

SOLAR *in Your Community* CHALLENGE



Case Study

Solar Working Group of Southwest Virginia

As the costs have decreased over time, solar energy has become a more integral part of our energy future across the United States. Its environmental benefits are accompanied by job creation, reduced utility costs for homeowners, and more efficient operational costs in facility management. Despite significant growth and demand for solar adoption, low and moderate income (LMI) communities represent less than 5% of solar customers in the United States. With LMI households representing 40% of America's population, this market's potential is largely unrealized, and the benefits of going solar have yet to materialize equitably.¹ Similarly, nonprofit organizations and public agencies have not been able to adopt solar at a rate comparable to the broader market.

There are several obstacles for LMI communities to go solar, including a shortage of financing options for small and nonprofit projects; complicated interconnection processes; limited options for power purchase agreements (or equivalent); legislative limitations on community solar projects; and limited local capacity in community partners.

In response to these obstacles, the U.S. Department of Energy Solar Energy Technologies Office launched the \$5 million Solar in Your Community Challenge (SIYC) in 2016. With participation from 172 teams across the country, the SIYC tapped the innovation of solar developers, service providers, utilities, municipalities, nonprofit organizations, and others to find solutions. In addition to accessing professional expertise and seed funding, teams also competed for \$1 million in monetary prizes.

Teams from around the country created new partnerships, built new financial models, explored regulatory change, leveraged other sources of capital, and structured deals that had no precedent. Some of the teams built

<https://www.solarinyourcommunity.org/>

Team Mission

To utilize the development of solar energy as an economic catalyst in the seven-county region of far Southwest Virginia

actual solar projects resulting in 15.5 MW of solar capacity, with much more in the pipeline. Other teams built programs that could be deployed across the country. Some did both. Additional details about the competition can be found on U. S. Department of Energy's [website](#).

The Solar Workgroup of Southwest Virginia is a Solar in Your Community team located in Norton, Virginia, a historically coal-producing region. The workgroup was borne out of the 2016 SWVA Economic Forum, an annual gathering hosted by the University of Virginia's College at Wise (UVA-Wise). Led by People Inc., one of Virginia's largest community action agencies, the workgroup represents a diverse group of stakeholders, including nonprofit and community action agencies, colleges, public agencies, and planning district commissions, as well as citizens and businesses that seek to build an impactful solar energy industry in the seven coalfield counties of Southwest Virginia. The primary conveners of this group are UVA-Wise Office of Economic Development & Engagement, People Inc., and Appalachian Voices, a nonprofit advocacy organization, each bringing a unique skillset to the team.

Over the course of several team meetings in 2016 and 2017, the workgroup set four key goals to help LMI communities gain access to affordable clean energy in Southwest Virginia.

In November 2017, the workgroup published [Solar Roadmap for Southwest Virginia](#) to further the development of the solar industry

Goal 1: Identify and develop sites that are ideal for solar development, especially solar “ambassador” projects.

Goal 2: Grow workforce development and entrepreneurship opportunities to advance solar projects and maximize local benefits.

Goal 3: Expand education and outreach in communities and with local leaders around solar benefits and opportunities.

Goal 4: Promote policy changes that will help grow the solar industry in Southwest Virginia.

in the region. The Solar Roadmap explores several policy, financing, and workforce development opportunities, while also identifying 15 “ambassador” sites where residential, commercial, and community solar projects could be pursued. These sites are categorized by “for-profit” and “nonprofit” entities and include schools, multifamily housing, grocery stores, and hospitals. The workgroup created a group purchase request for proposals (RFP) in 2018 through a group procurement solicitation process that will not only lead to the development of solar installations, but also roll out a solar awareness and education campaign. The group represents seven separate entities and will total approximately 1.6 MW of solar projects. In early April 2019, the workgroup released a second RFP, expected to yield 2.73 MW of solar capacity across 12 additional sites.

The biggest challenge they faced was the “chicken or egg” conundrum – the lack of a trained workforce prohibits local hiring and

lack of local contractors deprioritizes job training. The workgroup tackled this challenge by addressing both workforce training and local job opportunities as part of the procurement process. As part of the RFP they released, the team emphasized workforce development by including scoring criteria that encouraged bidders to hire local contractors. The RFP indicated that preference would be given to those bidders who “incorporate opportunities for hiring of local Southwest Virginia workforce, or opportunities for solar photovoltaic interns through the Mountain Empire Community College Energy Technology pathway program.” This program was developed by Mountain Empire Community College, the Solar Training Network, and solar installers. Through this initiative, college students are paired with solar construction jobs and are provided with all the necessary coursework to become North American Board of Certified Energy Practitioners (NABCEP) certified.

Education and outreach are critical components for the future of solar development in Southwest Virginia. The workgroup strategically targeted solar installations on schools so that students could see an installation and study how it works, all while benefitting from the clean energy that it provides. In 2017, the workgroup launched the Solar in Your School challenge that tasked teams of students with creating low-cost solar projects in their schools. The winning teams, Ridgeview High School and East Side High School, created a solar-powered robot and a solar cellphone charging station, respectively. Each winning team was awarded a \$500 prize, funded by a grant from the Appalachian Regional Commission.

The workgroup, knowing that long-term success could be supported through policy changes, collaborated with Virginia State Delegate Kilgore to champion a bill that would make renewable energy deployment easier

The workgroup is engaging with six counties and one city to create local ordinances to streamline solar development through the U. S. Department of Energy SolSmart Program.

and more affordable for tax-exempt entities. [HB 1252](#) seeks to expand the current power purchase agreement (PPA) pilot program in Virginia to all tax-exempt entities that are unable to access federal tax credits. The bill allows tax-exempt entities to purchase lower cost renewable energy from independent companies through third-party PPAs without going into debt or making large upfront investments. Passage of this bill would make the workgroup projects easier to develop and allow ease of access to financing incentives in the region. The introduction of this bill highlights the significant progress the workgroup and Southwest Virginia have made to further renewable energy development in this historically coal producing region.

The success of the workgroup is heavily predicated on the collaborative nature of their team. Engaging the community, team members from Appalachian Voices, UVa-Wise, and People Inc. allowed the workgroup to have a diverse perspective and wide reach.

The workgroup has made substantial progress during the Solar in Your Community Challenge,

including tackling several challenges and impacting the community in significant ways. The team continues to improve education about solar through consistent outreach, enhances solar workforce development despite the other economic opportunities for land in the region, and works toward better solar friendly policies for the communities. The team has helped to improve the community through cost-saving solar installations and education in the classrooms. In addition to the smaller scale installations currently planned on rooftops, the team is looking to plan more utility-scale installations in the future.

Southwest Virginia has a deep history with roots in coal production. The workgroup has highlighted the importance of energy as a way of life for this region, but broadens the definition of energy production from historically just coal to newer clean energy like solar. This team shows that other coal regions in the country can transform their energy economies to utilize more renewables.

“Southwest Virginia has always been an energy producing region, and it can continue to be so if we expand that definition to include renewable energy.”

— Workgroup member Adam Wells,
Appalachian Voices

About the Solar Energy Technologies Office

The U.S. Department of Energy Solar Energy Technologies Office supports early-stage research and development to improve the affordability, reliability, and performance of solar technologies on the grid. Learn more at energy.gov/solar-office.