

The Coalition for Community Solar Access (CCSA) appreciates the opportunity to provide comments on the development of a community solar framework for Puerto Rico. CCSA is a national trade association representing over 100 community solar developers, businesses, and nonprofit organizations working to expand customer choice and access to clean, local, and affordable energy through community solar programs. Our members actively develop and operate community solar projects across the United States and work closely with regulators, utilities, and policymakers to design and implement programs that deliver meaningful bill savings, expand access to underserved customers, and support grid reliability. We offer these comments to share best practices from established markets and to support the development of a successful, scalable, and equitable community solar program in Puerto Rico.

1. *What business model for implementing community solar (e.g., privately or municipally owned) best enhances affordability, equity and reliability of the Puerto Rico electric system?*

A third-party owned and operated community solar model best enhances affordability, equity, and system reliability. Under this structure, private developers finance, build, own, and operate community solar facilities, while utilities play a critical role in interconnection, billing, and crediting. This model has consistently demonstrated the ability to attract private capital, accelerate deployment, and deliver immediate bill savings to customers without requiring upfront investment.

This approach aligns with national best practices and CCSA policy guidance, which emphasize that competitive third-party markets drive innovation, reduce costs, and maximize customer savings.

a. *Summarize how that business model would be structured.*

Typically, under this model, third-party developers (often referred to as Subscriber Organizations or SOs) develop, own, and operate community solar projects and, in most established markets, are also responsible for customer acquisition and subscription management. This structure has proven effective in ensuring efficient project deployment, customer enrollment, and ongoing compliance with program rules.

At the same time, there is flexibility in program design to allow the utility to play a more active role in customer management functions, such as subscriber enrollment, billing integration, and customer interface. Allowing utilities to serve as the subscriber manager, while third parties retain responsibility for project development and operations, can be a viable alternative where it improves customer experience or administrative efficiency.

Irrespective of the entity that is chosen to manage subscribers, under community solar, as subscribers to the project, customers receive bill credits on their utility bills for their share of its generation each month. Utilities administer billing and crediting and maintain grid reliability, while regulators oversee program rules, consumer protections, and market performance.

This structure ensures clear role delineation: developers manage project risk and customer acquisition, utilities ensure system integration and billing accuracy, and regulators provide oversight and enforcement.

*b. Provide examples of where this business model has been implemented.*

This model is widely implemented across leading community solar states including New York, Massachusetts, Minnesota, Illinois, and New Jersey. These markets demonstrate that third-party ownership combined with strong regulatory oversight can scale deployment while maintaining high consumer protection standards and ensuring meaningful bill savings.

*2. What is the appropriate governance structure for the community solar business model identified in response to question 1?*

A governance structure that combines independent third-party operation with strong regulatory oversight is most effective. Third-party companies are responsible for compliance with program rules and consumer protection requirements, while the PSRB provides regulatory oversight and enforcement.

*a. Explain the governance of the example provided, with links to documentation (tariffs, laws establishing governance, etc.).*

In leading states, governance is established through enabling legislation and implemented through utility tariffs approved by the relevant commission. These tariffs define eligibility, crediting mechanisms, interconnection and program rules, while legislation establishes program objectives such as bill savings, market access, and equity requirements.

Regulators maintain authority over program administration, reporting requirements, and enforcement actions. Developers must register and demonstrate technical, financial, and managerial capability, consistent with CCSA consumer protection recommendations requiring qualification assessments and registration processes. fileciteturn0file1

*2. What role do you envision different public (governmental) entities in Puerto Rico will play in the governance of community solar?*

The Public Service Commission should serve as the primary oversight body, responsible for program design, tariff approval, compliance monitoring, and enforcement. Additional roles may include:

- Energy Bureau or equivalent: program administration and rulemaking support
- Consumer protection agencies: enforcement of marketing and contract standards
- Attorney General: enforcement of consumer protection laws

*3. What is the appropriate geographic (or administrative) boundaries of community solar programs? Why?*

Community solar programs should be structured around utility service territories. Requiring subscribers to be located within the same utility territory ensures that generation and consumption are aligned within the same distribution system, simplifying crediting and maintaining grid integrity.

*a. How are boundaries established in the business model recommended in Q1?*

Boundaries are typically defined by utility service territory.

*b. What are the alternatives for setting the boundaries of the community solar entity? What is the preferred alternative, why?*

Alternatives include statewide participation, load zone-based participation, or political subdivision boundaries. Utility territory-based boundaries are preferred because they align with billing systems, interconnection processes, and grid operations, minimizing administrative complexity.

*c. Should community solar be confined to a political subdivision? Please explain.*

No. Limiting programs to political subdivisions unnecessarily constrains participation and reduces economies of scale, ultimately increasing costs and limiting access.

*4. What are the different physical configurations for developing community solar?*

Community solar projects are typically ground-mounted or rooftop solar arrays interconnected to the distribution system. There is no need to differentiate significantly from other distributed solar configurations, provided projects meet interconnection and safety standards.

*a. Should ride-through inverters be required? Please explain.*

Ride-through inverter requirements should be evaluated within the interconnection process to ensure system reliability and resilience, particularly in a grid like Puerto Rico's that faces stability challenges.

*b. Should storage be required as part of the community solar configuration? Please explain.*

Storage requirements should be aligned with existing system rules. Where storage is already required for projects above certain thresholds (e.g., 1 MW), those requirements should apply consistently. Storage can enhance resilience and grid value but should not be mandated universally in a way that undermines project economics.

*5. What interconnection requirements are required for community solar?*

CCSA recommends an evaluation of interconnection rules concurrent with the development of Community Solar programs. When Community Solar programs "go live", they result in a substantial increase in larger interconnection requests, which require detailed analysis of impacts to the distribution system. Our experience in other markets has demonstrated that the

preexisting processes, procedures and utility staffing is not fit for purpose to adequately handle this inevitable increase in demand for interconnection. That said, there are good examples of how Commissions and utilities can reform the interconnection process and regulation to enable a well-functioning market, most notably in New York. It is critical that the interconnection process be transparent, timely, and standardized to reduce project uncertainty and delays.

6. *For the business model cited in (1), please outline interconnection requirements, including the entity to whom the community solar utility is connected.*

Community solar facilities interconnect directly to the utility distribution grid under standard interconnection procedures. The utility is responsible for reviewing, approving, and managing interconnection, ensuring that projects meet technical and safety requirements.

7. *What role should NEM play in valuing power from community solar? Explain why.*

Net Energy Metering (NEM) provides a straightforward and administratively efficient mechanism for valuing community solar generation. It allows subscribers to receive bill credits comparable to those available for onsite solar, promoting fairness and market clarity. Modifications to NEM credits may include modest adjustments to account for distribution system usage.

- a. *Can customers with solar compensated by NEM participate in community solar? If yes, how will their participation differ from customers who do not have solar compensated by NEM?*

Yes. Customers should be allowed to participate up to their net annual load. For customers with onsite solar, community solar subscriptions should be limited to their remaining consumption to prevent over-subscription.

8. *What entity will purchase excess electricity generated by the community solar project?*

The utility should purchase excess generation. In most cases, excess generation (not attributed to subscriptions) is minimal. Where excess exists, it may be compensated at avoided cost rates or rolled forward for future credit allocation. CCSA recommends creating mechanisms for rolling over credits to maximize the benefits of Community Solar to Puerto Ricans.

9. *What are options for pricing power injected into the grid?*

Pricing options include NEM-based crediting, avoided cost compensation, or more complex (but best-in-class) value-of-solar methodologies. While value-of-solar approaches provide precision, they can be administratively burdensome to develop. NEM remains a practical and effective starting point in many jurisdictions, but CCSA encourages the Commission to initiate a proceeding to develop a distributed solar “value stack” in an effort to establish an appropriate Community Solar compensation mechanism in the longer term.

- a. *What pricing information is available to support pricing of transactions injected into the grid?*

Pricing can be supported through NEM structures, avoided cost studies, and distribution system value assessments. Empirical evidence from multiple states demonstrates that NEM provides a reasonable approximation of distributed generation value.

*b. Are current estimates of avoided costs sufficient to support pricing for community solar? Please explain.*

Avoided cost estimates alone are generally insufficient, as they often undervalue the broad array of distributed generation benefits, including resilience, avoided transmission costs, local economic impacts, and others.

*c. What information is available from LUMA about the real-time value (price) that could support pricing with community solar injections into the grid?*

Real-time pricing data, if available, could support more dynamic valuation approaches; however, such methodologies require advanced metering and administrative infrastructure that may not yet be fully developed. There has not yet to date been a market in which Community Solar bill credit valuation relies on real-time pricing, and while CCSA is supportive of the concept, we would caution the Commission of seeking to implement such a concept at this time.

*11. How is the power delivered to members of the community solar organization (from grid sources or the community solar facilities) priced (credited) and accounted for?*

Energy is not physically delivered to subscribers, as once electrons enter the grid, they are undifferentiated from all other generation facilities' output. Instead, generation is exported to the grid, and subscribers receive bill credits on their utility bills equivalent to their allocated share of their project's monthly output.

*12. What will be the basis for crediting electricity provided by the community solar organization to the ultimate buyer for its members?*

Credits should be based on the value of electricity as determined by the applicable tariff (e.g., NEM or program-specific credit rate), ensuring transparency and consistency.

*13. Will credits to community solar members be based on a tariff, contract, or some other vehicle? Please explain.*

Credits should be established through a PSRB-approved tariff, while customer-specific terms (e.g., pricing discounts, subscription size) are governed by contracts between the subscriber and the developer.

*14. Do participants in community solar sign up for a fixed amount of energy to be delivered? If so, how is excess energy consumed priced, and energy not taken credited?*

Participants typically subscribe to a defined portion of a project, expressed as a percentage of output or estimated kWh. Excess production is credited via bill credits, while unused credits may

roll over depending on program rules. It is critical that regulations not seek to mandate specific kWh, but rather rely on the percentage in order to reduce administrative burden and avoid unnecessary complexity.

*15. Should participation in community solar be “opt-in” or “opt-out”? Why?*

Opt-out structures can significantly increase participation and equity, particularly for low-income customers, but must be carefully designed to ensure consumer understanding and consent. In most markets, opt-in programs are more common, but they can limit participation and equity outcomes and result in higher “soft costs” in the form of customer acquisition costs.

*16. What reporting requirements are necessary to oversee community solar entities?*

Utilities and developers should report regularly on metrics that will help illustrate program performance, including subscriber counts, project capacity, bill credit values, and low-income participation. Transparency is critical to effective oversight and market monitoring.

*17. What entity should receive those reports?*

The Public Service Commission should receive and review these reports, with data made publicly available to ensure transparency.

*18. What is the role of consumer protection for customers enrolled in community solar programs?*

Consumer protection is central to program success and should include clear disclosures, standardized contracts, transparent pricing, and robust enforcement mechanisms. CCSA best practices emphasize that customer-facing materials must be clear, concise, and include key contract terms such as fees, cancellation policies, and expected savings. fileciteturn0file1

Programs should also include dispute resolution processes, marketing standards, and requirements for accurate and timely bill crediting.

*19. What entity has authority to provide that protection?*

Consumer protection authority should be shared among the Public Service Commission, the utility, and relevant consumer protection agencies, with clearly defined roles and enforcement authority.

*20. If no entity has authority to provide customer protection, what governmental entity would be appropriate to take on this role?*

The Public Service Commission should be designated as the primary authority, with coordination from the Attorney General’s office and other consumer protection bodies.

*21. How should concern for distributional equity be incorporated in the regulatory rules and design of community solar projects?*

Equity should be embedded through program design requirements, including low-income participation targets, minimum bill savings, and removal of barriers such as upfront costs and credit checks. Over the years, Community Solar programs have evolved such that subscribers do not incur any up-front costs in order to participate in the program. CCSA guidance emphasizes that low- to moderate-income customers should receive guaranteed savings (which, in reality, all subscribers enjoy through their subscription to a Community Solar project).

*22. Should there be set-asides for service to low income or disadvantaged customers? How would that work?*

Yes. Programs should include minimum participation requirements or dedicated capacity for low-income customers, along with guaranteed bill savings. Enrollment processes should be streamlined, and eligibility verification should minimize administrative burden and avoid intrusive financial screening.

*23. Should there be limits on the capacity of community solar projects? If yes, what is the basis of those proposed limits? What entity would establish those limits?*

Individual project size limits (commonly around 5 MW) can balance economies of scale with grid integration considerations. Aggregate program caps should be avoided or set at sufficiently high levels to allow sustained market growth and attract private investment in the island's grid. The Public Service Commission should establish these limits through rulemaking based on system conditions and policy goals.

These comments are informed by the Coalition for Community Solar Access (CCSA) policy resources, including the Community Solar Policy Guidebook (2024), the Model Legislation for a Balanced and Effective Community Solar Program, the Policy Solutions for Inclusive Solar Access (Low-Income Guidebook), and the Recommended Best Practices for Community Solar Consumer Protection. These resources reflect best practices drawn from established community solar markets across the United States and are available on CCSA's resource library webpage, available at <https://communitysolaraccess.org/resource-library>. We would welcome the opportunity to provide additional detail or respond to further questions regarding program design, implementation, and performance in other jurisdictions, and to support the development of a successful community solar program in Puerto Rico.