

The Midwest is emerging as a vibrant new solar market thanks to innovation and investment at the local and regional levels. New companies continue to spring up throughout the region. A strong combination of falling costs, customer interest, and major policy development is supporting new investment and attracting the attention of major national solar companies.

Since 2010, Midwest solar capacity has grown over 4,284%, from just over 14 MW to over 632 MW of cumulative installed solar capacity. There are over 1,300 companies at work throughout the value chain in the Midwest. Solar Jobs in the Midwest have increased over 75% since 2012, employing over 20,720 people. Below are summaries of some of the major market developments occurring in the region.

SEIA would like to thank all of its Midwest partners for their support. Special thanks go to our colleagues at the Environmental Law and Policy Center, Fresh Energy, Indiana DG, the Iowa Solar Trade Association, and Renew Wisconsin, who provided information for this report.



Illinois

Illinois is a growing solar market that has benefited from a renewable portfolio standard that nominally requires utilities to generate 25% of their energy from renewable sources by 2025. The state has 66 MW of solar capacity installed, ranking it 27th in the country. Over the next five years, Illinois is expected to install 240 MW of solar capacity under the current regime. There are over 3,483 people employed in the solar industry in Illinois at 271 companies.

Top Issues and Action Items:

Renewable Portfolio Standard: Illinois has a 25% by 2025 RPS with a solar “carve-out” requiring 6% of the total renewables procured be from solar power. For electric utilities, 1% must also come from “distributed generation” — small systems (under 2 MW) installed behind a customer’s meter. A strong coalition has been working for more than a year to “fix” the Illinois RPS, which would lead to an estimated 1,500 MW of new solar (both utility-scale and distributed) by 2020 with increasing targets thereafter. The general assembly will likely consider comprehensive energy legislation this fall that includes the RPS revisions, along with a large community solar program, declining block incentive program for DG resources, and low income and brownfield solar provisions. In the meantime, the Illinois Power Agency is planning a spring 2017 procurement for distributed generation resources using approximately \$40 million in funds collected by Illinois electric utilities.

Interconnection standards: Illinois has been a leading state for interconnection standards, adopting best practice rules modeled after the Federal Energy Regulatory Commission (FERC) standards in 2008. After nearly two years of work, the Illinois Commerce Commission (ICC) recently finalized new interconnection standards that will significantly improve the interconnection process for distributed solar by incorporating updates from FERC and other leading solar states.

Net metering: Illinois’ net metering standard requires both regulated electric utilities and Alternative Retail Electric Suppliers to provide full retail credit for any energy sent back to the grid from residential and small commercial customers that install on-site renewable energy systems up to 2 MW in size. Large commercial and industrial customers receive a credit for net excess generation at the avoided cost of power supply. In April 2016, the ICC adopted revised net metering standards that requires electricity providers to “consider” virtual net metering proposals, which should provide a pathway to move some pilot community solar projects forward in Illinois.

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Minnesota

Minnesota's 138 solar companies work hard to ensure to expand deployment of solar throughout the state. These companies employ almost 2,000 people throughout the value chain. There is currently 37 MW of solar installed in the state. Over the next 5 years Minnesota is expected to install an enormous 1,073 MW of solar capacity, ranking it 17th over that time span, as policies that promote solar come to fruition. This amount is more than 36 times the amount of solar installed over the last five years.

Xcel Energy Community Solar: The roll out of Xcel Energy's community solar program brought incredible interest from the public and the solar market nationwide. Unfortunately, that program was slowed by continued utility push back at the Public Utilities Commission. Now, with Xcel's public goals of connecting 400MW of community solar gardens by the end of 2017, projects are beginning to come online. That, combined with a new Value of Solar bill credit rate for new projects, will hopefully bring more clarity to a growing solar market in Minnesota.

Minnesota Power Community Solar: While Xcel Energy's community solar garden program garners national attention for its potential to be nation-leading, work has continued in Minnesota to expand community solar options to other utility customers. This summer, the Public Utilities Commission ordered a small pilot program on Minnesota Power's system. Though limited in size, and utility owned, this program is a first step toward an expanded community solar market to northern Minnesota. Specific orders for Minnesota Power to calculate a Value of Solar for their system and to issue an RFP for non-utility owned projects in particular could create greater opportunities moving forward.

Co-op Net Metering Fees: A law passed in 2015 allows co-ops and municipal utilities to charge reasonable fees on net metered customers under specific circumstances. Over the past year, dozens of co-ops have proposed to begin charging fees as high as \$83 a month.

Minnesota Power RFP: Minnesota Power's most recent integrated resource plan was approved at the Public Utilities Commission, but only after significant changes were made to order more investments in wind and solar. Minnesota Power recently began that shift by issuing an RFP for 300MW of solar for its system. Though they have significant investments in wind (it met Minnesota's Renewable Energy Standard ten years early), this is the first significant investment in solar for Minnesota Power.

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Ohio

The promise of a rising solar market in Ohio has stalled since the legislature froze the state's renewable portfolio standard in 2014. The state currently has 119 MW of installed solar capacity, ranking it 23rd in the country. There are 255 companies in Ohio providing 4,811 jobs in the solar industry. 56 of these companies have manufacturing facilities in the state, producing goods across the supply chain - from the polysilicon that many photovoltaic panels are comprised of to the racking systems used to install solar panels.

Top Issues and Action Items:

End of the RPS "Freeze": A 2014 law that "froze" Ohio's solar requirement at 0.12% as part of a freeze of the RPS and EERS is scheduled to expire at the end of 2016. There are several proposed bills in the state legislature that would continue the freeze in some form, but Governor John Kasich has indicated that he would veto any such legislation. Instead, he has expressed interest in retaining the standards but with less ambitious targets. However, because the same 2014 law also permanently removed the RPS provision that 50% of the requirement be met with in-state resources, a reinstated standard would no longer provide the same level of support for Ohio solar.

AEP Solar Commitment: As part of a settlement approved by The Public Utilities Commission of Ohio (PUCO) in March 2016, AEP has committed to procure 400 MW of solar projects in Ohio, with a goal of completing the projects by 2021. So far, AEP has issued a Request for Information from companies interested in participating in an RFP process regarding solar projects currently under development in the state. At least as an initial matter, the RFI specifies a minimum project size of 5 MW-ac.

Net Metering: There is currently a net metering rulemaking proceeding pending before The PUCO, awaiting issuance of a final rule. The draft rule proposed by Commission staff provided that EDUs would have to pay customer-generators for both the energy value and capacity value of their excess generation, and provided for a 120% system size limit. The comment period ended in January 2016, and the rule will hopefully be finalized in late 2016 or early 2017, although the PUCO may be awaiting the fate of a proposed bill regarding the RPS and EERS that also includes net metering provisions.

Grid Modernization: In a recent decision providing a ratepayer subsidy to FirstEnergy as an "incentive" for grid modernization efforts, the PUCO stated that it would undertake a review of grid modernization issues in the near future. This proceeding is likely to implicate a number of policy questions relevant to solar and distributed generation more generally.

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Michigan

There is currently 25 MW of solar installed in Michigan, with more than half of that capacity coming from residential installations. There are 196 solar companies, employing 2,779 people throughout the value chain. Over the next five years Michigan is expected to install 387 MW of solar capacity. There is enough solar in the state now to power about 4,000 homes.

Top Issues and Action Items:

Energy Legislation: The Senate is expected to pass legislation in November, where it will then be considered by a lame-duck House. Thanks to the efforts of a broad coalition in Michigan, it contains a somewhat stronger RPS (15%) and improved provisions on net metering. However, there is still work to be done to make sure that the RPS results in real renewables growth and to either improve the “grid fee” proposal in the current draft or to change the current draft to leave net metering as is.

PURPA: The Michigan PSC is currently re-considering avoided cost methodology under PURPA in nine separate contested cases. Staff has proposed increasing the eligibility for standard offers to 5 MW projects and providing a contract term of 17.5 years to QFs, which would likely result in increased solar development. A number of companies and groups, including SEIA, have intervened in the case, to ensure that the Commission employs a methodology that determines the full avoided cost, including reduced line losses, avoided compliance costs, and other benefits of distributed generation.

Utility Standby Rates: Michigan PSC Staff is currently considering revision to utility standby rates. Staff’s initial conclusion was that standby rates should not be required of solar technologies. Standby rates currently impede on-site project development by commercial customers. A change to these rates could spark growth in small-scale, commercial solar.

Munis and Coops: Municipalities and Cooperatives in Michigan continue to explore and in some cases develop solar projects. Examples include the Lansing Board of Water and Light, a project in Cadillac by Wolverine that will serve Cherryland Electric Cooperative members, Traverse City Light & Power’s proposal to build a solar array in Elmwood Township, and conversion of a wind project to solar to serve the Muskegon wastewater treatment facility.

Most of the utility and co-op development is driven by customer demand. Most notably, the data cloud services company Switch agreed to locate a large data center in Grand Rapids only if it could be guaranteed 100% renewable energy. GM has recently committed to 100% renewable energy use by 2050, and there appears to be a cultural shift among corporate customers towards renewables and distributed generation.

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Iowa

Iowa is a national wind energy leader, the success of which is helping to set the stage for growth in solar. Iowa has developed over 6,000 MW of wind energy that accounts for over 30% of electricity generation. The solar market reached approximately 40 MW of installed capacity by the end of 2015 and is expected to reach 60 MW by the end of 2016. There is enough solar in the state to power over 4,000 homes. The state has 46 solar companies, employing 349 people. In 2015, over \$16 million was invested in Solar installations in Iowa.

There is a wide mix of home, business, and farm projects in the DG market with rural areas of Iowa often seeing the most installations. Utilities are beginning to add larger projects, with rural electric cooperatives and municipal utilities in particular introducing community solar and utility-scale projects.

Top Issues and Action Items:

Tax Incentives: Iowa has used tax policy to help grow its solar market. Iowa established an ITC in 2012 that matches 50% of the federal ITC (or 15% of the upfront cost of a solar project). In 2015, the Iowa legislature added 10 MW as a set aside for solar to its \$0.015/kWh Production Tax Credit. The 10 MW is primarily supporting rural electric cooperative and municipal utility projects (community and utility-scale). Both the ITC and PTC have waiting lists, highlighting the need for the Iowa legislature to add more capacity and funding to these programs in 2017.

Net Metering: The Iowa Utilities Board has led a wide-ranging inquiry on DG for several years and recently issued an order for the investor owned utilities to establish a pilot on net metering that preserves the existing framework and provides for a limited expansion of net metering. The pilot increases the project cap to 1 MW, and limits NEM credits to 100% of a customer's load, with a cash out for excess generation. All customers are eligible for the pilot tariff, including third party financed systems. The pilot tariff is expected to launch January 1, 2017. It will apply for 3 years, and projects on the pilot tariff will be grandfathered in for future changes.

Interconnection Standards: Iowa previously adopted FERC standards and has been a leading state on interconnection standards. As part of the IUB's DG docket, the state has reviewed the updated FERC standards and has initiated a rulemaking that is expected to significantly improve the interconnection process for distributed solar by incorporating critical updates from FERC and other leading states.

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Indiana

Indiana is still a state heavily dependent on coal-fired electric power plants, with the nation's second largest coal fleet (16,000 MW). Indiana is also the 8th largest coal-producing state producing 34 million tons of coal in 2015. Despite this, Environment America Shining Cities 2016 Report lists Indianapolis 2nd in solar PV per capita. Indiana ranks 18th in cumulative solar installations with 174 MW currently installed, and Q2 2016 Rank of 16th, which is higher than any other Midwestern state.

Top Issues and Action Items:

Net Metering: Proposed legislation (House Bill 1320) introduced during the 2015 session of the Indiana General Assembly which would have adversely impacted net metering in Indiana was defeated by a broad based coalition. No adverse legislative proposals regarding net metering were introduced during the 2016 session. Indiana investor owned utilities reported 8.123 MWs of solar PV using net metering. Although this represents an 87% increase in solar PV net metering since 2014, that is only 10% of the 1% cap (based on summer peak load) established by the current net metering rule.

Community solar: Community solar owned and operated by the utility is currently being offered by Tipmont REMC and Kankakee Valley REMC. Consumer owned and operated community solar still encounters several barriers particularly with regulated utilities.

Utility scale solar: A settlement agreement between Duke Energy Indiana (DEI) and consumer and environmental groups resulted in DEI entering into 20 MWs of solar PV Power Purchase Agreements. DEI also voluntarily agreed and received approval from the IURC to build a 17 MW solar PV project for the Crane Naval Center in southern Indiana. I&M also sought and received approval to build 16 MWs of solar PV projects in their service territory in NE Indiana. Hoosier Energy, the generation and transmission company for REMCs in southern Indiana, is completing nearly 10 MWs of 1 MW projects. The Indiana Municipal Power Agency (IMPA) is also building and operating solar PV projects at > 1 MW each.

Voluntary Feed-In Tariffs (VFITs): Both Indianapolis Power and Light (IPL) and Northern Indiana Public Service Company (NIPSCO) have offered VFITs. IPL's VFIT program, which was called Rate REP, resulted in over 96 MWs of solar PV that was installed under 15 year contracts; however, this program is no longer accepting new enrollment and expansion of the program is not anticipated. NIPSCO offered two phases of its VFIT with the first phase of the NIPSCO VFIT resulting in 15 MWs of solar PV. NIPSCO's second phase of its VFIT is ongoing .

Energy Storage: IPL has a 20 MW energy storage facility in Indianapolis called the IPL Advancion Energy Storage Array. This is the first of its kind in the MISO footprint. IPL has indicated in its most recently filed Integrated Resource Plan (IRP) that it plans to build an additional 500 MWs of energy storage. IPL has filed a fast track complaint asking the FERC to find that the Midcontinent ISO's rules for energy storage are deficient and should be revised.

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Wisconsin

Wisconsin ranks 33rd in the country for installed solar capacity with 27 MW currently installed. In 2015 \$12 million was invested on solar installations in the state, a 71% increase over 2014, with continued growth expected in coming years. There are 166 solar companies employing 1,941 people. Over the next 5 years, Wisconsin is expected to install 141 MW of solar capacity.

Top Issues and Action Items:

Policy Hurdles: Changes to metering, interconnection and net metering policies are being introduced. Third party ownership has not been addressed or moved forward. The Clean Power Plan is not being planned for, communicated or even acknowledged by any state level officials.

Utility Variability: There are discussions to amend interconnection requirements, but no actual policies have been introduced. One utility has adopted a kilowatt demand residential rate structure - the first and only in the state. A Webco/Integrus Merger has created one of the largest utilities in the state with two different net metering policies, two different rates and interconnection equipment requirements. This utility now covers almost 40% of the state.

Community & Group Buy Momentum: The presence of community owned and utility owned solar projects in the state have increased dramatically, with projects by Madison Gas and Electric, Dairyland Power, Xcel energy and multiple cooperatives. Group buy solar programs have also become popular. Milwaukee, Madison, Racine and other smaller communities have adopted programs that have led to the installation of approximately 500 kW of solar.

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ABOUT SEIA

Established in 1974, the Solar Energy Industries Association is the national trade association of the U.S. solar industry. Through advocacy and education, SEIA is building a strong solar industry to power America. As the voice of the industry, SEIA works with its 1,000 member companies to champion the use of clean, affordable solar in America by expanding markets, removing market barriers, strengthening the industry, and educating the public on the benefits of solar energy. For more information, please contact info@seia.org or membership@seia.org.

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