



MI Solar Communities: How to Finance and Develop a Community Solar Project

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MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY



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Catalyst Communities

Resources to aid communities
with their decarbonization efforts



<https://www.michigan.gov/egle/outreach/catalyst-communities>

Michigan Green Communities

Resources for benchmarking and
tracking sustainability progress



<https://migreencommunities.com/>

Today's Speakers

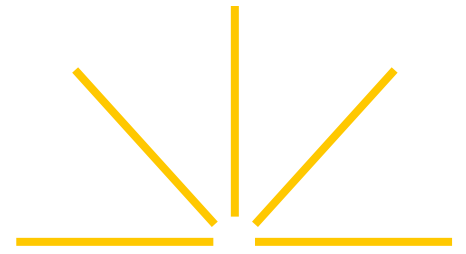
- John Freeman, Executive Director, GLREA

Michigan Solar Communities Guidebook

How to Finance and Develop a Community Solar Project

November 1, 2023





GLREA

The Great Lakes Renewable Energy Association (GLREA) is a non-profit organization of solar energy advocates who support the expansion and adoption of renewable energy in Michigan.

- GLREA's mission is to educate and enable homeowners, farmers, and businesses to save money and protect our environment by installing a renewable energy system and to establish policies that support the expansion of renewable energy in Michigan.
- Become a member or learn more by visiting GLREA.org

Michigan Solar Communities Guidebook

- A Practical Guide for Local Units of Government and Renewable Energy Advocates
 - **Purpose:** To help Local Units of Government, Organizations and Individuals learn about solar and geothermal energy, and be able to support the deployment of it.
 - **Recognition:**
 - The transition from fossil fuels to renewable energy is underway. There is the need of having a Guidebook so people can learn about it, quickly.
 - Many Local Units of Government are developing 'Sustainability Plans' and renewable energy plays a critical role in the implementation of these plans.
 - GLREA and the State of Michigan want to help Local Units of Government support and deploy renewable energy.



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Deployment of Renewable Energy in MI

Key Items to Understand:

- Public Act 295 in 2008
 - Establishing Renewable Portfolio Standard (RPS) of 10% by 2015
 - Establishing the right to install small scale solar – Distributed Energy
- Public Acts 341 and 342 in 2016
 - Increased RPS to 15% by 2021
 - Integrated Resource Plans by the Utilities
- Public Utility Regulatory Policies Act (PURPA) 1978. Require utilities to buy electricity at 'avoided cost'



What's Driving the Deployment of Solar?

- Rising Energy Costs
 - By installing your own system, you are in control and will save money
- Climate Change Concerns
 - Solar owners are reducing carbon pollution and are part of the solution
- Solar Technology Innovation
 - Cost of solar has decreased due to market demand and innovation
- Federal Investment Tax Credit (ITC)
 - 30% off of cost of system



What is Community Solar

- A solar energy system, where individuals or business can either purchase or subscribe to a number of panels.
- The value of electricity generated is credited back through their utility bill.
- Everybody can purchase solar electricity without having to install their own system where they live or work.
- Lower income people can now get solar, without spending a lot of money.



Two Types of Models

- **Equity Model:** participant buys a certain number of panels
 - It's as if panels on roof of house
 - Requires up front payment
 - 30% Fed ITC applies
- **Subscription Model:** participant 'subscribes' to certain number of panels.
 - Requires less money to subscribe
 - Participant doesn't own panels and can't apply ITC



Utility Interest

- There is nothing stopping the utilities from offering Community Solar. But none offer true Community Solar, which is why a new law is critical for its implementation.
- Investor Own Utilities: DTE, Consumers Energy
 - Both utilities offer a form of Community Solar, participants never own the solar blocks. They pay modest monthly fee and receive a small credit for the electricity. Rather than saving money, most people pay a bit more for getting solar.
- Municipal and Coop Utilities
 - These are well position to offer Community Solar because of their clear focus on servicing their customers. No loss of customers or loss of profit.
 - Cities that have a municipal utility and are developing a Sustainability Plan can expand solar through Community Solar.



Utility Interest – Serving Lower Income Families

- As indicated, three utilities established Community Solar programs for their customers; Cherryland, L'Anse and Consumers Energy.
- But it was recognized that the cost of purchasing solar electricity through these programs was still too expensive for lower income households.
- So specific programs were developed to lower the barriers of entry for low-income families to be able to obtain solar electricity.
- State and Federal grant money was used to purchase the value of electricity generated from solar panels and then these 'bill credits were allocated to low-income families in the form of 'solar blocks.' For example, each Cherryland family received 9 solar blocks, which translated into \$20-\$30 per month in savings.



Community Solar Case Studies

Clean Energy for Low Income Communities Accelerator (CELICA)

- Absence of Community Solar statute has not prevented the development of projects
- State of Michigan beginning in 2017 began developing Community Solar for low-income families
- These projects, funded through federal and state grants, seek to develop a sustainable Community Solar model
- Goal is to see whether Community Solar can reduce the energy burden for low-income households and reduce shut-offs



Cherryland Electric

- Located in northwest corner of the Lower Peninsula. Region of affluence and subsistence living. Lack of affordable housing and high utility bills a major problem.
- Cherryland Electric, MI Dept. of Health and Human Services and Northwest MI Community Action Agency partnered to develop a pilot program in 2017.
- Participants first had home weatherized; insulation, LED lights and energy education.
- Then were able to receive energy credits from 9 solar blocks at Community Solar array, which translated into \$20-30 a month savings or \$350 a year.
- Data was kept of energy usage before and after.
- Respondents said energy savings were used to pay medical bills, buy food and make home repairs.
- Program expanded in 2021 to serve more families.



Village of L'Anse

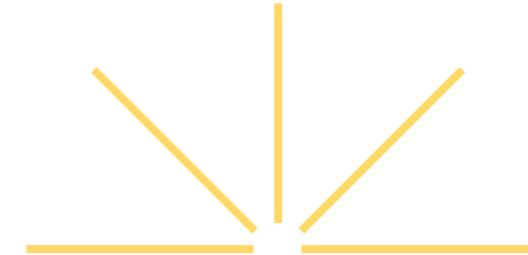
- Located in the Upper Peninsula, at the bottom of Keweenaw Bay, city of 2,000.
- L'Anse City Manager Bob La Fave wanted to develop Community Solar program that included all families, including low to moderate income households.
- Partnered with Michigan Tech University who did a survey to see what people were willing to pay for solar and whether this was viable for lower income families.
- Program targeted to people at 200% of poverty. Participants first had home weatherized.
- Participants were then to lease between one and ten solar blocks for a prescribed number of years. Price of the solar blocks brought down by state grant.
- Monthly savings were \$21-\$23 per month or \$298 per year.
- 'On-Bill Financing' was available to reduce barriers to entry.

Consumers Energy – Capital Area

- Consumers Energy had developed 'Solar Gardens' program and offered to their customers that in return for monthly fee, a person or business can receive credits on their bill for value of solar electricity from subscribing to solar blocks.
- But even this monthly fee might be too high, so Consumers Energy created their Sunrise program and teamed up with Capital Area Community Services and the MI Energy Services Unit to target low-income customers.
- Participants first had to go through home weatherization program.
- Participants were awarded four solar blocks for a prescribed number of years. Price of the solar blocks brought down by state grant.
- Still gathering data on how effective this program is.

Lessens Learned

- Developing successful partnerships with utilities, state agencies and local community action or weatherization organizations, is very important.
- The program must be designed so that low-income households can participate. The cost of participating must not be too high. Funding to bring down the cost is generally required.
- The number of solar blocks that families can subscribe to must be enough to reduce their energy burden meaningfully.
- Homes should be weatherized first to maximize the benefit.
- Time and attention must be given to working with the participating families, who are already under financial stress, in order to make the program succeed and be beneficial.



Questions?

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QUESTIONS?

Upcoming Webinars

- November 14, 11-12 PM
[Tools and Resources to Help Communities Navigate Materials Management](#)
- November 27, 1-2 PM
[MI Solar Communities: Reducing the Cost of Solar through GLREA Solarize](#)
- December 04, 1-2 PM
[MI Solar Communities: Utilization of Geothermal and Other Resources](#)