

Utility Enrollment Process Considerations for Shared Solar Projects

Created through the Grow Solar Partnership, a DOE SunShot Initiative (Rooftop Solar Challenge II) grant recipient

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What is Shared Solar?

Shared solar (or community shared solar) is a photovoltaic electric system that provides power and/or financial benefit to multiple community members

- ◆ Shared solar expands access to solar energy. The classical solar model is of 1 system serving 1 end-user, but shared solar now allows 1 system to serve multiple users
- ◆ According to the National Renewable Energy Laboratory (NREL), **only about one-quarter of residential rooftop area** is suitable for solar photovoltaic systems
- ◆ Shared solar expands access to solar power to renters, condominium owners, those with shaded roofs, and those with financial barriers to installation, which is the vast majority of households

Source: National Renewable Energy Laboratory, Supply Curves for Rooftop Solar PV-Generated Electricity for the United States, 2008. Available at: <http://www.nrel.gov/docs/fy09osti/44073.pdf>

Shared solar enrollment process best practices

Program Design—defining subscription terms, ownership model, tax considerations, bill crediting, program length, and participation term

Project Approval—working with developer to site project, establish interconnection, and enter into a Power Purchase Agreement

Subscriber Enrollment—customer education and acquisition, marketing enrollment, implementing bill crediting, subscription transfers

Program Management—bill settlement, closeout criteria, ongoing project management

Program design

Active engagement of stakeholders for feedback on program design is critical to ensuring the success of a new shared solar program.

- ◆ What are the program goals? Is it to
 - Meet renewable energy or environmental mandates?
 - Increase customer access to clean energy?
 - Create economic value for subscribers or the utility?
- ◆ It is important to select a program design that makes sense
 - Use surveys, focus groups, and other methods of outreach to solicit feedback on design elements
- ◆ Program design options:
 - Subscription structure:
 - Upfront or ongoing payment
 - Energy or line item crediting
 - Participation limits (minimum and maximum subscriptions)
 - Term of subscriptions
 - Subscription transferability
 - Ownership model, considering access to incentives and capital:
 - Utility-owned/sponsored
 - Third-party-owned
 - Program size/scale

Project approval

Overall, the project approval process for a shared solar project is similar to that for other commercial-scale solar arrays.

- ◆ Net metering agreement/ power purchase agreement negotiation
 - Dependent on policy landscape (e.g., can the utility own generation or enter into a PPA?)
- ◆ Site acquisition
 - Should align with program design goals (e.g., is visibility important for subscribers?)
- ◆ Permitting
- ◆ Financing, incentive applications
- ◆ Interconnection
 - Application
 - Information Access
 - Technical evaluation
 - Processing
 - Inspection
- ◆ Construction

Subscriber enrollment

The effort involved in customer acquisition, marketing, system changes, and ongoing support for subscribers is often underestimated.

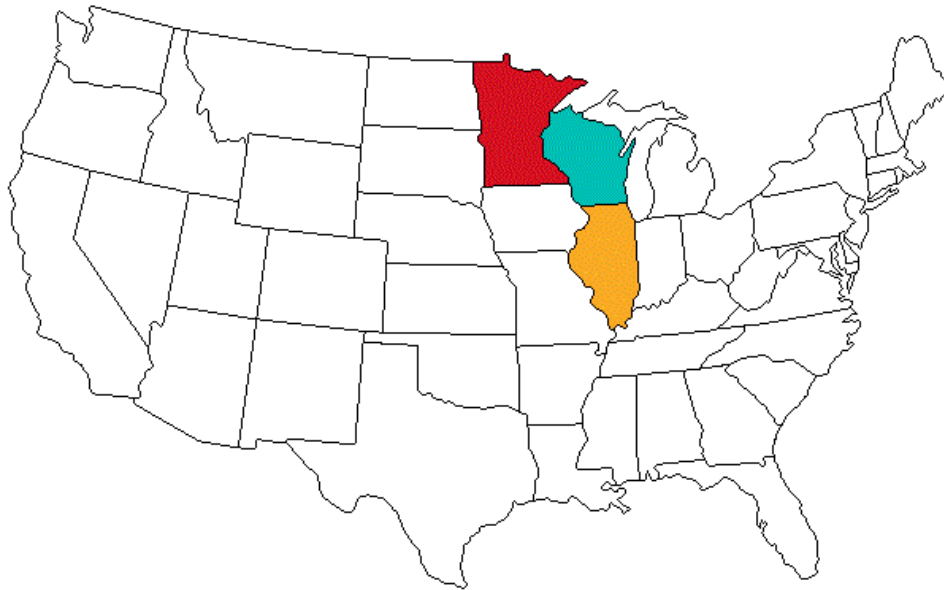
- ◆ The subscriber enrollment process depends on customer education of solar energy in general, and specifically shared solar. It will likely include the following:
 - Customer education (through online campaigns, traditional advertising, events, workshops, etc.)
 - Financial analysis from the subscriber perspective
 - Targeted marketing
 - Developing and negotiating a subscriber power purchase agreement or lease agreement
 - Updating bill credit systems
 - Processing subscriber deposits
 - Enrolling subscribers for on-bill crediting
 - Ongoing customer satisfaction outreach
 - Ongoing call-center support

Program management

A shared solar program establishes a long-term relationship with subscribers; it requires project and program management for the lifetime of the program

- ◆ Once a program is operational, there are a number of continuous, ongoing tasks for the operation and management of the program
 - Subscriber management
 - Providing call-center support
 - Ensuring correct on-bill crediting
 - Collecting any ongoing administrative/service fees
 - Creating a mechanism for transfers of subscriptions
 - Reporting generation information
 - Project management
 - Monitoring solar project operations and ensuring desired performance
 - Performing operations and maintenance

There are over twenty pioneering shared solar programs in IL/MN/WI



Illinois

- Jo-Carroll Electric Cooperative

Minnesota

- Agralite Electric Cooperative
- Arrowhead Electric Cooperative
- Beltrami Electric Cooperative
- Connexus Energy
- Itasca-Mantrap Cooperative
- Kandiyohi Power Cooperative
- Lake Region Electric Cooperative
- McLeod Cooperative Power
- Minnesota Power
- Moorhead Public Service
- Redwood Electric Cooperative
- Runestone Electric Association
- South Central Electric Cooperative
- Stearns Electric Association
- Steele-Waseca Electric Cooperative
- Tri-County Electric Cooperative
- Wright-Hennepin Cooperative
- Xcel Energy

Wisconsin

- Barron Electric Cooperative
- Clark Electric Cooperative
- Eau Claire Energy Cooperative
- St. Croix Electric Cooperative
- Taylor Electric Cooperative
- Vernon Electric Cooperative

This handbook was created through the Grow Solar Partnership. Grow Solar is working to reduce the barriers to solar generation across the Midwest

- ◆ Funded through the U.S. Department of Energy SunShot Initiative's Rooftop Solar Challenge Phase II grant, the Grow Solar Partnership is a network of regional partners working to leverage private, local, and state support to build an open and advantageous solar market across the 3-state region of Illinois, Minnesota, and Wisconsin

- ◆ The Grow Solar Partnership is comprised of a team of core partners that work collaboratively with a wide range of regional organizations
 - **Core Partners:** Midwest Renewable Energy Association, West Monroe Partners, Environmental Law & Policy Center, Great Plains Institute, City of Milwaukee, Clean Energy Resource Teams, Illinois Green Economy Network
 - **State Energy Offices:** Illinois Department of Commerce and Economic Opportunity, Minnesota State Energy Office, Wisconsin State Energy Office

- ◆ West Monroe Partners is leading the Utility Interconnection Process workstream:
 - **Complete:**
 - Current State Findings Report, which highlighted current utility- and stakeholder-identified pain points and best practices across four major target areas: application, information access, processing time, and inspections
 - Evaluating shared solar program enrollment processes, with an actions roadmap and leading practice examples
 - **Next Steps:**
 - Creating pilot utility multi-year Solar Adoption Roadmaps with technology / process improvements for six utilities

For more information, please visit:
www.GrowSolar.org

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