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Subject: Community Solar Regulatory Framework - Case No. NEPR-MI-2025-0003

April 17, 2026

Honorable Lcdo. Ing. Edison Avilés Deliz
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San Juan, PR 00918

Subject: Community Solar Regulatory Framework - Case No. NEPR-MI-2025-0003

Esteemed Lcdo. Ing. Avilés-Deliz
Honorable Commissioners
Puerto Rico Energy Bureau

Introduction

The Cooperativa Hidroeléctrica de la Montaña is Puerto Rico's first electric power cooperative. The Cooperativa Hidroeléctrica de la Montaña is organized with the purpose of providing cost-effective and resilient energy from renewable sources for its Owner-Partners in the municipalities of Adjuntas, Jayuya, Lares, Maricao and Utuado.

As a rule, we feel that Community Solar should represent a community, that is Community Solar with a Capital C. Focusing on the Community in Community Solar helps distinguish its unique capability and features, while also distinguishing Community Solar projects from other third-party solar development projects. Community Solar with a Capital C helps policy makers and government focus limited resources on promoting and expanding these projects that offer multiple benefits.

Most Community Solar projects are envisioned as energy cost hedges that provide economic benefits or mitigation against continued energy cost increases, but in Puerto Rico we feel that Community Solar projects have another vital role by improving community resiliency, especially for low resourced communities. This mindset guides our subsequent answers focused on geographic limitations along distribution feeder lines supported by a non-profit, member owned community governance structure that

may include electric cooperatives. This combination is where we feel Community Solar stands out.

Thank you for your attention to this reply. We are committed to assisting the Puerto Rico Energy Bureau and stand by to support this initiative should we be invited to participate in subsequent phases of the rulemaking process.

Attachment A Responses:

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?

The best model to develop affordable and reliable energy access with optimized equity for beneficiaries of a Community Solar project and the Puerto Rico electric system is a privately member-owned and operated Community Solar project governed by a non-profit Electric Cooperative. This structure incentivizes rational economic decisions while ensuring active participation and interest in the Community Solar project. Privatization coupled with shared governance ensures direct involvement of the beneficiaries while reducing the barrier to entry for future members and provides legislative protections against incompetent or illegal conduct by internal or external bad actors.

This contrasts with the drawbacks associated with other energy business models. For example, the utility models may under or overcapitalize projects and may demonstrate limited innovation of solutions. Additionally, utilities can limit the program expansion and have approval delays to prevent non-participants from subsidizing participants. Lastly, they generally do not give subscribers the ability to own assets, thereby reducing the community alignment.

Third-party ownership offers real advantages — particularly access to private capital, proven project-development expertise, and faster deployment timelines — and can serve as a valuable complement to cooperative-led Community Solar programs, especially in markets where cooperative formation presents initial barriers. That said, structural differences are worth noting: profit-driven design incentives can result in escalating subscription fees, thinner bill savings, and shorter contract terms over time. These risks can be effectively managed through regulatory safeguards requiring minimum subscriber savings thresholds, standardized subscriber agreements, and robust PREB oversight.

Lastly, municipal ownership carries elevated risks of political exposure, budget reallocation, and policy reversals. These challenges may be accompanied by operational capacity constraints arising from limited in-house expertise, reliance on external consultants or EPCs, and constrained scaling potential.

a. Summarize how that business model would be structured.

Community solar would be administered by a regionally localized entity that has expertise in the topic of generation, distribution, handling clients, operations and maintenance. This entity will then be in charge of supplying the energy to the members who chose to participate in the solar community. The members, being local individuals/businesses/industry will receive an equivalent deduction in their electric bill to the energy that was produced using their portion of investment.

Electric cooperatives can access capital not generally available to for-profit developers, including USDA Rural Development loans and grants (e.g., the Rural Energy for America Program), low-interest financing through the National Rural Utilities Cooperative Finance Corporation (CFC), and member-equity contributions. Projects are developed through a combination of member assessments, grant funding, and project-finance debt structured around predictable subscription revenues. Costs are recovered through member subscription fees set at or below retail rates, ensuring members always capture a net financial benefit relative to their standard utility bill.

The Cooperativa acknowledges that a locally bounded geographic service area may limit absolute subscriber count compared to island-wide third-party programs. However, geographic localization materially strengthens community alignment and resilience delivery: member-owners are the same households bearing the risk of outages, creating a governance incentive to ensure the project performs as designed. Member-acquisition costs are also lower where existing cooperative member relationships already exist.

b. Please provide examples of where this business model has been implemented.

More than 200 electric cooperatives in the United States have Community Solar programs and lead the industry in implementation of the Community Solar programs.[1] The National Rural Electric Cooperative Association (NRECA)'s Achieving Cooperative

[1] https://www.electric.coop/cooperatives-lauded-as-trailblazers-in-community-solar

Community Equitable Solar Sources (ACCESS) program is a model we recommend the PREB review as Community Solar is a component of the program. Additionally we recommend the PREB consider the following projects for more careful comparisons:

Orcas Power & Light Cooperative (OPALCO), San Juan County, WA — active Community Solar planning and deployments tied to resiliency and equitable access, with 2024–2025 community engagement and projects framed to benefit island residents including low-income households.[2] Approximately 270 members who purchased shares through OPALCO's community solar program.[3]

Anza Electric Cooperative (Southern California) — SunAnza community solar on Tribal lands built to expand affordable solar access for tribal and low- and moderate-income members; part of NRECA's ACCESS effort (2024 reporting).

Roanoke Electric Cooperative (Aulander, NC) — SolarShare community solar program expanded with donations and subsidies to enable low-income member subscriptions and strengthen local resilience and bill relief (covered in NRECA ACCESS materials through 2024). Qualified LMI member can subscribe to the community solar program at no cost

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

A private owner-member owned electric cooperative with a non-profit governance model is the recommended structure for Community Solar in Puerto Rico, whereby the cooperative administers, operates, and maintains the community solar site while distributing benefits equitably among its member-owners. The Bureau should note that existing Puerto Rico cooperative statutes may require clarification or targeted amendment to expressly authorize electric cooperatives to own and operate community solar facilities as a distributed generation service. We respectfully request that the Bureau address this legal pathway as part of the regulatory framework established under this docket, coordinating with the Legislature as necessary to remove any statutory barriers.

[2] https://www.opalco.com/save/community-solar/decatur-island-microgrid-project/

[3] https://www.cooperative.com/programs-services/bts/access/Documents/Advisory-ACCESS-Case-Study-OPALCO-Dec-2023.pdf

The Puerto Rico Energy Bureau (PREB) should serve as the primary regulatory authority, responsible for approving tariff structures, setting program parameters, adjudicating disputes, and auditing project performance. The Independent Consumer Protection Office (ICPO) should exercise a consumer protection role, reviewing subscriber agreements and handling complaints. This dual-regulator structure is consistent with the Bureau's mandate under Act 57-2014, as amended.

a. Explain the governance of example of that business model provided, with links to documentation, such as tariffs, laws establishing governance etc.

California Community Green Solar Tariff

NCSP Hub/Programs | Open Energy Information

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

The Cooperativa envisions a clearly delineated multi-agency governance structure. The Puerto Rico Energy Bureau (PREB) should serve as the primary regulatory authority: approving program rules and tariff structures, auditing facility performance, adjudicating disputes, and setting project capacity limits consistent with Act 57-2014. The Independent Consumer Protection Office (ICPO) should exercise its statutory consumer-protection mandate by reviewing subscriber agreements for fairness and transparency, establishing clear disclosure requirements, and providing an accessible complaint-resolution process for Community Solar participants — particularly LMI households. LUMA, as the transmission and distribution operator, will play a necessary operational role in interconnection, metering, and billing-credit application, but should not hold a governance or gatekeeping role that could delay project deployment. Municipalities may facilitate site identification, streamline local permitting, and partner with cooperatives to enroll eligible residents, but rate-setting and program-design authority should remain with the Bureau.

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

The preferred boundary is the distribution feeder level, with the substation service territory as an acceptable alternative where feeder-level data are unavailable. The feeder approach incentivizes siting where generation delivers the greatest grid and resilience benefit, and aligns Community Solar with the distribution planning data LUMA

already maintains. The Bureau should coordinate with LUMA to make feeder-level hosting capacity data publicly available to support transparent project siting decisions.

a. How are boundaries established in the community solar business model recommended in response to question 1? Please explain.

These boundaries are established by assessing the member's geographical locations relative to the community solar site. Feeder level Community Solar projects may be best positioned for improved resiliency.

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

One alternative is to use already defined sectors, districts, urbanizations as a starting point for setting community solar boundaries evaluating feeder connections that support those communities. Another alternative is to start by identifying critical points (e.g. sectors with high-outage times) and start expanding outwards. Another alternative is to go to the electrical feeder level. The feeder level approach provides a technical and realistic approach to defining boundaries.

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

No. Electrons are apolitical. Feeders cross municipalities and have no regard for political boundaries.

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

It is possible to have Solar photovoltaics as a standalone with various configurations

○ Rooftop Solar

○ Agrivoltaics

○ Floating PV

○ Solar Farm on non-arable land

○ Carport Solar

○ Walkway Solar

a. Should ride-through inverter be required? Please explain.

Ride-through requirements should be calibrated to facility size and grid location. Small, end-of-line projects serving isolated communities should be required to comply with IEEE 1547-2018 voltage and frequency ride-through standards, because these communities benefit most from facilities that remain energized during grid disturbances. Larger projects with greater potential compounding effects on adjacent portions of the distribution system should be subject to individualized interconnection study to determine appropriate inverter control parameters. The Bureau should work with LUMA to develop standardized ride-through tiers to avoid case-by-case negotiations for every project.

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

Yes, this limits the amount of clipping that is done during periods of excess generation, while also providing reliable access to electricity in the communities that need it most. It is quintessential in providing reliable energy access on the island. If NEPR requires the implementation of grid-forming inverters it would enhance ride-through capabilities and aid in providing enhanced grid performance among other ancillary services.

6. What interconnection requirements are required for community solar?

Community solar would follow the existing distributed generation rules applied by the utility and scaled to the system size under current regulatory framework. The electric cooperative managing the community solar project will be treated as a single generation/interconnection customer with one interconnection point.

We recognize that the PREB is currently evaluating distributed generation interconnection regulation under the case number NEPR-MI-2019-0009. We hope that the PREB focuses on streamlining those processes included in that regulation and includes community solar within that model.

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

The community solar facility would interconnect directly to the existing distribution grid and would follow the current interconnection requirements applicable to distributed generation systems, scaled according to system size.

Community solar would be structured as a single point of interconnection asset under cooperative ownership, with member allocations handled contractually. This approach

ensures that energy flows are managed entirely within the local distribution network, avoiding unnecessary transmission-level transfers or interconnection across distant substations.

As a result, project siting is inherently tied to distribution-level constraints, with preference for locating community solar resources within the same or electrically proximate service areas as participating members to maintain efficiency and minimize grid congestion.

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

The Cooperativa recommends that Community Solar compensation be established through a dedicated community solar tariff and Virtual Net Metering (VNM) mechanism, rather than the existing Net Energy Metering (NEM) program. NEM was designed for individual behind-the-meter systems and does not translate well to the shared, off-site generation model of Community Solar. For cooperative-owned facilities that include battery storage, NEM may play a limited supplemental role where the cooperative draws grid power to charge storage during off-peak periods — but the primary compensation mechanism should be a dedicated community solar credit rate applied through LUMA's billing system on a per-kWh basis proportional to each member's subscription share. The Bureau should confirm that LUMA's billing systems can support VNM allocations prior to program launch.

   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 already compensated by NEM may participate in community solar. If the customer chooses to enroll in a community solar program, they may participate if they follow all contractual requirements and complete payments. Their participation should not be affected by also participating in NEM.

NEM will be listed on a customer's bill separately from the community solar credit. LUMA would have to create a separate accounting for community solar credits and would have to include that in their bill.

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

The community solar project injects all its energy into the grid directly. In the case that there is excess electricity not purchased by customers or members, the community solar projects should be allowed to enter PPAs for excess through wheeling. As an alternative, the grid operator must purchase the rest of the energy. New customers interested in joining the project should have priority over the grid operator to encourage local use of the generated electricity.

10. What are options for pricing power injected into the grid?
    a. What pricing information is available to support pricing of transactions injected into the grid?

Pricing information may be derived from other 3rd party providers that are monitoring energy injection into the grid. The PREB could create a clearinghouse for volunteer reporting of data that can inform grid pricing transactions.

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

Avoided costs are insufficient to support pricing, while remaining an important element of pricing. Avoided costs imply that community solar is an add-on to the service provision, when in some cases, sufficiently sized community solar can eliminate the generation needs of an entire community.

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

Net metering data is a first good start, but feeder level substation consumption and energy flow data may help most.

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?

The entity managing the community solar project will maintain internal records tracking total energy injected into the grid. A meter at the system level will measure energy exports, while each member's consumption will be recorded through their individual utility meter. Electricity is delivered through the existing utility distribution system.

Electricity is delivered through the existing utility distribution system. For members with pre-existing solar installations, a bi-directional meter is required for the purpose of NEM.

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

Crediting electricity will be based on the measured energy (kWh) allocated to each member.

Community solar credits should be based on the retail rate to inspire the development of community solar projects.

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

Credits to community solar members/participants will be based on tariffs evaluated and approved by the Puerto Rico Energy Bureau (PREB) consistent with current legislation that regulates electricity tariffs in Puerto Rico (e.g., electric cooperative tariff regulation). PREB oversight ensures consumer protection and affordability by preventing unregulated private contracts. Community solar facility owners must be electric service companies certified by the Puerto Rico Energy Bureau (PREB) in accordance with NEPR Regulation 8701.

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?

Community solar participants pay a monthly fee for the rights to share of the electricity generated by the community solar facility. As community solar projects are managed by member-owned and operated non-profit Electric Cooperatives, the members may determine the appropriate fee structure and seek tariff approval from the Puerto Rico Energy Bureau (PREB).

15. Should participation in community solar be "opt-in" or "opt-out"? Why?

Opt-in is the desired state due to the cooperative volunteer model of free association. The negative of opt-in is the higher member-owner acquisition cost and the potential longer capital recovery schedule, which is offset by the collaborative and volunteer membership.

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

Community solar facility owners/entities will be required to submit monthly operational reports to the Puerto Rico Energy Bureau (PREB) and the grid operator (e.g., LUMA

Energy) to ensure compliance with PREB regulation and technical system performance requirements established by the grid operator. Monthly reports should include data on kilowatt-hours (kWh) injected to the electric distribution system (grid) and other relevant energy flow data for the purpose of proper compensation and reconciliation with the grid operator. The monthly reports should also include information about added or removed participants and aggregate demographic information to ensure equitable benefit distributions.

17. What entity should receive these reports?

The Puerto Rico Energy Bureau (PREB) and the grid operator (e.g., LUMA Energy) should receive the monthly reports prepared by the community solar facility owner.

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

Consumer protection should ensure transparency, fairness, and informed participation. At a minimum, it must require clear and standardized disclosure of pricing structures, expected savings, and associated risks, while preventing misleading marketing practices and predatory contract terms.

Contracts should be standardized to the extent possible and include clearly defined terms regarding enrollment (opt-in vs. opt-out), contract duration, cancellation options, and transferability. Customers must also have access to accessible and effective dispute resolution mechanisms.

A critical element of consumer protection is ensuring that participants fully understand the nature of the benefit they are receiving. Disclosures should explicitly clarify whether the customer is receiving a direct electrical service benefit (e.g., improved resilience or reliability) or solely an economic benefit (e.g., bill credits). This distinction is particularly important for projects that are not electrically proximate, where participation may not result in any improvement to the customer's service continuity or resilience.

Without these safeguards, customers may overestimate the benefits of participation, particularly in terms of reliability, leading to misinformed decisions.

19. What entity has authority to provide that protection?

Primary authority should rest with the Puerto Rico Energy Bureau, given its jurisdiction over tariffs, interconnection, and participation in the energy market. The Bureau is best

positioned to establish enforceable consumer protection requirements within the regulatory framework and to act as the adjudicatory body for disputes.

In parallel, the Independent Consumer Protection Office (OIPC) should play a formal role in representing and safeguarding consumer interests, including monitoring program implementation, raising concerns, and supporting customers in complaint processes.

A coordinated framework between both entities is necessary, clearly delineating roles: PREB as regulator and adjudicator, and OIPC as consumer advocate.

Additionally, Community Solar providers — particularly where projects are owned or operated by electric service companies — should be required to incorporate internal consumer protection measures, including standardized contracts and accessible dispute resolution mechanisms, subject to oversight by the PREB.

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

There is no need to create a new governmental entity. Instead, the authority of the Puerto Rico Energy Bureau should be clarified and, if necessary, expanded to explicitly cover consumer protection in Community Solar programs, including oversight of third-party providers and aggregators.

In parallel, the role of the Independent Consumer Protection Office (OIPC) should be strengthened to actively monitor market practices, support consumers in complaint processes, and provide independent oversight focused on consumer interests.

This approach leverages existing institutional structures while closing any regulatory gaps specific to Community Solar.

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

Distributional equity should be treated as a core design requirement, not a secondary objective. Regulatory rules must ensure equitable access to Community Solar regardless of income level, credit score, or home ownership status.

This includes prioritizing deployment in disadvantaged, underserved, or high-outage communities, where the reliability and affordability benefits of Community Solar can have the greatest impact. In parallel, safeguards must be established to prevent cost-

shifting to non-participating customers, ensuring that program benefits do not come at the expense of the broader ratepayer base.

Transparency is essential. Project developers and program administrators should be required to report participant demographics and the distribution of economic and reliability benefits. The Puerto Rico Energy Bureau should standardize these reporting requirements.

Additionally, pilot programs led or approved by the PREB should be explicitly targeted toward these priority communities to validate equitable program design.

To support accountability, the PREB should establish a public-facing dashboard or transparency portal that tracks and displays Community Solar access and benefits on a socio-economic and geographic basis.

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

Yes. The Cooperativa recommends that the Bureau require a minimum of 50% of each project's subscribed capacity to be reserved for low- and moderate-income (LMI) members, consistent with the parameters in the Bureau's July 22, 2025 Resolution and Order. For cooperative-owned projects, this set-aside is structurally reinforced by democratic governance: member-owners have a direct interest in ensuring benefits flow to those most in need. Implementation should require cooperatives to demonstrate LMI compliance at registration and on an ongoing basis, using eligibility criteria tied to federal income thresholds (e.g., 80% of area median income). The Bureau should encourage partnerships with social-service agencies and municipal governments to streamline LMI verification and reduce documentation burdens. Projects that exceed the 50% LMI floor should be eligible for expedited interconnection review or enhanced credit rates as an incentive for deeper equity impact.

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?

Yes. On a purely technical basis, limits on the capacity of Community Solar projects can be based on the hosting capacity of the grid, interconnection study results, and alignment with system planning. PREB should establish the regulatory framework and approve limits. LUMA should provide the technical basis. Aside from the technical

considerations, Community Solar project sizing should also be related to the census or electric energy demand in the geographical area focused on feeder level capacity.

Conclusion

The Cooperativa Hidroeléctrica de la Montaña appreciates the opportunity to submit these comments and respectfully urges the Bureau to advance this docket with urgency. Community Solar represents a meaningful opportunity to democratize clean, affordable energy — but only if the regulatory framework prioritizes genuine community ownership, feeder-level resilience delivery, and robust protections for low- and moderate-income participants. The cooperative model is uniquely suited to deliver these outcomes in the mountain communities of Adjuntas, Jayuya, Lares, Maricao, and Utuado, where energy insecurity has been most acute and where member-owned democratic governance ensures that benefits remain local and accountable. We stand ready to collaborate with the Bureau, the ICPO, LUMA, municipalities, and all stakeholders to design and implement a Community Solar framework that genuinely serves the people of Puerto Rico.