PRIMER

COMMUNITY SOLAR

CEBA
Clean Energy Buyers Association

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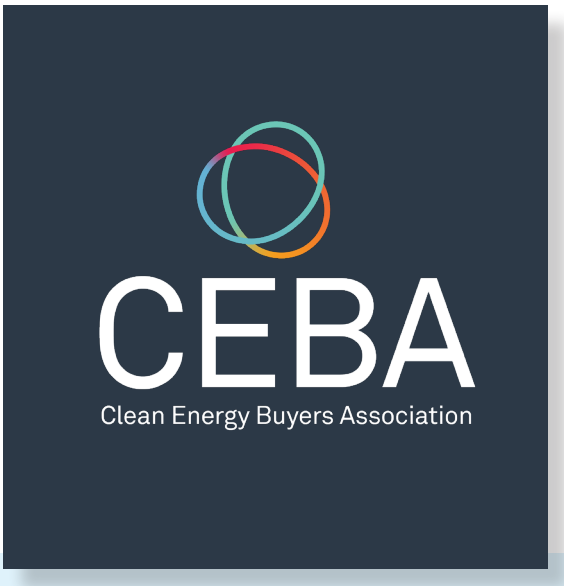

ABOUT THE CLEAN ENERGY BUYERS ASSOCIATION

The Clean Energy Buyers Association (CEBA) activates a community of energy customers and partners to deploy market and policy solutions for a carbon-free energy system. CEBA's aspiration is to achieve a 90% carbon-free U.S. electricity system by 2030 and cultivate a global community of customers driving clean energy.

To join CEBA or learn more about the organizations participating in the CEBA community, visit **www.cebuyers.org.**

OBJECTIVES
OF THIS RESOURCE

PURPOSE: The purpose of the Community Solar Primer is to help energy customers understand the potential to incorporate community solar into their clean energy procurement portfolio. This Primer describes how community solar works, why energy customers may pursue a deal, and things to consider when pursuing this procurement method.

INTENDED AUDIENCE: Energy customers of all types, sizes, and experience levels. Whether you are in the process of formulating your clean energy strategy or looking to expand your portfolio, this Primer will help you think about your options in the marketplace.

HOW SHOULD YOU USE THIS PRIMER? The Community Solar Primer starts with an introduction to the procurement method and includes questions to ask when pursuing this option. Information in this Primer should not be interpreted as a fully comprehensive guide to considerations when pursuing community solar projects. Rather, it should be seen as a tool to help guide internal discussions and decision-making on your clean energy portfolio.

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INTRODUCTION TO COMMUNITY SOLAR

When an energy customer seeks to procure renewable energy close to its load centers, several challenges may arise. In many cases, on-site projects are not practical because energy customers often lease their space and the landlord may be unable or unwilling to install on-site generation. In some instances, on-site solar generation is impossible because rooftops are too shaded or a building's structure is not adequate to support solar panel installation. Additionally, the scale of an on-site project is often constrained by space, making potential generation insufficient to meet a location's needs.

Community solar, ***also known as shared solar, community distributed generation, or solar gardens***, typically provides between 0.5 and 5 megawatts AC (MWac) of grid-connected energy production and offers energy customers a middle ground between small-scale installation and utility-scale procurement.

Energy customers subscribe to a set amount of electricity generated from an array located in their utility service territory, and in exchange, through virtual net metering or a similar process, they receive bill credits for energy produced. These credits offset a portion of what they would normally pay for their energy usage and can often result in a net savings on their energy spend (more on how billing works below).

Large energy customers often engage with community solar by acting as anchor tenants for a solar installation (or multiple installations) in their local community. Though rules vary by location, projects are often legally required to provide at least 50% of their output to residential or small commercial customers. In some regions, a portion of community solar generation must be made available specifically to low- to moderate-income residents, who would not otherwise be able to obtain access to renewable energy because of credit hurdles for traditional rooftop solar installation.

BENEFITS OF COMMUNITY SOLAR

Community solar can be a viable component of your renewable energy strategy and portfolio. Even if you continue to pursue more traditional renewable procurement, community solar can offer cost savings and community relations benefits. Pursuing community solar need not be in conflict with your pursuit of a virtual power purchase agreement (VPPA), for example, as the localized benefits of one are not mutually exclusive of the hedge approach of the other. In fact, the economic value proposition can be quite strong. While a VPPA exposes the energy customer to wholesale energy pricing fluctuations, community solar energy customers generally receive a discount on their bills regardless of prevailing market prices. Depending on the market, the typical community solar corporate customer can expect to see up to a 10% savings on their electricity bills every year.

Community solar also offers an opportunity for enhanced relations with the community in which a project operates. Because projects can be sited local to the companies' operations, energy customers that support community solar installations can point to benefits in the communities in which they operate, even beyond the enhanced tax base or job creation that is often cited for renewable energy installations.

Why consider community solar?

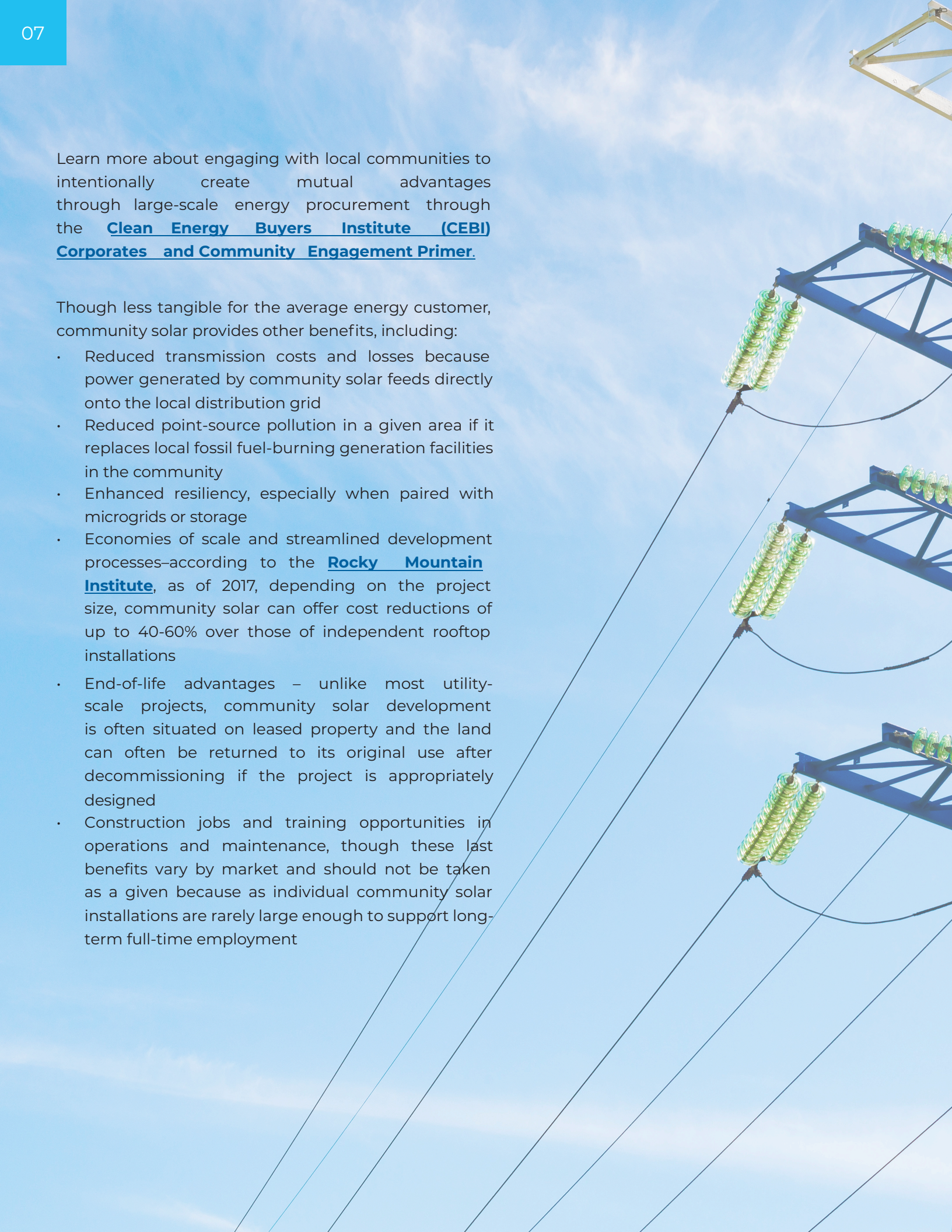
- **Potential cost savings**
- **Enhanced community relations**
- **Positive community impacts for economically burdened population**
- **Reduced transmission costs and loss**

When an energy customer signs on to be an anchor tenant for a community solar project, it becomes easier for a developer to access low-cost financing. This, coupled with rules about subscription quotas for low- and moderate-income residents, offers renewable energy access - and discounted energy rates - to less highly credit-rated customers. These customers often shoulder a disproportionate share of the energy burden; they pay more for energy as a percentage of income, both because of their lower income base and because their dwellings are often less energy efficient than those of higher income residents.

Learn more about engaging with local communities to intentionally create mutual advantages through large-scale energy procurement through the **Clean Energy Buyers Institute (CEBI) Corporates and Community Engagement Primer**.

Though less tangible for the average energy customer, community solar provides other benefits, including:

- Reduced transmission costs and losses because power generated by community solar feeds directly onto the local distribution grid
- Reduced point-source pollution in a given area if it replaces local fossil fuel-burning generation facilities in the community
- Enhanced resiliency, especially when paired with microgrids or storage
- Economies of scale and streamlined development processes–according to the **Rocky Mountain Institute**, as of 2017, depending on the project size, community solar can offer cost reductions of up to 40-60% over those of independent rooftop installations
- End-of-life advantages – unlike most utility-scale projects, community solar development is often situated on leased property and the land can often be returned to its original use after decommissioning if the project is appropriately designed
- Construction jobs and training opportunities in operations and maintenance, though these last benefits vary by market and should not be taken as a given because as individual community solar installations are rarely large enough to support long-term full-time employment



PLANNING A COMMUNITY SOLAR PROJECT

An organization needs to understand the local market conditions for each project they are considering. The organization should consider claims they expect to make about their involvement with the project and align that with on-the-ground realities.

In many locations, the energy customer is not eligible to retain Renewable Energy Credits (RECs) for the power produced by the project. For example, in New York where there is a robust community solar market, local utilities retain all claim to RECs in pursuit of the state's Renewable Portfolio Standard (RPS).

In places where RECs are automatically transferred to the utility, the energy customer can evaluate different ways to purchase unbundled RECs to meet their renewable energy goals and *still see* a net economic benefit. This can often be done through the developer or via a third party, and discussions should include an evaluation of the energy customer's goals; *Are green-e certifiable RECs necessary?; Are RECs from the same area as customer load necessary?* Often, a developer can procure the appropriate RECs, retire them on a customer's behalf, and build them into the billing process for easier accounting.

In this case, while an energy customer cannot claim to be using renewable energy from the specific project they support, they can make parallel claims such as 'the company's direct support of the project offsets the equivalent of X tons of carbon emissions annually.' Depending on the situation, an energy customer may also make a claim that the project could not have been built without its commitment. It is important that any marketing claims be evaluated by legal counsel to ensure accuracy.

Other questions to ask when pursuing a community solar project include:

+ **Do the available market(s) map to my company's load center(s)?** Community solar rules in each state impact the location and availability of projects. Generally, an energy customer must have load in the same utility service territory as the project, which lends credence to the claim that the energy customer's participation is greening the grid where its operations are located and where its employees live and work.

+ **If a single installation is insufficient to meet energy demand, can aggregated projects accomplish our goals?**

  Projects are generally less than 5 MWac in size with restrictions on how much energy a single customer can subscribe to and therefore, one potential challenge to community solar procurement is scalability. If your company needs access to more energy, is the developer able to bundle multiple projects together to cover your load?

+ **How experienced is my developer?** Energy customers should conduct due diligence to ensure that they are working with partners that understand the community solar market and have plans in place to effectively manage contracts after operation begins. Project developers should be able to answer questions about how their subscription process will be managed, including: whether billing will be outsourced to a third-party or handled in-house; if they can meet the requirements of the energy customer's accounting team, how they will engage relevant utilities, if they have a plan for credit management so that financing does not fall through, etc.

+ **How far along is the project?** As with any clean energy project, community solar is subject to permitting and interconnection requirements that could delay, or even scuttle, development plans. Though these smaller-scale projects are often less controversial than utility-scale installations, it is important to understand where a project stands in the development process.

+ **How exactly does billing and accounting work?** Most organizations have a robust accounts payable infrastructure already established that can mitigate challenges of the community solar subscription billing process. Though the billing can be complex, community solar contracts themselves are relatively straight forward and offer no transfer of operational control. This avoids concerns over derivatives, swaps, and lease accounting that may be raised for other forms of procurement. For context, here is one possible example of the billing process:

  - *The business incurs $1,500 of energy costs from its utility in a given month.*
  - *It receives $1,000 in credits from its utility for its community solar subscription in that month.*
  - *The business pays their utility the $500 difference.*
  - *The community solar developer bills the business $900 (for $1,000 of credits earned that month minus a 10% discount).*
  - *A business' total energy spend that month is:*

    $500 (to the utility) + $900 (to the community solar developer) = $1,400 total vs the original $1,500 in energy costs incurred.

  Note that some states, like New York, offer a unified consolidated billing system. This results in the energy customer receiving a utility bill for $1,400 and the developer receiving a payment from the utility for $900 worth of credits. This format may become more common in the future.

+ **What are the contract terms for commercial customers?** Energy customers should make sure they understand and are comfortable with how RECs will be handled (if included), whether there is a price floor associated with the contract, etc. Community solar agreements are generally priced at an indexed discount to the utility bill credit rate or supply rate, depending on the market. Energy customers should also consider contract term length, which is typically 15-20 years for an anchor tenant and may include application of termination fees. However, community solar often allows for transferring a subscription to a new customer location, or to a new customer with investment-grade credit if the existing customer moves out of a utility's service territory.

+ **Can my developer help me make the business case internally?** The idea of saving money on energy spend, meeting clean energy goals, and having a positive impact in the community all by signing a subscription agreement can be seen as a "too good to be true" scenario that requires educating internal stakeholders. Ask the developer if they have the resources and availability to help explain the benefits and process to the company's Chief Financial Officer and other key decision-makers.

+ **Can my company host a project if we own real estate?** Energy customers with land assets or significant roof square footage, like a self storage facility with a light energy load, may consider hosting a community solar project. Site feasibility may be influenced by the fact that community solar developers prioritize projects on sites that have low cost considerations, including land lease, interconnection, grading, and access.

+ **Does my existing relationship with my utility matter?** To offset supply costs in addition to delivery costs, energy customers typically need to take delivery of electricity from their local utility to realize the largest financial savings. Some utilities restrict an energy customer's ability to engage in both on-site and community solar. It is important to ask whether there are other utility/location-specific issues to consider before advancing a project.

+ **Are there additional benefits to community solar involvement?** In some instances, energy customers will negotiate a deal to provide employee benefits by carving out a percentage of the project production to be offered exclusively to employees for subscription. Other internal benefits might include staff off-site visits and community pride as employees drive by company-branded projects.

+ **Are there opportunities for my company to help promote the project benefits to our community?** One of the public relations opportunities with community solar is the chance to get involved in spreading the word about available rate reductions for residents. While saving on utility bills is a clear benefit to local residents, it can require building awareness of the project benefits and cost savings to potential customers. Companies may host workshops or community events that help educate low and moderate income households.

+ **Does my company understand the potential opportunities to maximize impact of the project?** Community solar projects can help reduce the energy burden for low- to moderate-income community members, provide rental income for land-owners, and can provide educational opportunities for nearby schools that raise interest in science, technology, engineering, mathematics, renewable energy, and climate change. In some instances, anchor tenants can influence the type of panels and equipment that are used in the installation. It's important to consider how your community solar project can help maximize benefits.

WHY NOW?

The community solar market is maturing, making now a good time to explore this procurement option. As more projects are developed, the ability for an energy customer to scale procurement of carbon-free energy by combining subscriptions to several different projects is increasing, thereby making community solar a more viable option for companies with larger loads. According to the **Solar Energy Industries Association (SEIA)**, 2,826 MW of community solar had been installed in the U.S. through 2020, with 40 states hosting at least one community solar project. Experts predict additional installation of as much as 3.6 GW of community solar in the next five years.

Community solar was once largely the domain of clients in the Municipalities, Universities, Schools, and Hospitals (MUSH) market because this segment of energy customers had predictable, stationary, long-term load that justified a 20-year commitment in a particular locale. However, shorter contracts have become available in certain markets over the past few years. This allows more flexibility for energy customers to transfer an existing subscription to a new facility instead of risking default on a long-term contract.

As more markets open to community solar development, the widening geographic footprint of projects allows companies more opportunities to support projects that are sited near their operations. As of the writing of this resource in spring of 2021, the most active markets for community solar were Illinois, Maine, Maryland, Massachusetts, Minnesota, New Jersey, and New York. However, according to our expert interviews, Pennsylvania and Virginia were two additional markets that seem primed to expand in the short-term.

The December 2020 extension of the Investment Tax Credit for commercial projects that begin construction in 2021 and 2022 (26%) and 2023 (22 %) may also increase the availability of financing for community solar projects, thus increasing the pool of potential projects.

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