Takeaways from the 2018 Solar Power Midwest Conference for the Ohio Solar Sector

November 30, 2018

Earlier this month, the Solar Energy Industries Alliance (SEIA) and the Smart Electric Power Association (SEPA) hosted the 2018 Solar Power Midwest Conference. Similar to last year's event, there was limited direct discussion regarding Ohio's solar sector, but many of the issues and themes are relevant to Ohio. (View last year's conference summary here.) A summary of the conference panels and accompanying takeaways for the Ohio solar sector are described below.

"The State of Solar in the Midwest"

This "fireside chat" involved Abigail Ross Hopper, President and CEO of SEIA, and Howard Learner, President and Executive Director of the Environmental Law & Policy Center. They shared their perspectives on key trends within the Midwest solar sector, noting that that the Midwest is the fastest growing region in the U.S. for new solar capacity. The discussion also examined how the election may impact solar policy, especially in the multiple Midwestern states experiencing a change in party control in their governor's offices. Looking ahead, the panelists identified upcoming state commission appointments, Congressional committee assignments, and growing demand for clean power by Midwestern cities and commercial building tenants as areas of opportunity for the sector.

Takeaways for the Ohio solar sector: The election did not result in a change in party control in Ohio, with the GOP remaining in control of the governor's office and General Assembly.[1] However, Ohio will experience a change in the governor's administration, as well as likely changes to energy committee assignments and eventual appointments to the Public Utilities Commission of Ohio (PUCO). Cities in Ohio are also increasingly driving solar projects to supply their load. For example, Cincinnati has a 100 percent renewable energy commitment and is currently developing a 25-megawatt solar project on city property. Looking ahead, the following trends will likely become opportunities for the solar sector: (1) continued development of utility scale projects driven by corporate demand in the PJM Interconnection (PJM); (2) development of policies to promote the use of Distributed Energy Resources (DERs) as part of the PUCO's grid modernization effort, "PowerForward;" and (3) the increasing use of Property Assessed Clean Energy (PACE) financing for onsite solar on commercial buildings. Each of these opportunities for the Ohio solar sector is discussed in more detail below.

"The Role of the Utility in Grid Modernization"

Executives from three Midwest utilities shared their perspectives on the changing grid and how their role is also evolving. In vertically integrated markets, a number of utilities have determined that solar resources are more cost effective than new coal generation facilities and, in some cases, even new natural gas power plants. The utilities observed that the planning horizon for new assets, traditionally about 25 years, will need to be much shorter in order to accommodate new technologies. One utility representative expressed that utilities will need to shift to making more frequent, smaller investments over a shorter timeframe to allow more experimentation with a variety of new technologies. The utilities agreed that their companies are going to increasingly become software and data management companies as the distribution grid becomes smarter and more interactive. As a result, state regulatory models will need to evolve and shift to incentive structures that recognize the utilities' role

as a data management and grid services provider. SEPA also shared its primary areas of focus related to grid modernization: (1) the evolving utility business model; (2) regulatory innovation; (3) grid integration of solar and other distributed generation; (4) grid resilience; and (5) the electrification of the transportation sector.

Takeaways for the Ohio solar sector: Ohio is positioned to lead the Midwest in grid modernization efforts. In August 2018, over a year after it began its comprehensive initiative regarding the status and potential future of electric grid, the PUCO released its Roadmap for modernizing electric utility industry in Ohio, PowerForward: A Roadmap to Ohio's Electricity Future.[2] The non-binding Roadmap outlines a path forward for grid modernization and attempts to organize the grid modernization efforts of the electric distribution utilities in Ohio. These next steps involve elements of existing proceedings, new case dockets, and a variety of reports and working groups, some of which are beginning to commence. Earlier this month, the National Association of Regulatory Utility Commissioners (NARUC) awarded PUCO Chairman Asim Haque its 2018 Regulatory and Policy Innovation Award in recognition of his efforts in propelling the energy industry into the future.

"Opportunities and Challenges for Distributed Generation in the Midwest"

The Midwest did not break 100 megawatts of total distributed generation for commercial and industrial customers until this year. However, by 2023, it is predicted that there will be over 600 megawatts of new solar distributed generation in the region, the fastest rate of growth in the country. The Midwest states predicted to experience the most growth in distributed solar are Illinois, Indiana, Michigan and Iowa. The panelists discussed a number of issues related to distributed solar rate design and permitting. As a result, rate design should reflect the reality that distributed solar in the Midwest is still in the very early stages, and compensation mechanisms like net metering are important to provide foundational policy for distributed solar. From a permitting standpoint, a number of organizations are developing permitting "toolkits" to help developers navigate local permitting issues. The panel also pointed out that the rapid projected growth of distributed generation will necessitate other ancillary considerations, such as investment in workforce development. Another factor with implications to distributed solar deployment in the Midwest is that by 2023 approximately 25 percent of new distributed solar projects will be paired with energy storage.[3]

Takeaways for the Ohio solar sector: Late last year, after a nearly five-year process, the PUCO issued updated net metering rules. The new rules made a number of changes to Ohio's net metering framework, including modifications to the level of compensation for excess generation. However, the net metering debate in Ohio is hardly over, because the next five-year review of net metering *is already occurring now*.[4] Over the long term, the outcomes of PowerForward may also support the growth of distributed solar in Ohio. A primary objective of the PowerForward effort is conceptualizing the grid as a platform that enables the integration of DERs that can be used as a grid resource, including distributed solar and battery storage. Another potential driver of distributed solar in Ohio is PACE. Ohio is already a leader in the utilization of PACE for energy efficiency projects, and property owners are beginning to include onsite solar among projects to be financed by PACE.[5] From a permitting perspective, the state only has siting jurisdiction for projects greater than 50 megawatts, so distributed solar is subject to local permitting requirements, including zoning. Just this week, a bill was introduced in the Ohio House to prohibit condominium, homeowners and neighborhood associations from imposing "unreasonable limitations" on rooftop solar.[6]

"Smart Inverters in an Evolving Grid"

The use of smart inverters will become increasingly important as the grid relies on more intermittent and distributed energy resources. In contrast to traditional inverters, which are programmed to shut down during disturbances on the grid, smart inverters can continue to operate and provide assistance in stabilizing the grid. Smart inverters have sophisticated grid monitoring and communication capabilities, the ability to receive offsite operation instructions, and the capability to make autonomous decisions to maintain grid stability and reliability. Through these capabilities, smart inverters can allow increased solar penetration while maintaining grid stability. Increased use of smart inverters raises important policy considerations for regulators, such as requirements and compensation for grid stability services, standards that allow for advanced inverter functionality, the extent of utility control and ownership structures.

Takeaways for the Ohio solar sector: The PUCO will encounter smart inverters in at least two upcoming proceedings. In

September 2018, the PUCO kicked off its distributed generation interconnection rulemaking process. Second, one of the outcomes of the PowerForward Roadmap was the creation of a workgroup called the Distribution System Planning Working Group (PWG). The PWG's mandate includes developing recommendations for the PUCO on modifications to interconnection standards, including defining required functions and settings for advanced inverters.[7]

"Integrating DERs into the Grid of the Future"

Panelists discussed a number of grid modernization initiatives throughout the Midwest. In discussing grid modernization, the panel identified the following as features of a modern grid: distributed generation, two-way power flow, demand response, energy storage, electric vehicles, customer access to information, customer control, and improved efficiency through data and analytics. From a solar standpoint, the panel acknowledged that that grid modernization is not a necessary precursor to developing a solar market, because the current grid can accommodate distributed solar in most markets without significant additional investment.

Takeaways for the Ohio solar sector: As discussed above, a primary focus of the PUCO's PowerForward process is conceptualizing the grid as a platform that enables the integration of DERs that can be used as a grid resource, including distributed solar and battery storage. The PUCO recently initiated the establishment of Distribution System Planning and Data Access working groups. Further, the Roadmap requires each utility to file a Distribution System Planning Assessment and a Grid Architecture Plan by April 2019.

"PURPA, Competitive Procurement and More: Utility-Scale Solar in the Midwest"

The panel discussed the near-term challenges and opportunities for utility-scale development in the Midwest. The topics discussed included the role of PURPA and integrated resource plans in solar development, as well as how corporate demand is driving projects. Another topic of focus was potential land use conflicts with utility-scale solar development in the Midwest.

Takeaways for the Ohio solar sector: Because Ohio restructured its generation sector, integrated resource plans and PURPA are not drivers of new projects in Ohio. Until less than two years ago, the Ohio Power Siting Board (OPSB), the state permitting agency for generation projects over 50 megawatts, had not encountered a single solar project application. Today, there are over half a dozen solar projects that have been approved by the OPSB or are going through the OPSB permitting process. These projects account for approximately one gigawatt of new utility scale solar in Ohio. These projects are largely driven by corporate demand for solar power in the PJM region. In addition, some projects are also be driven by AEP Ohio's commitment to develop at least 900 megawatts of renewable energy, as part of a recent settlement. AEP Ohio recently filed at the PUCO to advance some of these projects.[8] Thus far, there have not been agriculture land use conflicts with solar development in Ohio. As part of the OPSB permitting process, impacts to agricultural land must be assessed. In addition, the Ohio Farm Bureau Federation has taken an active role in most cases before the OPSB.

"What the Hill is Going On: A Federal Affairs Update"

SEIA provided a brief of the year's action in Washington, D.C., and what to expect on the policy front after the midterm elections. In particular, SEIA is currently working to urge Congress to modify the tax code to include energy storage as an eligible technology for the investment tax credit (ITC).

Takeaways for the Ohio solar sector: Clarification of energy storage's federal ITC treatment would likely accelerate solar-plus-storage deployment in Ohio. At the state level, one of the most important tax provisions for solar projects in Ohio is the tax abatement structure in Ohio Revised Code 5727.75, which enables payments in lieu of taxes for both sales and property tax for qualified energy projects. However, this abatement structure is currently set to expire at the end of 2020.

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[1] For more information about the election results in Ohio, please visit the "2018 post-general election update" from Bricker & Eckler's government relations team.

[2] For more information about the PUCO's PowerForward grid modernization program, visit: https://www.puco.ohio.gov/industry-information/industry-topics/powerforward.

[3] See Bricker's recent article on energy storage in Ohio, available here.

[4] PUCO Case No. 17-1842-EL-ORD.

[5] For more information about Ohio's PACE law, visit: http://www.bricker.com/insights-resources/publications/property-assessed-clean-energy-pace-financingthe-ohio-story.

[6] Ohio House Bill 774.

[7] Roadmap at 19.

[8] See, e.g., Case No. 18-0501-EL-FOR.

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