



Cooperative Community Solar Gardens Building Equity in Our Energy Future

About Cooperative Energy Futures

Cooperative Energy Futures (CEF) is a MN member-owned energy services cooperative that builds community wealth through energy efficiency and clean energy solutions that are accessible to everyone. Since 2009, we've helped Twin Cities residents create affordable community-controlled energy solutions by working cooperatively. We run do-it-yourself weatherization trainings, bulk purchasing of home efficiency products for our members, and group contracting for advanced home insulation and air sealing services. Since 2012, we have innovated residential solar bulk-buying, loan, and leasing models that reduce or eliminate upfront costs, provide immediate financial savings from month one, and enable more people to go solar. We have been building our community solar model since 2013.

Why Cooperative Community Solar Gardens?

A cooperative approach to Community Solar Gardens (CSGs) empowers community leadership and control, creates broad access for all communities, and engages subscribers not just as customers, but as member-owners of community-powered energy. Thus, CEF focuses on serving communities, whether geographic, cultural, or faith communities, that wish to develop CSGs. Our primary goal is to empower communities as members of a shared clean energy enterprise, and design projects that help them achieve their goals and visions. CEF supports communities as a project developer and long-term facilities manager that is owned and controlled by the subscribers who are our members.

As a cooperative, CEF uses the seven cooperative principles to guide how we develop CSGs:

1. **Open and Voluntary Membership:** anyone who wants to join can become a member.
2. **Democratic Member Control:** as members, subscribers can vote or run for the Board, giving them democratic control of these CSGs. Member control provides incentives for active community participation and keeps the cooperative accountable to our members.
3. **Member Economic Participation:** members own the business and its capital in proportion to the amount of business they do with it. CEF has no incentive to generate excess profits beyond development, operation, and administrative costs and operating reserves. Any excess profit is distributed to members based on their share of subscriptions, reallocating any surpluses from our projects back to the community.
4. **Autonomy and Independence:** our relationships with partners must preserve member control. CEF ensures contractor selection based on member priorities (such as price, local hiring and manufacturing, and social equity goals like minority-owned and women-owned contracting) without the conflict of being an installer ourselves.
5. **Education and Training:** we empower our members with information and tools to advance their energy interests and engage actively in the co-op. Cooperative CSGs provide a stronger foundation for engaging subscribers as advocates for a clean energy future than a typical customer-sales relationship. Our weatherization and insulation bulk-buying programs accentuate the energy savings members get from solar, a key component for lower income residents.
6. **Cooperation Among Co-ops:** we collaborate with co-ops in other sectors and are excited to support the development of other co-op-based CSGs.



7. **Concern for Community:** we focus our projects on broad community benefit. We are currently partnering with an on-the-job training program to subcontract with our installation partners as an opportunity for low income residents to gain employment and build job skills in the solar sector. We also innovate in partnership with local organizations, local governments, and financing partners to expand access for low-income community members.

Our CSG Projects are developed with the following features:

Size/Scale: CEF will develop projects at a range of scales based on community needs, but we are focused on roof-top systems in the 200-250kW range. While these medium sized projects are slightly more expensive per watt installed, a higher Renewable Energy Credit rate and some reduced construction and interconnection costs makes projects in this size viable. We are also in discussion with a couple of sites for larger ground-mounted CSGs at or near 1MW. We do not intend to group multiple 1MW projects around a single interconnection, as has become common.

Types and Size of Subscribers: CEF engages subscribers primarily based on the communities (geographic, cultural, or faith) relevant to each site. We fill any remaining subscriptions from interested members in other communities, building networks across our member base. We target residential subscribers, though many projects include local business and organizational subscribers as well. We prioritize access for low-income subscribers and renters. Some projects include large subscribers - usually host sites of a relevant local institution - using up to 40% of the production of the array. We do not design projects that primarily benefit a small number of very large subscribers.

Financing: CEF uses affordable tax equity sources to reduce overall subscriber costs by leveraging federal tax incentives and partnerships with community lending and alternative finance networks to enable pay-as-you-go subscriptions. As a cooperative, we are also exploring methods of community-financing, allowing members and community institutions to participate in project investments and benefits as an alternative to investing in dirty industries. This approach keeps financing costs reasonable and ensure communities get a fair share of the benefits of community solar at an affordable cost.

Subscription Method: CEF uses both upfront and pay-as-you-go subscription models depending on the community served. Especially for smaller projects and those less focused on low-income communities, we encourage the use of upfront subscription models that reduce financing costs and maximize long-term savings to subscribers. For 200-250kW projects serving low-income communities, we use a hybrid model in which some subscriptions are sold upfront and others, targeted for low-income families, are sold pay-as-you-go. Larger projects can be purely pay-as-you-go if desired by the community. We work with communities to structure subscription options to meet community needs and provide full transparency of the long-term costs and benefits of each option so that communities can understand the trade-off between upfront cost and long-term benefit. While models vary, we can achieve savings for upfront subscribers at or above 6.5% return on investment, and average savings for pay-as-you-go subscribers equivalent to 8% or more discount on energy costs.