



Solar Workgroup for Solar Development in Southwest Virginia

May 9, 2017 Meeting Summary

Background

The fifth in a series of meetings of a Solar Workgroup around Solar Development in Southwest Virginia was held on May 9, 2017 at the Chancellor's Lounge at the UVA of Wise Convocation Center in Wise, VA. Four previous in-person meetings of the Workgroup were held in February 2017, November 2016, October 2016, and April 2017. Two conference calls of the Workgroup were held in the winter of 2016-2017 around prioritizing sites for solar development in SWVA. Meeting summaries can be found on the website: <http://swvasolar.org>.

Following the workgroup meeting, the Solar Fair was held from 5-7pm across the road at the Carl Smith Stadium. The event was a huge success for the SWVA Solar Workgroup's outreach goals. The Coalfield Progress featured the Solar Fair on their front page, and the article and photos can be found [here](#). The next day, the SWVA Economic Forum was held at the Convocation Center, and the Solar Workgroup had a table with informational hand-outs.

Meeting overview

Meeting participants (which are listed at the end of the summary) discussed workforce development, recent policy changes, financing opportunities, Solarize Wise, ambassador site prioritization and assessment, and other economic development opportunities during the Workgroup meeting.

Solar Workgroup updates included:

- Solarize Wise will launch at the Solar Fair;
- The Solar in your School mini-grant award will be announced at Solar Fair as going to Eastside High School for their solar cell-phone charging station and for Ridgeview High School for a solar-powered robot project; and
- The Sunshot technical assistance grant, which will benefit the Ridgeview High and Norton Green ambassador projects, was awarded with the equivalent of \$10,000 of technical assistance.

Recent Policy Changes

After opening welcome and introductions, participants briefly discussed recent policy changes that will impact solar development. Governor McAuliffe signed 11 bills supporting clean energy

development that received bipartisan support. Several bills are directly relevant to the Solar Workgroup (see Appendix A for more information), and were reviewed by Solar Workgroup members:

- SB 1393 – Authorizes Community Solar Pilot Programs SB 1393 creates a path for the creation of community solar programs in the service territories of Appalachian Power Company (ApCo), Dominion, and the Electric Cooperatives. Each utility will develop its own territory-specific program that allows citizens and businesses the ability to “subscribe” to receive electricity generated by a small centrally-located solar generation system.
- SB 1258 -- Changes the Virginia Solar Energy Development Authority to the Virginia Solar Energy and Battery Storage Development Authority SB1258 expands the mission of the Virginia Solar Energy Development Authority to include the promotion and development of battery storage technology. The bill increases the composition of the Authority by four seats.
- SB 1394/HB 2303 – Establishes Small Agricultural Generators Program SB 1394 and HB 2303 are identical bills that create a new framework for the generation of renewable energy at agricultural facilities and how that energy can be sold to utilities. This bill was put forward by the group dubbed the “Rubin Group” as facilitated by Mark Rubin.
- SB 1395– Size of projects eligible for Permit by Rule SB 1395 increases the allowable maximum size of renewable projects to be eligible to be permitted through the Permit by Rule (PBR) process from 100MW to 125MW. It also exempts projects that are being built for use by a single customer of a utility from having to apply for and receive a Certificate of Public Convenience and Necessity from the SCC. This bill was put forward by the so-called “Rubin Group.”
- HB 1565 – Local Option to Create Green Development Zones HB 1565 allows localities to establish “green development zones” where businesses can receive special taxing and zoning treatment for buildings and facilities that are determined to be energy efficient or the manufacturing of products that are beneficial to the environment.
- HB 1760/SB 1418 – Pump Storage Electric Generation Facilities in the Public Interest HB 1769 and SB 1418 are identical bills that place pump storage electric generation facilities in the public interest. This makes it easier for new pump storage projects to receive by the SCC.
- HB2390 – Power Purchase Pilot Program creation in Southwest Virginia HB 2390 establishes a Power Purchase Agreement (PPA) pilot program in the service territory of Appalachian Power Company (ApCo). Permitted participants in the pilot are private colleges and universities located within the ApCo territory.

Panel on Workforce Development

Several solar installers and economic development practitioners were invited to share their perspective of solar development in Southwest Virginia. Panelists included Harvey Arbouelata of Aries Clean Energy, Blake Sutherland of Ecological Energy Systems, Turner Pittkin of Sigora Solar, Thomas Clements of Mountain Empire Community College, and MACED’s (Mountain Association for Economic Development) Rachel Norton and Josh Bills. The questions posed to the panelists included:

- 1) How are long and short term jobs created and sustained?
- 2) What successful training programs have you seen or recommend for displaced workers?
- 3) What ideas do you have on how solar development could improve Southwest Virginia's economy?

Several themes arose from the panelist discussion, with additional detail below:

- Workforce development should look to developing complimentary skillsets and offering appropriate training opportunities.
- Solar financing can be time sensitive, and many opportunities should be taken advantage of sooner rather than later.
- The economic and workforce impacts of solar development may be indirectly attributed towards the profit savings and capacity created through businesses and individuals that benefit from solar.

Workforce Development

Panelists noted that there is a need to develop career opportunities that can offer a salary comparable to that of a coal miner, such as HVAC specialties, which is often in the \$80,000+ range. MECC offers two degrees (electrical and HVAC) that integrate geothermal and solar skills. Students need installation experience for NABCEP certification, which is necessary for solar installations. Solar development and training create a lot of opportunities for increasing small jobs and job placement through specialization, such as a plumber or electrician that understands solar heat pumps or solar thermal. Several of the solar installers on the panel affirmed that they hire workers with a variety skills. Solar installation companies like Sigora are growing quickly. Sigora now has 50 employees but hopes to double within the next year. Solar jobs can also arise from home-based businesses and sole-proprietorships, or adapted from businesses such as roofers or contractors.

Action Items:

- Create opportunity to provide credit/non-credit training to existing contractors that want to expand their skill set and marketability.
- Coordinate with solar installers to provide installation experience to MECC students that need to work towards their NABCEP certification.
- Look into feasibility of component manufacturing or distribution for creating jobs and attracting other businesses.
- Consider developing apprenticeship and training for solar sales and other specializations.
- Identify specialized workforce opportunities that correlate with a higher salary such as IT work, HVAC, or design work.

Solar Financing Opportunities

Even though financing incentives create opportunity, solar development should also be viewed as an affordable long-term investment. Virginia might not have many solar incentives yet, but these incentives can come from a local level through property tax credits or municipal bonds. In Kentucky, MACED offers several programs for alternative energy job training and financing such as How\$martKY which assists with financing energy-saving retrofits using modelling to

project savings, with on-bill savings (administered in partnership with electricity co-ops). How\$martKY creates short term jobs for local contractors. They also have an energy intern program for displaced coal workers. TVA (Tennessee Valley Authority) currently has a federal match program that might not persist for much longer along with USDA REAP grants. Other incentives worth exploring are the PACE campaign and Virginia Community Capital financing programs, which were both noted as being underutilized.

Suggested Action Items from the panel and Workgroup conversation:

- Evaluate rate classes and peak demand for commercial customers, and provide options which can drive commercial installs.
- Explore how to take advantage of Sigora’s financing of 18 months without payment and low interest rates.
- Maximize local benefit by promoting Solarize Wise program.
 - Market to homeowners that may want to install a new roof, and connect with roofers to share information.
 - Bundle incentives. “It worked for Comcast.”
 - Identify potential installers on the front end rather than later in the program development.
- Investigate possibility of developing local tax incentives and special enterprise or green building zones.
- Understand how new policy changes can direct future incentives.
- Differentiate between private and public solar incentives and how the legal structure or model should differentiate.

Economic Development

Savings from solar installation can allow businesses to lower their operational costs, making them more competitive and able to add more jobs. Allowing existing business to become more competitive creates a “spark” that fuels the economy. MACED has a metric for energy savings to jobs created. See Appendix B to see these metrics. Solar development also can attract large employers that have renewable energy benchmarks. Combining solar projects with other economic initiatives such as greenhouses or recreational opportunities on abandoned mine lands may help to fill out economic development.

Suggested Action Items from the panel and Workgroup conversation:

- Understand and promote the economic opportunities created by improving the bottom line through solar (through overall savings and the related ability to contribute to economic growth through investing those savings).
- Gain understanding of how large businesses might locate based on solar incentives.
- Coordinate/educate new construction contractors on how to plug into solar incentives and training.
- Promote solar development as crucial in creating attractive places to live, work, play, and retire.

Ambassador Sites for Solar Development

The Sunshot award will benefit Norton Green and Ridgeview High School of the priority list with technical assistance, and the benefits of this Sunshot award may overflow onto other possible sites. Downstream Strategies will be looking at financial incentives at various scales, and Blake will be conducting preliminary site assessments. Several members of the Workgroup strongly advocated that the ambassador sites should benefit the public good; the Workgroup should be wary of investing resources in privately owned sites. For this reason, it was suggested that the Workgroup should target schools as possible sites. Currently, the planning team is collecting utility info and further details about candidate sites. One Workgroup member expressed the importance of finding a “champion” for chosen sites which will not only ensure the success of the project, but also spread solar enthusiasm, and develop a model for project development that other sites and projects can adapt. One Workgroup member advocated for MECC as a project site due to their high visibility as well as for the need for on-the-ground solar installation training needs for students, and other opportunities for education and training.

Suggested Action Items from the panel and Workgroup conversation:

- Find local champions within organizations, communities, or institutions to move the project forward.
- Establish a clear point of contact between site representatives and liaison, and move information forward for Blake.
- Give more weight to candidate sites that will provide public benefit.
- Learn how PPAs (Power Purchase Agreements) and municipal bonds can provide solar opportunities for public and private institutions.
- Develop Solarize Wise learn and earn model by partnering with MECC curriculum for engineering students and perhaps creating a practicum requirement.

Solarize Wise

Since the Workgroup meeting was also the same day of the Solarize Wise kick-off, a lot of excitement was stirring about the possibilities. With momentum, this program could ignite a grassroots demand for solar. Outreach will be concentrated May through August, and final participants will be selected in August. Turner with Sigora mentioned that Solarize sign-ups might also want to ask for the workplace of prospective participants in case they want to become a “solar evangelist”. Turner also encouraged the Workgroup to push for scheduling installations before September if possible, since September through December is the busiest season for solar installers. No specific contractor has been selected for these installations, since it may be more desirable to develop a list of contactors that property owners can select from. MECC can carry out free assessments, creating an educational link between students and contractors. It was also suggested that Solarize Wise could work with various installers to offer different packages, presented in a matrix, so that participants can choose the combination which most benefits them.

Upcoming Solar Workgroup Meetings and Events

- Stay posted for more information on the two summer workgroup conference calls and a Workgroup meeting in August or September.

Meeting Participants

Stan Botts, SWVA Technology Council

Jimmy Adkins, LENOWISCO Planning District Commission

Matt Wasson, Appalachian Voices (joined by phone)

Lydia Graves, Appalachian Voices

Adam Wells, Appalachian Voices

Tommy Clements, Mountain Empire Community College

Nick Polier, Dept. of Mines, Minerals and Energy

Evan Hansen, Downstream Strategies (joined by phone)

Mike Thompson, Tazewell County IDA

Blake Sutherland, Ecological Energy Systems

Harvey Abouelata, Aries Clean Energy

Turner Pittkin, Sigora Solar

Joe Collini, A Plumber for Less

Christine Gyovai, facilitator, Dialogue + Design Associates

Emily Carlson, assistant, Dialogue + Design Associates

APPENDIX A: The 11 bills that were recently passed in Virginia concerning alternative energy.

Commonwealth of Virginia
Office of Governor Terry McAuliffe

FOR IMMEDIATE RELEASE

Date: May 8, 2017

Office of the Governor

Contact: Brian Coy

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Governor McAuliffe Signs Clean Energy Legislation

~ 11 bills receive bipartisan support to grow clean energy sector in VA ~

RICHMOND – Governor Terry McAuliffe today signed 11 bipartisan bills passed by the General Assembly earlier this year that promote the use of solar and other renewable energy options and aim to reduce energy consumption across the Commonwealth.

“Today, I am honored to sign these bills into law, furthering the great work we’re doing to support and promote the clean energy sector across the Commonwealth,” **said Governor McAuliffe at the bill signing ceremony.** “It is clear that Virginia is moving in the right direction, especially with the recent announcement of record growth in our solar industry, but there is still work to do. Together, with our partners in the General Assembly and the private sector, I will continue to implement policies that bolster the entire clean energy industry in the Commonwealth.”

“With revenue in the clean energy sector increasing from \$500 million to \$2 billion since 2014, the industry is a vital component of the new Virginia economy, creating more jobs and opportunities for citizens across the Commonwealth,” **added Secretary of Commerce and Trade Todd Haymore.** “Today’s bill signing highlights the commitment we have to reducing energy consumption and providing more sustainable energy options in the Commonwealth.”

“Energy storage is essential for a clean and sustainable energy future,” **said Senator Adam P. Ebbin (D-Alexandria).** “The inventor who perfects the technology to store the power of the sun and the wind will be our next Bill Gates, and deservedly so.”

“I carried two bills in the House of Delegates during the 2017 Session that will help Virginia citizens, businesses, and government agencies conserve energy and create energy from renewable sources,” **said Delegate Randy Minchew (R – Leesburg).** “First, I was the Chief Patron for HB 1712, an Administration Bill that will allow local governments, school boards, and state agencies to save taxpayer dollars and reduce their energy consumption. Second, I was

the Chief Patron for HB 2303, a bill that was the product of a year-long mediation effort between investor-owned utilities, electrical cooperatives, farmers and rural business operators, and renewable energy stakeholders and that will allow agricultural landowners to ‘farm the Sun,’ become energy independent, and help increase renewable energy production throughout our Commonwealth.”

“Giving localities the flexibility to enhance their economic growth with green businesses and buildings in green development zones was truly an idea that came from the ground up,” **added Delegate Michael J. Webert (R – Marshall)**. “The Fauquier Economic Development team brought forth the idea, and I am excited that the County of Fauquier is poised to be one of the first counties to take advantage of this legislation. I sincerely appreciate the Governor signing this bill, and I look forward to the economic development that this will bring across the Commonwealth.”

Joined by clean energy industry stakeholders and several bill patrons, Governor McAuliffe signed the following legislation into law at a ceremonial bill signing today at the Executive Mansion.

SB 1393 – Senator Frank Wagner – Authorizes Community Solar Pilot Programs

SB 1393 creates a path for the creation of community solar programs in the service territories of Appalachian Power Company (ApCo), Dominion, and the Electric Cooperatives. Each utility will develop its own territory-specific program that allows citizens and businesses the ability to “subscribe” to receive electricity generated by a small centrally-located solar generation system.

SB 990 – Senator Roslyn Dance (and Delegate Rip Sullivan) – Energy Efficiency Goal Progress Report Requirement

SB 990 requires the Department of Mines, Minerals and Energy to report annually the progress the state is making toward achieving the codified voluntary goal of reducing energy consumption in Virginia by 10 percent by 2022 from 2007 levels.

SB 1258 – Senator Adam Ebbin - Changes the Virginia Solar Energy Development Authority to the Virginia Solar Energy and Battery Storage Development Authority

SB1258 expands the mission of the Virginia Solar Energy Development Authority to include the promotion and development of battery storage technology. The bill increases the composition of the Authority by four seats.

SB 1394/HB 2303 – Senator Frank Wagner and Delegate Randy Minchew – Establishes Small Agricultural Generators Program

SB 1394 and HB 2303 are identical bills that create a new framework for the generation of renewable energy at agricultural facilities and how that energy can be sold to utilities. This bill was put forward by the so-called “Rubin Group.”

SB 1395 – Senator Frank Wagner – Size of projects eligible for Permit by Rule

SB 1395 increases the allowable maximum size of renewable projects to be eligible to be permitted through the Permit by Rule (PBR) process from 100MW to 125MW. It also exempts projects that are being built for use by a single customer of a utility from having to apply for and receive a Certificate of Public Convenience and Necessity from the SCC. This bill was put forward by the so-called “Rubin Group.”

HB 1565 – Delegate Michael Weibert – Local Option to Create Green Development Zones

HB 1565 allows localities to establish “green development zones” where businesses can receive special taxing and zoning treatment for buildings and facilities that are determined to be energy efficient or the manufacturing of products that are beneficial to the environment.

HB1712 – Delegate Randy Minchew- Energy Performance Contracting

HB 1712 allows for the continued use by state agencies and localities of Energy Performance Contracting as a financing tool to reduce energy consumption and increase energy savings through building and facilities improvements.

HB 1760/SB 1418 – Delegate Terry Kilgore and Senator Ben Chafin - Pump Storage

Electric Generation Facilities in the Public Interest

HB 1769 and SB 1418 are identical bills that place pump storage electric generation facilities in the public interest. This makes it easier for new pump storage projects to receive by the SCC.

HB2390 – Delegate Terry Kilgore – Power Purchase Pilot Program creation in Southwest Virginia

HB 2390 establishes a Power Purchase Agreement (PPA) pilot program in the service territory of Appalachian Power Company (ApCo). Permitted participants in the pilot are private colleges and universities located within the ApCo territory.

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APPENDIX B: MACED's metrics for jobs created based on project investment cost shared by Josh Bills to support the Workgroup's exploration of the workforce creation and economic development benefits of solar from a cost-savings perspective.

- E3—Total dollars (MACED direct investment and other investment) invested in retrofits because of E3's assistance (projects that include assessment or TA or assessments or TA plus MACED's financing) converted to jobs. (See below for conversion.)
- How\$mart—Dollars invested in retrofits because of How\$mart's assistance converted to jobs, including dollars leveraged from other sources. (See below for conversion.)

E3 and How\$mart will enter data on total investment in retrofits by county in their template worksheet. The worksheet has the conversion to jobs built in. We use a multiplier of 7.7 jobs per \$1,000,000 investment in retrofits: $(\$invested/1,000,000)*7.7$.

E3 and How\$mart will then enter the jobs created or saved figure into DIDS.

This multiplier for building retrofits was derived using IMPLAN 2.0 with 2007 data. Infrastructure multipliers and assumptions are presented in "How infrastructure Investments Support the U.S. Economy: Employment, Productivity and Growth," Political Economy Research Institute, January 2009, <http://www.peri.umass.edu/236/hash/efc9f74five6a/publication/333/>.

Updates to this measure should be made if and when newer and better estimates of the multiplier for retrofits of buildings become available.

From:
[Mountain Association for Community Economic Development \(MACED\)](#)