

Request for Information: Equitable Access to Community-based Solar

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Category 1: Equitable deployment and greater access

1. How, and please be as specific as possible, can SETO address the needs for greater community solar deployment and benefits to all customers? Tools and activities that can be leveraged include, but are not limited to:

- Data aggregation
- Analysis
- Decision tool development
- Convening
- Training
- Peer exchange
- Identifying best practices
- Increasing market transparency
- Consumer protection efforts
- Innovative pilot programs
- Prize and challenge programs
- Providing financial assistance
- Evaluation, measurement and verification

Because SETO heavily influences the priorities for funding, research, policies, and projects nationwide, it is extremely important that the office designs high-level frameworks for understanding equity and community solar and uses findings to steer program priorities. This analysis should include the identification of customer groups that are not currently benefiting from existing community solar offerings, the access needs for these groups, and the models of community solar that can meet the needs of identified customer groups to equitably distribute community solar benefits. Along these themes, we provide recommendations for how SETO can use available resources to 1) define community solar customer priority groups using principles of energy equity 2) broaden the framing of community solar benefits beyond bill savings for participants using principles of energy equity and 3) support, amplify, and improve community solar models that prioritize community-ownership and governance by – and for – marginalized communities.

1. Define community solar customer priority groups using principles of energy equity

A major obstacle regarding equity in who benefits from community solar is the lack of defined priority groups and the lack of a “bike lane” for community solar project development in legislative and regulatory matters. Without such definitions at the outset, there are limited ways to accurately assess the state of equity in deployment or to implement effective solutions. We believe that DOE’s recognition of these needs and guidance in these areas are critical to creating equitable community solar programs nationwide.

In order to meaningfully reach “all customers”, communities that have been historically excluded from and/ or are not currently benefiting from community solar must be prioritized. To do so, we must ask, “Have we properly scoped the question and problem for a meaningful solution?” Under guidance from DOE, NCSP, and NREL, community solar laws and programs nationwide reflect a misunderstanding that access for low-to-moderate income communities is the appropriate lens for creating equitable access to community solar and its benefits.

No person is just a “low-to-moderate income customer”. Intersecting identities such as race, gender, medical vulnerability, language fluency, and geography (frontline, not frontline, urban, rural, natural disaster prone) combine with income and wealth to produce novel barriers that cannot be solved through an economic lens alone. An economic lens does give a good aggregation to common problems and common solutions, but if SETO’s analysis does not intersect other frames, SETO will miss barriers that need to be removed before access is truly equitable. For instance, solar developers reach out to black communities less often - and offer smaller loan amounts - than they do for white communities even when controlling for income and home ownership status. Therefore, it is important

for DOE to broaden its notion of customer priority groups along principles of energy equity and to develop incentives and support systems that scale and prioritize the concerns of marginalized and vulnerable groups - particularly pollution-burdened environmental justice communities, which predominantly include people of color and low-income households. Furthermore, energy equity focuses on communities on the frontline of climate change impacts; fossil fuel industry workers; women, non-binary, and trans people; and others historically disenfranchised by social inequity, especially Black, Indigenous, Latinx,¹ and rural communities.

Recommendation: Identify priority groups², including through mapping **geographically-defined groups based on cumulative health impacts and demographic data**, as well as other **vulnerable populations** such as low-income households or customers reliant on electricity to power medical equipment. Additional consideration could be given to identifying solar deserts - areas with low distributed solar generation. This process should involve collaborations with community organizations, frontline leaders, and organizations committed to racial and environmental justice to help establish priorities for data aggregation, analysis, and modeling. These collaborations should be rooted in shared understandings of project expectations, goals, and roles, with collaborators receiving financial compensation for their time and labor. Collaboration should occur across all project stages, beginning with early outlines of project scope and goals through model development to deployment of the tool. This tool should be used by DOE to define priority customer groups for all energy related matters - not just community solar - and be the basis for developing special programs and prioritization of deployment.

2. Broaden the framing of community solar benefits beyond bill savings for participants using principles of energy equity

It is important to consider how much various groups benefit from community solar. Energy equity aims to advance three levels of benefits: 1) the human right to energy, 2) non-energy benefits, and 3) energy democracy.

¹ Tessum et. al. "Inequity in consumption of goods and services adds to racial-ethnic disparities in air pollution exposure." March 2019 (PNAS) <https://www.pnas.org/content/pnas/116/13/6001.full.pdf>.

² Different jurisdictions should involve communities in selecting terms and crafting their definitions, based on the principle of prioritizing, restoring, and benefiting communities that have faced, and continue to face, injustice. For more guidance on the process of creating definitions for marginalized communities, see "Justice in 100 Scorecard," (Initiative for Energy Justice), page 28, <https://iejusa.org/wp-content/uploads/2021/04/Justice-in-100-Scorecard-Interactive-PDF.pdf>. For more examples of environmental justice mapping tools, see "Justice in 100 Metrics," (Initiative for Energy Justice), page 34, <https://iejusa.org/wp-content/uploads/2021/03/Justice-in-100-Metrics-2021.pdf>.

It is useful to categorize the types of benefits from community solar within a larger framework of energy benefits to evaluate if deployment is fair and just. Benefits can be conceptualized as a three-part pyramid with 1) the base of the pyramid being the human right to access affordable electricity, 2) the middle level of the pyramid being non-energy social, health, and economic benefits, and 3) the top of the pyramid being energy democracy: the democratic management of the energy system by the people using that energy.

Throughout the past year, People’s Solar Energy Fund has been organizing a Community of Practice on Community-Owned Solar within the National Community Solar Partnership to identify the unique benefits and desirable outcomes that community solar provides. Examples of some of the second tier non-energy benefits identified that SETO should consider include: local spending value, wealth building opportunities, workforce development and quality local job creation, reduced pollution from dirty peaker plants, resilience to power outages, grid modernization, paired energy efficiency initiatives, redirection of bill assistance dollars away from fossil fuels towards renewable, and education and awareness for distributed renewable energy and its benefits.

A fundamental barrier to people benefitting from the whole suite of potential benefits from the deployment of community solar is the absence of clear goals, metrics, and utility accountability mechanisms to drive these outcomes.

Recommendation: Create metrics and require that at least 60% of holistic benefits from community solar are distributed to marginalized communities. It may be most helpful to think of the distribution of community solar benefits within a larger framework that describes metrics for the distribution of all energy-related benefits. Combining the best practices of states such as Washington and New York, federal and state policy should require the equitable distribution of clean energy benefits, including a minimum of 60% of benefits targeted to marginalized communities.³ Enforceable accountability mechanisms would include adequate reporting of equitable benefit metrics, as well meaningful participation in the development of metrics, measurement, and evaluation.⁴

³ See Washington’s Clean Energy Transformation Act (CETA) (E2SSB 5116, 2019) and New York’s Climate Leadership and Community Protection Act (CLPCA) (S6599, 2019).

⁴ See “Justice in 100 Metrics,” (Initiative for Energy Justice) <https://iejusa.org/wp-content/uploads/2021/03/Justice-in-100-Metrics-2021.pdf>.

Figure 1: Example elements of an energy equity measurement logic mode⁵

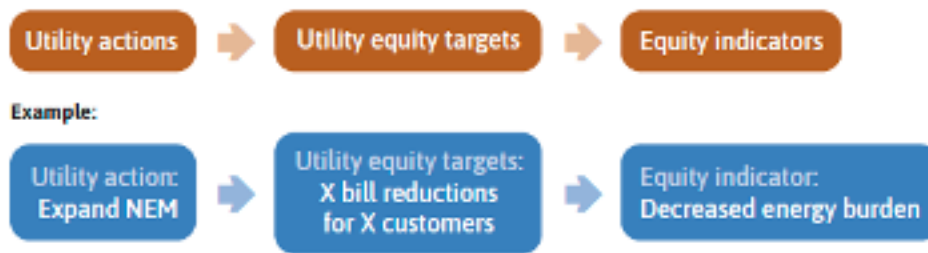
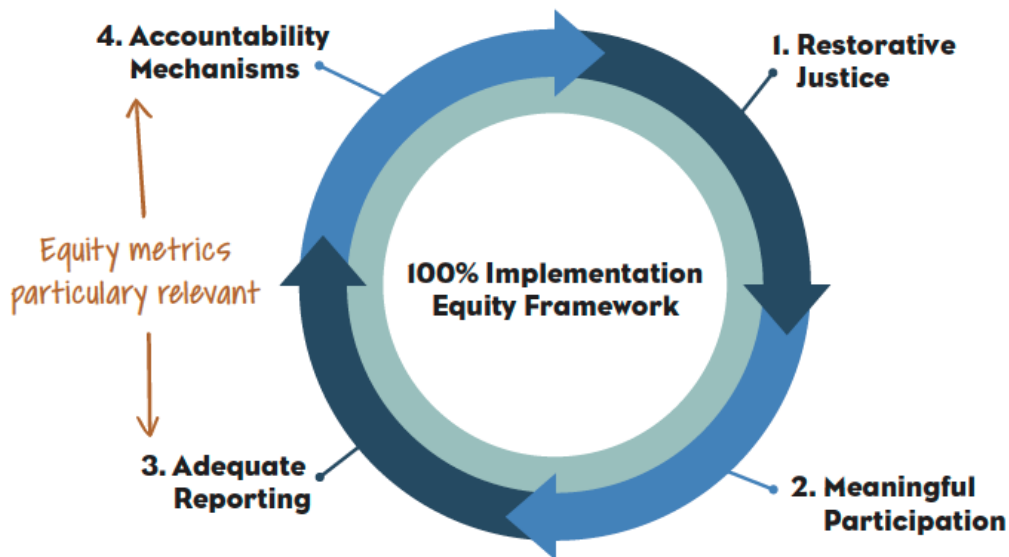


Figure 2: Equity framework in the implementation of 100% clean energy standards⁶



Within this larger framing of equity metrics for all energy-related benefits, specific metrics should be designed to measure and direct the flow of benefits created by community solar.

3. Support, amplify, and improve community solar models that prioritize community-ownership and governance by – and for – marginalized communities

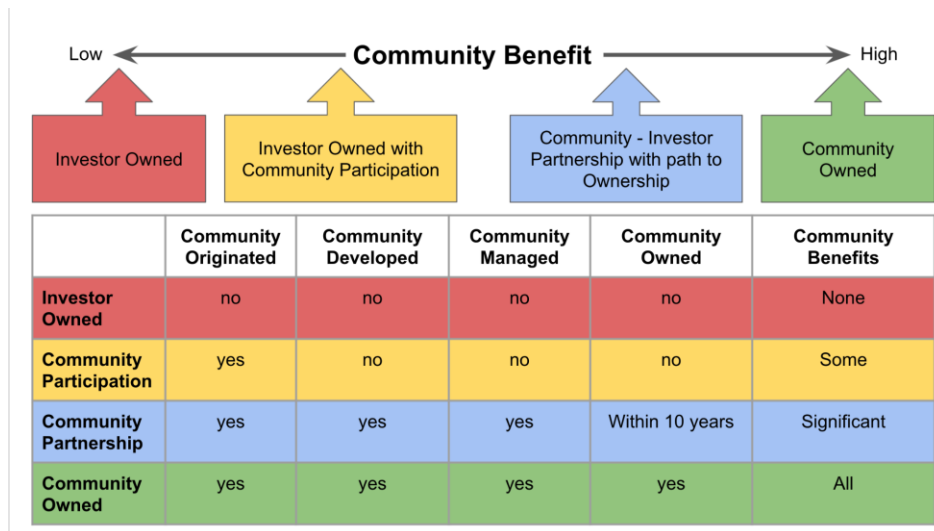
⁵ “Justice in 100 Metrics,” (Initiative for Energy Justice), page 8, <https://iejusa.org/wp-content/uploads/2021/03/Justice-in-100-Metrics-2021.pdf>.

⁶ “Justice in 100 Metrics,” (Initiative for Energy Justice), page 9, <https://iejusa.org/wp-content/uploads/2021/03/Justice-in-100-Metrics-2021.pdf>.

A myopic view of community solar fails to prioritize specific approaches that maximize the creation and equitable distribution of benefits. Through this lens, community solar models are selected on a comparative basis that prioritizes low-cost, market-driven solutions without consideration for which benefits are created and who will receive them. As a result, research, funding, and project development has favored community solar models that are owned and governed by utilities or large, for-profit third parties and limit the scope of benefits to bill savings for participants.

The Community of Practice on Community-Owned Solar within NCSP has identified numerous outcomes unique to community-owned solar projects. We identify community-owned solar projects as projects that are originated, developed, and managed by the community with either direct ownership from the community from the outset of project completion, or investor-owned with a path to community ownership within 10 years.

Figure 3: Spectrum of investor-owned to community-owned projects. For the purpose of this RFI we refer to “community-owned” projects as the green and blue rows.⁷



In order to move beyond the limitations of prevailing models and harvest from the full benefit pyramid, we need community solar models that prioritize community ownership and governance. This is because the lionshare of benefits rest in system ownership and decision-making. Over a project’s lifetime, significant wealth and resources will flow to an array of project stakeholders who benefit from tax equity, siting, manufacturing, sourcing, installation, interconnection, outreach, and

⁷ Created by Lynn Benander (Coop Power, People’s Solar Energy Fund) as a shared resource for Community of Practice on Community-Owned Solar members

maintenance. With this understanding, a community solar project cannot increase equitable access to benefits unless it increases representation for priority groups across all stakeholder groups, not just participants.

Community-ownership enables communities to make direct decision-making around energy assets as energy citizens. These projects maximize benefits to communities by enabling the following unique benefits: increased economic and political power through ownership of essential infrastructure, increased resilience benefits due to community's understanding of environmental risks and needs, reduced negative environmental impact from solar siting due to community's understanding of local land use, wealth creation via shared ownership of a valuable income-producing asset, and increased education and awareness around political and technical elements of our energy system and solar development.

Recommendations: Support, amplify, and improve community solar models that prioritize community-ownership and governance by – and for – marginalized communities. Research and model development should begin with convenings such as the Community of Practice on Community-Owned Solar within NCSP to collaborate with – and learn from – groups that have established community solar projects owned and governed by marginalized communities. Through this process, SETO can learn the priorities and strengths of existing approaches, as well as areas that require further support or development. As part of this process, SETO would identify which benefits are most important to marginalized communities, how to create and equitably distribute benefits, and how to address barriers to increased representation for marginalized communities across stakeholder groups. This knowledge could then be used to develop and amplify equitable project models.

Some starting points for SETO research could include:

- Sunset Park Solar produced by UPROSE, Co-op Power, Solar One, 770 Electric Corp., and Resonant Energy in the Sunset Park neighborhood of Brooklyn, NY ⁸
- Shiloh Temple International Ministries community solar produced by Cooperative Energy Futures, Minnesota Interfaith Power and Light, Sierra Club Northstar, Neighborhoods Organizing for Change, and Renewable Energy Partners in Minneapolis, MN ⁹

⁸ See “Solar with Justice” (Clean Energy States Alliance), pages 89 - 92 <https://thesolutionsproject.org/wp-content/uploads/2020/07/Solar-with-Justice.pdf>

⁹ See “Shiloh FAQ” (Cooperative Energy Futures) <https://cooperativeenergyfutures.wordpress.com/shiloh-faq/>

- Leech Lake Band of the Ojibwe community solar produced by Leech Lake Band of the Ojibwe and Rural Renewable Energy Alliance in Ojibwe territory in Northern Minnesota ¹⁰

4. A component of supporting, amplifying, and improving equitable community solar models is the publicization and sharing of useful project information¹¹. The Community of Practice on Community-Owned Solar within NCSP has already put together an “action plan” to facilitate the sharing of project information, including the steps to:

1. Define shared terms and strategies
 - a. Includes terms such as “community-owned solar”, “equity”, “frontline community”, “Just Transition”, and “community”
2. Define desired outcomes and outcome measures for community-owned solar
3. Collect case studies of community-owned solar
 - a. Create a shared database of select case studies that demonstrate how nonprofits, publicly owned utilities, rural electric cooperatives, nonprofits, and other consumer-owned energy cooperatives are securing financing (gaining access to the ITC) for solar projects that benefit their communities.
4. Identify best practices, as identified by marginalized communities and more generally, in financing for community solar ownership including processes for community inclusion in the solar development process.
 - a. Overall description of the various models, the suite of legal documents, financial proformas, etc. enabling policy required and outcomes
5. Identify current resources, policies, programs, organizations supporting financing and development of community solar ownership
6. Identify resources, policies, programs, and organizations needed in the future to better support community solar ownership

Recommendation: SETO should facilitate step 3 (above): developing a centralized database to track community-owned solar projects with publicly accessible data detailing project characteristics - including information concerning stakeholder demographics, funding sources, ownership structure, compensation rate, bill savings, financing options for participants, involved organizations/companies/utilities, enabling policy, and siting information. The work to implement

¹⁰ “Community solar garden first in MN to be 100% dedicated to low-income residents” (Clean Energy Resource Team) <https://www.cleanenergyresourceteams.org/community-solar-garden-first-mn-be-100-dedicated-low-income-residents>

¹¹ See “Equitable Community Solar: California and Beyond” (Ecology Law Quarterly) <https://www.ecologylawquarterly.org/print/equitable-community-solar-california-beyond/>; and “Establishing Equitable Community Solar Programs” (Institute for Local Self-Reliance) <https://ilsr.org/equitable-community-solar-release/>

this project could be resourced by SETO and supported by the number of academics, community-based energy developers, and other specialists already participating within the Community of Practice and managing existing data on community-owned solar projects in the United States. This data should then be used to 1) conduct periodic equity assessments to determine who is benefitting from community-owned solar in order to inform solutions for future projects, 2) communicate project successes and novel innovations, and 3) amplify the replication of desirable models across the unique needs of variable policy landscapes.

2. What are specific needs, beyond financial support, for increased and more equitable community solar adoption and customer acquisition/management?

1. Meaningful participation from marginalized communities in rulemaking and model design

A major obstacle to ensuring that marginalized communities benefit from community solar is the absence of their voice, insight, and perspective at the stages of regulatory rule-making as well as system design and predevelopment. Well-intentioned decision-makers who are not adequately informed by the unique lived experiences, needs, and challenges faced by marginalized communities will inevitably have blind spots that lead to ineffective regulations and the creation of programs and projects that are improperly sited for these priority groups, do not maximize the desired outcomes for priority groups, or that make customer acquisition and management difficult.

Recommendation: Invest in robust outreach, inclusive practices for soliciting feedback, and providing resources. To overcome this obstacle, we must **center the most-impacted and most-vulnerable communities in the design of solutions upfront.** To adequately meet the needs of marginalized groups, these communities must be at the decision-making table identifying systemic problems, practical challenges in implementation, and proposed solutions. Federal, state, and local lawmaking and rulemaking should include direct outreach and meaningful participation for the public and marginalized communities, including accessible meetings. Energy policymaking should also provide relevant information and other resources to the public and marginalized communities to sufficiently evaluate the proposed policies.¹² For these practices to be meaningfully accessible:

¹² See “Justice in 100 Scorecard,” (Initiative for Energy Justice), page 19-20, <https://iejusa.org/wp-content/uploads/2021/04/Justice-in-100-Scorecard-Interactive-PDF.pdf>

- Financial compensation should be provided for contributions to rulemaking. Intervenor funds must be appropriately priced and distributed on a reasonable timeline so that underfunded community organizations can participate.¹³
- Direct communication with frontline leaders and community groups should occur with sufficient notice and operate along a timeline that is suitable for meaningful community engagement. Community liaisons should have time to create and distribute educational materials, communicate with their member base, and seek out and receive adequate technical assistance in order to participate fully. For example, a community solar program designed for robust outreach with marginalized communities should require at least twice the timeline as one designed solely for industry professionals, and often more, depending on the nature of the project and communities engaged.
- Accessible meetings should be located near public transportation, held outside of customary work hours, provide multiple opportunities for participation across several days and times, offer remote participation options, provide sufficient time for public speaking, provide real-time language translation, provide childcare support during meetings, and occur in the absence of “backroom” dealings or undisclosed communication with utilities or industry leaders.

2. Technical assistance and training for community-based solar development

Many of the marginalized communities who would most benefit from community solar development are the same communities that have faced a history of colonialism, red-lining, resource/wealth extraction, pollution, gentrification, and other injustices from external parties and developers. As a result, many of these communities are understandably skeptical of external parties engaging in community solar development or customer acquisition in their communities. In order to build trust and ensure optimal outcomes for their community, communities should be their own stakeholders and leaders in the development and design of community solar projects and customer acquisition programs.

Recommendation: Technical assistance and training materials should be made available that are designed to educate and train marginalized communities to lead in the solar development process. Since community solar development is a highly technical task involving large amounts of

¹³ For an example of financial compensation for rulemaking engagement, see “Intervenor Compensation Program” (California Public Utilities Commission) <https://www.cpuc.ca.gov/icom/>

legal, financial, and engineering expertise, these materials should address every stage of the solar predevelopment and development process, enabling communities to make meaningful decisions at each step of the development process.¹⁴ These materials should be designed with meaningful input from marginalized communities, and be designed specifically for community-based solar development. Examples of what could be described in these materials are:

- Definitions of the roles commonly involved in community solar development
- Definitions of the milestones commonly encountered in community solar development
- An overview of the key outcomes and questions to consider in community solar development
- An overview of how community solar works, how the grid works, how energy markets work, and how energy and revenue flow through a community solar project
- An overview of factors to consider in system siting and design
- An overview and comparison of the financing models available for community solar that prioritize benefits to community stakeholders

3. Inclusive financing models for customer acquisition

Marginalized communities and frontline communities face the highest energy burdens in the United States.¹⁵ As such, these communities stand to benefit the most from the financial benefits of community solar. Despite the fact that FICO scores cannot *legally* correlate with factors such as race and income, given our national history of racist red-lining and predatory lending, it is known that in *reality* they do.¹⁶ In addition to the prohibitive barriers presented by FICO, many marginalized communities and high energy burden customers may also not be able to afford the up-front costs associated with participating as a subscriber in community solar.

Recommendation: Inclusive financing models and credit check strategies should be included in any customer acquisition strategy. In place of FICO, customer acquisition programs should

¹⁴ People’s Solar Energy Fund is currently designing a TA Program for Community-Based Solar Developers to pilot this idea.

¹⁵ See “Lifting the High Energy Burden in America’s Largest Cities”, (American Council for an Energy Efficient Economy), page 4, <https://www.aceee.org/sites/default/files/publications/researchreports/u1602.pdf>

¹⁶ See “Credit Scores Perpetuate Racial Disparities”, (Urban Institute) <https://www.urban.org/urban-wire/credit-scores-perpetuate-racial-disparities-even-americas-most-prosperous-cities>

instead turn to inclusive alternatives or bypass credit checks altogether.¹⁷ Similarly, programs should offer services such as on-tariff or Pay-As-You-Go (PAYGO) financing in order to avoid upfront costs to participation.

4. Transparent utility processing of utility interconnection agreements

Often, utilities are not required to disclose specifics of how they process interconnection agreements or why applications are denied. This lack of transparency benefits established private developers and hinders the ability of nonprofits, cooperatives, tribal governments, and other community-based solar developers to submit bids for competitive community solar projects. In conjunction with this, interconnection processes are often opaque and require a number of bureaucratic steps. Utilities could improve on this a number of ways, such as by offering public maps of where the most efficient interconnection points in their territory can be found, and creating resources to guide community-based solar developers through the interconnection step.

Recommendation: A study of what practices utilities should follow to create a “bike lane” for community-based solar development. This study should include and describe the resources utilities provide from the outset of project development - such as interconnection maps, interconnection guides, application instructions, timelines - as well as the resources and platforms used during and after the interconnection process - including application materials, email updates, and information necessary for improving future interconnection requests. This study should be conducted in consultation with community-based solar developers from rural and urban geographies.

3. What are the specific barriers, if any, to provide greater access to capital and/or affordable tax equity for community solar deployment for all markets? Please describe in detail where access to capital or tax equity stopped a project from moving forward and possible SETO-focused tools and activities, as referenced above, that could have facilitated a solution.

The ITC is a significant barrier to capital access and affordable tax equity. In its current form, the ITC does not provide upfront financing support; is only accessible to those with significant and/or passive

¹⁷ See “EnergyScore,” (Solstice) <https://solstice.us/wp-content/uploads/2018/08/2018-08-09-EnergyScore.pdf>. PosiGen also offers an example of an effective alternative credit check that correlates higher energy burdens with a lower likelihood to default, given that a solar program offers savings to the subscriber <https://www.posigen.com/the-truth-behind-posigens-solar-program/>

forms of income; and cannot be accessed by nonprofit and community organizations; state, local, and tribal governments; or cooperative and municipal utilities. This skews access away from the entities best equipped to deploy projects in a manner that is equitable and prioritizes community ownership and governance. As such, participation by these entities often requires a tax equity partner, causing financial value to flow away from priority communities and hinging project success on partnerships between entities that often have conflicting priorities and interests. Given these circumstances, the existing form of the ITC uses public dollars to incentivize the privatization of solar resources among companies and individuals with significant pre-existing wealth.

Recommendation: Conduct an analysis of the Solar ITC that recommends short-term improvements and long-term replacement mechanisms to increase the deployment of equitable solar projects. Short-term, this analysis should provide recommendations for immediate improvements to the ITC, making it accessible as a cash grant/ direct pay option for size qualified projects owned by entities that are unable to access the incentive in its current form. For an example of what ITC modifications may look like, refer to page 3 of the 30 Million Solar Homes policy guide.¹⁸ Long-term, this analysis should lay out a roadmap of alternative incentive options geared towards the deployment of equitable solar projects with the intent of replacing the ITC. This analysis should first identify the characteristics of equitable solar projects in order to understand the financial support thresholds required for project viability and the incentive mechanisms that are most accessible to the types of entities involved in project development.

Category 2: Strategies for meaningful bill savings and other benefits of community solar

2. What is needed to promote and deploy additional community-owned solar facilities for the purposes of local wealth building?

1. Virtual net metering as a necessary policy for community solar proliferation

Virtual net metering (sometimes called “group” or “neighborhood” net-metering, or “shared renewables”) is a state policy that allows utility customers to net their on-bill energy consumption against a shared, remote community solar project.¹⁹ In states where this policy is available to all customer groups, such as Minnesota and Massachusetts, this program has become synonymous with

¹⁸ See “Policies for an Equitable Economic Recovery Built on Climate Protection and Energy Democracy” (ILSR, SUN, IEJ), page 3 <https://www.30millionsolarhomes.org/wp-content/uploads/2021/05/30-Million-Solar-Homes-policy-proposals-May-25.pdf>

¹⁹ See “Virtual Net Metering” (ILSR), <https://ilsr.org/virtual-net-metering/>

community solar. Other states, such as California, make do with a patchwork of virtual net metering and other community solar programs for specific customer groups, such as multifamily housing.²⁰ Virtual net metering is a proven program for the purposes of local wealth building in frontline and marginalized communities because it enables commercial and residential utility customers to access the Section 48 and Section 25D ITC *directly* as consumers of renewable energy. Utility customers in marginalized communities are often otherwise unable to access these vital incentives under single-offtaker net metering due to a high proportion of customers who a) rent their property or b) do not possess the capital or credit to go solar individually. Additionally, virtual net metering enables communities to develop neighborhood-scale community solar projects without the involvement of tax equity partners, who are often interested in larger scale projects²¹.

b. What elements should be considered in program or business model designs to ensure a community-owned facility provides resiliency benefits? What specific assets should be included?

Resilient community-owned facilities should incorporate solar and energy storage technology so that they can function independently of the grid in the event of grid disruptions. The possibility of incorporating energy storage should be considered early in the project development process because solar and/or electrical design can quickly move too far along to make the needed adjustments for storage without delaying the project. At the very least, a facility should consider space and siting requirements for a battery system and associated hardware and the feasibility of isolating desired critical loads given the electrical system layout.

In general, parties developing community-owned resilience facilities should consult with local home care workers, disaster response workers, and others at the frontlines of community resilience in order to adequately understand and address the energy resilience needs for their region. Models for community solar resilience should follow the “Resilience Hub” design for community solar whereby local communities play a critical role in siting the project on the site of a local community center (such as a school, church, etc.) that is well known and accessible by the community (more below). City, state, and local governments should facilitate programs that incentivize networks of Resilience Hubs that can offer solutions on a regional scale, share best practices, and offer complementary services.²²

²⁰ See SOMAH, <https://calsomah.org/>

²¹ See “Tax Equity Financing, An Introduction to Policy Considerations” (CRS), pages 11-12

²² See “Resilience Before Disaster” (APEN, SEIU, BlueGreen Alliance), pages 6-8, <http://apen4ej.org/wp-content/uploads/2020/10/Resilience-Before-Disaster-FINAL-UPDATED.pdf>

Other special considerations that should be given to siting include:

- Particular consideration should be given to areas that are prone to extreme weather events or power shutoffs (planned or unexpected). For example, at locations prone to wildfires, facilities should be equipped with HEPA filters for air purification.
- Within priority areas, sites should be as accessible as possible (especially in the absence of transportation options) and should be co-located at sites with critical community infrastructure. Critical community infrastructure is “infrastructure that is vital to community and individual functions, including -
 - schools;
 - town halls;
 - public safety facilities;
 - hospitals;
 - health clinics;
 - community centers;
 - community nonprofit facilities providing essential services;
 - libraries;
 - grocery stores;
 - emergency management facilities;
 - water systems;
 - homeless shelters;
 - senior centers; and
 - public or affordable housing.²³
 - Resilient community-owned facilities should be prepared to handle the needs of medical baseline customers. Medical baseline customers are people with special energy needs due to a medical condition (i.e. refrigeration for medication or electrification for life - or mobility - supporting medical equipment

Because solar and storage share the same electrical system at any facility, it is most cost and time efficient to design and install storage and solar projects simultaneously. Community solar programs wishing to incentivize resilience should therefore include incentives for storage or at least be designed to accommodate timelines for parallel storage incentives and development. For example, the Community Solar Green Tariff (CS-GT) program, a community solar program in California, only

²³ See the Energy Resilient Communities Act (H.R. 8628)

offers incentives for solar and requires developers to follow a fast and strict interconnection timeline with the local utility and ISO, making it difficult to coordinate development with incentives for storage, such as the state’s Self Generation Incentive Program (SGIP).²⁴

In addition, programs designed to incentivize storage more broadly should account for the unique use-cases that storage-for-resilience requires. Storage designed for demand response or energy arbitrage may prioritize smaller battery technologies with quicker discharge/refill times, whereas resilience needs may require a larger battery system with more lenient discharge/refill times. As an example, incentive programs focused on demand shaving that limit solar and storage technology sizing to the peak demand of a site’s historical usage may not allow for solar and storage systems large enough to provide long term resilience in the event of an outage.²⁵

3. How could DOE programming or funding ensure community solar facilities provide economic and environmental resiliency to the communities they are located in?

Following the policy language from the 30 Million Solar Homes Initiative, DOE should²⁶:

- Create a national resilience grant competition for projects that reduce community vulnerability to disaster-related power outages through distributed solar plus storage in marginalized communities, with at least \$15.5 billion available over five years.
 - Model the program after the one proposed by H.R. 8626 Energy Resilient Communities Act²⁷, with all funds reserved for use in marginalized communities.
 - Funds can be used to install solar and storage technologies on community anchor institutions, essential businesses, and residential buildings.
- Consult with HUD for guidance and best practices on running a national disaster resilience competition.
- Provide \$100 million over five years to support education and outreach on the benefits of solar energy, federal funding opportunities for solar, and the importance of an equitable transition to clean energy.
 - Materials and engagement should be available in multiple languages, including English and Spanish.

²⁴ This comes from People Power Solar Cooperative’s experience in developing a CS-GT project in California

²⁵ See “Resilient Power Project Toolkit” (CEG), <https://www.cleangroup.org/ceg-projects/resilient-power-project/toolkit/>

²⁶ 30 Million Solar Homes is an initiative put together by the Initiative for Energy Justice, Institute for Local Self Reliance, and Solar United Neighbors <https://www.30millionsolarhomes.org/>

²⁷ See the Energy Resilient Communities Act (H.R. 8628)

- A portion of the funds should be reserved for a competitive grant program to support local governments and community organizations conducting relevant education and outreach activities for marginalized communities.

Category 3: Innovative Business Models

1. What types of business models exist that support community ownership of solar? What barriers exist to making community ownership of solar accessible, affordable, and scalable? How could DOE address specific barriers, if possible?

Cooperatives, nonprofits, and community organizations; state, local, and tribal governments; and cooperative and municipal utilities are all examples of models that support community ownership of solar by virtue of a) operating locally, b) engaging community members democratically as stakeholders, and c) removing the profit incentive for solar development. Refer to responses in Category 1 for information about barriers, needs, and recommendations regarding the development of these models.

2. How can community solar facilities better leverage micro-grids, storage and other technologies to provide greater value and meaningful benefits to customers and communities?

When siting a community solar facility, the potential for community resilience benefits should be considered. If the solar system will be behind a customer's meter, can that facility serve as a place of refuge, cooling center, or community resource hub? See response to question 2b for more detail. For front-of-the-meter systems, developers should consider if there is a community facility nearby that could be powered by the system when paired with storage.²⁸

²⁸ Clean Energy Group has worked with projects where a section of the grid could be isolated to serve as a microgrid during a power outage, such as the Stafford Hill Solar Farm and Microgrid. <https://www.cleanegroup.org/ceg-projects/resilient-power-project/featured-installations/stafford-hill/>