to increasing renewable energy and energy efficiency as a part of West Virginia’s compliance under the Clean Power Plan.

WV SUN works to scale the solar industry in WV by implementing solar cooperatives in communities across the state. Each solar cooperative is led by local community partners and allows each community to coalesce around goals for local economic development. Community members seek us out when they want to save money by going solar, create local jobs, and attract and scale employment opportunities with solar companies in their area.

WV SUN is committed to supporting and stimulating a growing competitive and consumer friendly solar market. Our methodology of gathering, organizing and educating homeowners provides an essential cost-saving service for solar companies. By finding, screening and educating potential customers we stimulate solar companies to transition from a small-staff, high-margin, low-volume business model to a larger staff, low-margin, high-volume business. We continually see the companies we work with scale up – from small mom-and-pop operations to significant companies employing 25 or more employees.

We recognize that renewable energy sources and energy efficiency programs create new employment paths for area residents, and help these counties generate wealth and keep this wealth in the local economy. WV SUN's co-op model is intended to help consumers go solar, but is also intended to jumpstart the West Virginia solar industry and create demand for additional solar jobs. Likewise, energy efficiency improvements create jobs and a demand for skilled labor. Because the State is allowed flexibility in how it complies with the CPP, we believe that renewables and energy efficiency measures should be a central part of compliance, in order for West Virginia to reap the rewards of these two, virtually untapped job markets.

West Virginia, along with its neighboring Appalachian states, is in the midst of a critical economic transition that has been caused by a number of converging factors. There has been prolonged underinvestment in local small businesses, job skills training, energy and economic diversification. Many communities face an acute need for more, well-paying jobs and a skilled workforce that can fill those jobs. West Virginia has lost jobs and population for the past two-three years, and the state has the lowest labor force participation rate in the country, at just 53% ([http://www.be.wvu.edu/bber/outlook\\_pdfs/WVEconomic-Outlook-2016.pdf](http://www.be.wvu.edu/bber/outlook_pdfs/WVEconomic-Outlook-2016.pdf)). The 2015 annual unemployment rate for the six counties we plan to work in for this project was between 4.7% and 7.3% (<http://data.bls.gov>).

These are large challenges, as are the challenges created by the provisions set forth in the Clean Power Plan, and will require numerous solutions from across sectors and geographies. These solutions should include increases in renewable energy and energy efficiency improvements. Right now, West Virginia ranks near the bottom on scorecards for renewable energy deployment and energy efficiency gains. The potential for growth in these industries is significant.

For instance, the solar industry is growing exponentially around the country as prices have dropped and demand has soared. Between 2009 and 2014, the cost of going solar dropped by 50% ([https://emp.lbl.gov/sites/all/files/lbnl-188238\\_2.pdf](https://emp.lbl.gov/sites/all/files/lbnl-188238_2.pdf)), and research groups estimate that prices will continue to fall, possibly dropping another 40% by 2020. This shift has happened in conjunction with tremendous growth in solar deployment, and in solar jobs. Since 2009, the installed capacity of residential-scale solar in the U.S. has increased roughly 900%, and the number of U.S. solar jobs has increased 123% (<http://www.thesolarfoundation.org/national>).

The American Council for an Energy-Efficient Economy (ACEEE) estimates that there could be a net increase of 1.3 to 1.9 million jobs in energy efficiency industries across the country by 2050, if the United States would invest heavily in energy efficiency. Right now, ACEEE ranks West Virginia 44<sup>th</sup> on its energy efficiency scorecard, reinforcing the notion that there could be major job growth in this sector if the State were to make it a central part of its compliance plan under the CPP.

Renewables and energy efficiency have the potential to make a huge impact not only in changing how communities obtain and use energy, but in generating wealth within communities. The economic development opportunities presented by renewables and energy efficiency programs fall into two categories: (1) job creation, and (2) wealth creation and retention.

**Economic Development Opportunity #1: Job Creation.** Renewable energy companies require a wide variety services, including: system design, engineering, installation, financing, sales, marketing and legal support. Other potential job functions include operations, and project management. The solar industry, in particular, includes over 40 different career paths across four sectors, presenting ample opportunities for both skilled and unskilled workers

<http://irecsolarcareormap.org>). Military skills also translate particularly well to the solar industry, and a number of programs exist to support solar jobs training for veterans <http://www.thesolarfoundation.org/solar-ready-vets>).

A study by the Solar Foundation demonstrated that wages paid to solar workers are competitive with similar industries and provide many living-wage opportunities. The average wage in the industry is \$20-\$24/hour, and internal staff earn approximately \$44/hour. The solar industry is also adding workers at a rate 12 times faster than the overall economy, and accounted for 1.2% of all jobs created in the U.S. in 2014. In 2014, West Virginia had only 15 solar companies, but by December 2015 this had nearly doubled to 26 solar companies, which employ 350 people in the state. Building demand for solar energy will spur this growing market, injecting more investment into each county's economy and creating more well-paying, locally-based solar jobs.

WV SUN specifically has helped more than 50 West Virginians go solar, facilitated over \$1 million of private investment in the local economy, and saved co-op members over \$172,000 in energy costs over the lifetime of their solar installations. Since 2014, because of a marked increase in demand for solar co-ops from communities, we are seeing an increasing number of West Virginia installers bidding on the co-op work.

Many of these West Virginia companies are new, and some got their start as crew members for out-of-state companies who had won WV SUN co-op work in the past. For example, one of our most recent West Virginia co-ops, the Tucker/Randolph Solar Co-op, selected local company Praxis Solar & Electric as its installer. Christopher Danz, the founder of Praxis, got his start working for AAT Solar, an Ohio firm, on WV SUN's Fayette, Wheeling, and

Kanawha County co-ops. Now, Mr. Danz and his company are routinely bidding on WV SUN co-ops and offering selection committees yet another local choice for their solar installations.

AAT Solar continues to employ West Virginians looking to transition into solar work. When it won the Kanawha County co-op, two of its regular installation crew were former miners who had recently been laid off in Southern West Virginia.

WV SUN is not the only organization that is seeing the demand for solar drive demand for new solar jobs. Brandon Dennison, CEO of Coalfields Development Corporation, cited their solar certification program as an example of employment created as a result of the increasing demand for solar energy. Requests for solar installations were routinely taking time and manpower away from Coalfields' regular construction business until a decision was made to spin off four employees to create a venture called ReWire Appalachia to handle the solar business. ReWire Appalachia recently installed the largest solar array in the city of Huntington and the crew was led by Robert Adkins, a former coal miner.

In an interview with the Herald-Dispatch, Adkins had this to say, "Right now there are so many good, smart, intelligent men that have been laid off and are being overlooked. Just because you are dirty and you're oiled up and you've got scars on your hands doesn't mean that you are not able to learn and adapt to new things. For me, solar is an opportunity to change the area."

Likewise, energy efficiency retrofits and programs require skilled craftsmen, but also engineers, planners, and financiers to implement them. These are jobs that pay a fair wage, and – by their nature- cannot be outsourced.

**Economic Development Opportunity #2: Wealth Creation.** Solar is an instrument for homeowners, small businesses and farms to improve their disposable income, and generate

wealth. An average home solar installation is valued at roughly \$15,000 and generates about \$30,000 in value over its lifetime. Revenue comes from both electricity bill savings and solar renewable energy certificate (SREC) payments. The systems also protect owners against future electric rate hikes, and increase a home's value by an estimated \$13,000 - \$16,000. Therefore, a solar co-op with just 25 members that go solar generates an estimated \$750,000 in revenue for the participants, facilitates \$375,000 in local spending, and increases home values by up to \$400,000. According to studies conducted by the U.S. Department of Energy, the vast majority of this money stays in the community and is reinvested, creating a large multiplier effect ([http://www1.eere.energy.gov/wip/solutioncenter/pdfs/clean\\_energy\\_investment\\_cases.pdf](http://www1.eere.energy.gov/wip/solutioncenter/pdfs/clean_energy_investment_cases.pdf)). For most of the West Virginia counties that WV SUN works in, this multiplier effect on the local economy is roughly 2.2% – meaning that every dollar saved by co-op participants will create \$2.20 in new income for the local community.

Energy efficiency improvements are also a way to keep wealth in a community, as well as one of the best ways to mitigate any potential energy cost increase that compliance with the CPP might precipitate. In 2015, Appalachian Power customers saved 47.8 million kWh as a result of Appalachian Power's energy efficiency programs. Meanwhile, Mon Power and Potomac Edison (MP/PE) programs saved less than 17 million kWh. Given that MP/PE have more customers than Appalachian Power, on a per-customer basis, MP/PE's savings are more than two-thirds lower.

This disparity is a result of the utilities' choices. Appalachian Power has recognized the importance of energy efficiency as a tool for helping consumers save money on bills. Moreover, Appalachian Power knows that energy efficiency is a low cost resource - it is cheaper for

Appalachian Power to invest in energy efficiency programs than to spend money generating that same amount of power.

Lastly, solar and energy efficiency programs can provide additional benefits for low-income homeowners. Thus far, low-income communities have been mostly left out of these markets, even though they can be a long-term, relatively low-cost solution to heating and energy bill assistance. By conserving or generating their own power, low-income families can protect themselves against rising energy rates, increase their monthly disposable income, and create local investment that stays in their community. Additionally, homeowners who have gone through an energy efficiency audit with an education component and members of a solar co-op become more educated about policy issues affecting their lives, and methods for impacting policy makers, such as public meetings and city council hearings. This helps to give low-income individuals a voice where they previously have not had one.

West Virginia should take advantage of the flexibility afforded to states by the Clean Power Plan and create a plan for compliance that really does constitute an “all of the above” energy policy. Energy efficiency and renewable energy should be central to the plan for compliance so that West Virginia can enjoy economic gains and the sharp increase in clean energy jobs that we’ve seen across the country, as well as mitigate any negative consequences related to compliance.

