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ELISABETH HAUB SCHOOL OF LAW

RURAL ELECTRIC COOPERATIVES AND THE TRANSITION TO A CLEAN ENERGY FUTURE

A Guide for Cooperative Leaders

Climate Cabinet Education combines data science with policy expertise, local partnerships and cross-state experience to support climate leadership in local governments across the US — working towards a clean energy economy that creates jobs, improves community health, and unlocks local opportunity and leadership.

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Ken Colburn retired as RAP's director of US programs in 2020. He continues to contribute to the clean energy transition part-time through his LLC, Symbiotic Strategies.

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Authors, Researchers and Contributors:

Regulatory Assistance Project (lead author)
- Megan Anderson
- Camille Kadoch
- Ken Colburn
- Ruth Hare
- Donna Brutkoski

Pace Law
- Janine Midgen-Ostrander
- Craig Hart
- Jessica Laird

Climate Cabinet Education
- Emma Fisher
- Nick Arnold
- Ethan Kirkham

Pleiades Strategies
- Frances Sawyer

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D. Expand Clean Energy Generation

As load is changing due to energy efficiency and electrification and becoming more flexible through demand management, supply options are also changing and possess different characteristics than traditional sources. Cooperatives have numerous options to procure and develop supply. Ultimately, they will be able to match these sources of supply with energy efficiency and demand-side approaches. This section will first discuss how policies to procure or build clean energy sources may act as a threshold consideration for cooperative utility decisions. Next, this section will outline various options that cooperatives have to develop or procure clean energy generation.

1. Policies to Procure or Build Cooperative Clean Energy

There are a number of ways rural electric cooperatives can develop and procure clean energy to meet policy goals and as a least-cost option to meet demand. In some cases rural electric distribution cooperatives are still bound by an all-requirements contract with a G&T. As explained earlier, some distribution cooperatives are breaking these contracts, as they are finding more flexible and affordable solutions outside of the supply offered by their G&T. The procurement options listed here will be most relevant to a cooperative not bound by an all-requirements contract, but they may still be helpful for cooperatives for any partial requirements they may have, and for those contemplating changing their supply procurement practices.

Cooperatives may:

- Procure clean energy through all-source competitive bidding.
- Build or contract a third party to build their own renewable generation, such as solar, wind and storage.
- Engage members to procure flexibility from energy efficiency, demand management and time-varying rates and obtain distributed resources on the distribution grid through net metering, user-friendly interconnection regulations and electrification tariffs.

Determining which method or mix of methods to use can be daunting. The process outlined in Table 3 may help.

Table 3. **Steps to help cooperatives choose procurement methods**

Internal assessment	The cooperative should assess resource needs, including determining the optimum procurement of resources in front of and behind the meter. The cooperative should also assess whether other goals for member involvement or other goals would have a bearing on the types of resources selected beyond cost considerations. Many of these steps will take place in the planning processes we have discussed.
Issue a request for proposals for competitive all-source procurement	This process will provide cooperatives with an assessment of the variety of resources available to meet their needs and the cost of procuring it.
Get bids for self-build	Obtain bids for creating on-site renewable or clean energy.
Weigh and assess the results	The information obtained in this process will help cooperatives determine which option or mix of options is right for them.

a. Competitive Bidding of All Sources to Serve Load

Historically, energy generating sources were mainly coal, gas, or nuclear, resource types that require large, central generating plants. Given the cost of these large plants, they were usually built and owned by generation and transmission cooperatives, which then supplied their output to distribution cooperatives. Today, generation sources include renewable energy, either utility scale or distributed generation, and grid resources such as demand response and storage, all of which can be provided by third-party providers in addition to G&Ts. Renewable energy purchases by cooperatives are growing rapidly. Cooperatives now obtain 19% of their energy from renewable resources.[158] As cooperatives begin to take more control of their generation, this number will likely grow, with locally sited renewable resources growing as well.

As cooperatives have a greater ability to make choices about their energy needs, so they can readily adjust their energy purchasing practices to allow for this diversity. All-source procurement means that whenever a cooperative believes it is time to acquire new generation resources, it may conduct a unified resource acquisition process. In that process, the requirements for capacity or generation resources are neutral with respect to the full range of potential resources or combinations of resources available in the market. A competitive procurement process is usually accomplished through requests for proposals (RFPs) as part of the process of selecting adequate generation resources. In an RFP, the cooperative describes the resources it wishes to procure.[159]

Competitive bidding is not a new concept for cooperatives, as many types of contracts may have competitive bidding requirements pursuant to state law. Experience offers some best practices to follow for competitive procurement.[160]

- **Ensure that the need for new resources is well defined, transparent and linked to findings from a well-vetted resource planning process.** A need for new resources may arise from emerging electric system reliability requirements, from changing economics of resource options, or from policy goals that reflect environmental, equity, economic development and resource priorities. Modeling assumptions and tools should be as transparent as reasonably possible and accessible to all stakeholders. Resource planning scenarios should be specified and evaluated in consultation with a diverse group of stakeholders so that those needs are well understood and validated.

158 National Rural Electric Cooperative Association. (n.d.-a). *Power supply*. https://www.electric.coop/issues-and-policy/power-supply .

159 Shwisberg, L., Dyson, M., Glazer, G., Linvill, C., & Anderson, M. (2021, March). *How to build clean energy portfolios.* RMI. https://rmi.org/how-to-build-ceps/; and Wilson, J. D., O'Boyle, M., Lehr R., & Detsky, M. (2020, April). *Making the most of the power plant market: Best practices for all-source electric generation procurement.* Energy Innovation Policy & Technology and Southern Alliance for Clean Energy. https://energyinnovation.org/wp-content/uploads/2020/04/All-Source-Utility-Electricity-Generation-Procurement-Best-Practices.pdf

160 Adapted for cooperatives from Shwisberg et al., 2021.

- **Ensure that all resource providers have opportunities to offer all capabilities from each of the resource options they bid.** Bidding should be open to all resource providers that meet reasonable bidding requirements, and bidders should be allowed to submit bids that include all resource types to enable portfolios that use combinations of supply- and demand-side resources.
- **Work with bidders prior to, during and after solicitations to understand what data they need to give their best bids.** Supporting bidders to deliver diverse and competitive solutions requires cooperative contacts to be available to answer questions. In the interests of transparency and to ensure a level playing field, the cooperative should document and publish all bidder questions and the cooperative's answers and be open to modifying the solicitation and proposed contract terms if that can expand the field of competitive solutions.
- **Ensure that the bidding process is open, transparent and evaluated fairly.** Evaluation criteria used to select bids should be transparent and communicated clearly to bidders prior to bid submission deadlines. A third-party, independent evaluator could be used to supervise the utility bid evaluation to ensure that it follows published criteria. Cooperatives should consider trade-offs among bids and additional modeling of resource options if no one portfolio among finalists is clearly superior to the others.
- **Consider whether evaluation criteria for selecting the optimal resource portfolio are aligned with public policy outcomes.** Stakeholders are increasingly concerned about alignment between procurement and public policy objectives, including resilience, equity and decarbonization. Cooperatives should carefully evaluate how well their solicitation processes support their goals.

Three foundational improvements in competitive all-source procurement practices support the achievement of outcomes that are aligned with objectives and ensure the least regrets outcomes:[161]

1. **Increase transparency.** Bidders obtain the information they need to propose competitive solutions that meet solicitation objectives and reduce the likelihood of bids falling through.
2. **Engage stakeholders and members.**
   - Stakeholders may propose alternative specifications of the need or portfolio options that the cooperative did not consider.
   - Stakeholders can provide feedback about whether state and local policy objectives are adequately reflected in a solicitation's scope and evaluation criteria and build public support for outcomes.
   - Stakeholders and bidders can identify barriers that may limit participation in the solicitation.
   - Consistent engagement with bidders can reduce perceived risk, result in more competitive bids from a diverse set of resources and support market maturation.
3. **Link planning and procurement.**
   - Consider all resource options holistically, including distributed energy resources and nonprocurement pathways (i.e., energy efficiency measures or other options that could achieve resource needs without procuring new energy) to save money and reduce environmental impact. Assess the need for procurement of a resource in the context of longer-term planning objectives and risks.
   - Actual price and operational capability information from bids is used to inform planning decisions.

b. Build and Own Cooperative Clean Energy

Many cooperatives have decided to pursue clean energy that they build and own themselves. These projects can include large-scale or utility-scale renewable energy developments on land owned or leased by the cooperative. They can also include on-site solar PV systems, often installed on rooftops or parking lots, at substations or at sites where electricity is consumed. These systems are directly tied to a facility's electrical system and can reduce the facility's need for electricity from the grid.[162] Increasingly, energy storage is co-located with renewable energy systems and may be built or procured along with renewable energy.

Cooperative goals, as well as cost comparisons learned from an all-source RFP, will help inform whether to procure clean energy through third parties, build and own clean energy on-site or a combination of both.

Utility-scale clean energy projects require coordination and alignment between municipal government officials and cooperative board and staff.

161 Adapted for cooperatives from Shwisberg et al., 2021.

162 American Cities Climate Challenge Renewables Accelerator. (n.d.). *Procurement guidance: On-site solar.* https://cityrenewables.org/on-site-solar/

Cooperatives will need to:

- Ensure alignment on goals and priorities.
- Perform or oversee on-site solar siting assessment.
- Analyze and decide on ownership model.
- Run the transaction process — that is, issue an RFP using the process outlined above, select a contractor and negotiate a contract.[163]

On-site clean energy can also offer visibility and educational opportunities, lower costs and — when paired with energy storage — enhance resilience. It also has the potential to provide local jobs and economic development.[164]

"Community solar" refers to projects in which members of the community can subscribe to get the benefits from a solar facility. It is especially useful for renters who cannot install PV units and for low-income members who can't afford to purchase a PV unit but can benefit from a reduced rate by having a portion of their electricity needs come from solar energy. Community solar programs are another option for cooperatives to procure clean energy, and they can be owned and operated by the cooperative or can be owned by a developer and subject to the competitive solicitation elements outlined above. Community solar programs can be generally grouped in one of three categories: utility-owned, member-owned or third-party (developer) owned. Being more flexible and responsive to member demand allows cooperatives to occupy a unique space within the community solar market. According to industry association data, 491 cooperatives in 43 states utilize solar, which includes both utility-scale and community solar.[165] In addition to regular community solar programs, some cooperatives have partnered with state agencies to bring community solar to low-income households. In Michigan, the state Office of Climate and Energy partnered with Cherryland Electric Cooperative on a pilot low-income community solar project, which was launched in 2018. The state energy office provided matching funds, and the cooperative financed most of the project. In the city of Cadillac, state-identified participants received weatherization before subscribing to a community solar project. Participants receive a monthly bill credit of 10 cents per kWh for the output of their solar PV share, or about $350 in solar bill credits each year they are subscribed.[166]

Additionally, community solar can be a way for utilities to extend the benefits of solar to low-income members by waiving or discounting upfront costs, termination fees and subscription fees that may otherwise be prohibitive, as well as guaranteeing savings on the energy bill of income-qualified members. In states that have legislation allocating funds for low-income community solar, cooperatives have a great opportunity to link their members to those funds and help address energy burden in their communities while they expand their renewable portfolio.[167] (The following section further discusses policies that address energy burden.)

Use of energy storage is rapidly increasing as storage technology is rapidly becoming cost-effective. Storage can be implemented either in front of the meter, typically utility-scale storage, or behind the meter as a member resource, depending on the desired application. Cooperatives are increasingly pairing intermittent generation resources, such as solar PV, with energy storage to allow them to capture electricity as it is produced and discharge when it is needed, thus enabling further large-scale solar and wind development.[168] Energy storage can be built and owned by a cooperative or by a third-party developer.

163 Gonçalves, T., & Liu, Y. (2020). How US cities and counties are getting renewable energy. World Resources Institute. https://www.wri.org/insights/how-us-cities-and-counties-are-getting-renewable-energy

164 American Cities Climate Challenge Renewables Accelerator, n.d.

165 National Rural Electric Cooperative Association. (n.d.-b). *Solar.* https://www.electric.coop/wp-content/Renewables/solar.html

166 U.S. Department of Energy. (n.d.). *Promising practice: State partnerships with electric cooperatives for low-income community solar and weatherization*. Better Buildings. https://betterbuildingssolutioncenter.energy.gov/sites/default/files/PP_State%20Partnerships%20w%20Electric%20Coops%20for%20L-I%20Final%20v%202.pdf

167 Examples are Massachusett s and Washington, D.C., as shown in this report: Heeter, J., Xu, K., & Chan, G. (2021, July). *Sharing the sun: Community solar deployment, subscription savings, and energy burden reduction*. National Renewable Energy Laboratory. https://www.nrel.gov/docs/fy21osti/80246.pdf

168 SolSmart & Cadmus Group. (2019). *Solar + storage: A guide for local governments.* https://solsmart.org/wp-content/uploads/SolSmart_SolarPlusStorage_Guide_06-25-2019.pdf.

Working with local government on clean energy

Cooperatives can work with local government to assess permitting options that can attract renewable energy or clean energy developers. Local government can incentivize and control where renewable generation is allowed through zoning and local permitting, leveraging its oversight to influence investment in renewable energy. Some towns have allowed renewable energy development on municipal land and used the associated land lease payments to invest in other infrastructure, such as roads, municipal facilities and schools, to reduce local property taxes.[169]

Providing input into community land use plans can be an ideal starting point for rural electric cooperatives wishing to pursue renewable energy objectives. The plan should identify elements that allow for community priorities around renewable energy objectives. Once a community plan is in place outlining renewable energy objectives, local governments with the authority to regulate zoning should include renewable energy development in zoning codes. Finally, providing a clear and predictable permitting process saves time and money for both contractors and cooperatives.[170]

Useful Resources on Renewable Energy Procurement

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National Renewable Energy Laboratory. (2017). *Lessons Learned: Community Solar for Municipal Utilities.* https://www.nrel.gov/docs/fy17osti/67442.pdf

National Rural Electric Cooperative Association. (2016). *The Community Solar Playbook.* Cooperative.com. https://www.cooperative.com/programs-services/bts/Pages/SUNDA/The-Community-Solar-Playbook.aspx

SolSmart. (2019). *Solar + Storage: A Guide for Local Governments.* https://solsmart.org/wp-content/uploads/SolSmart_SolarPlusStorage_Guide_06-25-2019.pdf

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U.S. Environmental Protection Agency Green Power Partnership. (2015, April 15). *Understanding Renewable Energy Certificates (RECs) and the Green Power Procurement Process.* https://www.epa.gov/sites/default/files/2016-01/documents/webinar_20150415_critchfield.pdf

Vote Solar. (n.d.). *Community Solar Works for Rural Electric Cooperatives.* https://votesolar.org/wp-content/uploads/2020/12/Community-Solar-Works-For-Rural-Electric-Cooperatives-Vote-Solar.pdf

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169 Office of the New York State Comptroller. (2008, April). Green best practices: How local governments can reduce energy cost and minimize impact on global climate change. https://www.osc.state.ny.us/files/local-government/publications/pdf/researchbrief_green.pdf

170 Grow Solar. (2017). Local government solar toolkit: Planning, zoning, and permitting — Wisconsin. https://www.growsolar.org/wp-content/uploads/2017/10/WisconsinSolarToolkitOCT2017.pdf