DISTRIBUTED WIND FINANCE CASE STUDY: Working with Distributed Wind Developers

RADWIND Project

This is the fourth in a series of case studies on financing distributed wind projects at electric cooperatives for NRECA Research's *Rural Area Distributed Wind Integration Network Development* (RADWIND) project. RADWIND's goal is to understand, address, and reduce the technical risks and market barriers to the adoption of distributed wind technologies by rural utilities. Distributed wind projects can use any scale of turbine from small kilowatt-scale units up to large multi-megawatt units, as long as they are connected on the distribution side of the electric grid. Turbines may be connected on the customer side of the meter to serve a local load, directly to the distribution grid as a utility generating asset, or directly powering an off-grid load. For more information on the project and additional resources, please visit the project landing page at www.cooperative.com/radwind.

This material is based upon work supported by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) under the Wind Energy Technologies Office Award Number DE-EE0008958.

Introduction

With new federal tax credits and funding opportunities available, consumer-members in many parts of the country may consider adding one or more distributed wind (DW) turbines to serve their commercial and industrial (C&I), agricultural, and other large facilities to control energy costs (price hedging), increase resiliency, or meet corporate sustainability goals (or a combination of these and other goals). These projects could be stand-alone wind turbines or wind turbines that are part of hybrid systems that also include solar, battery energy storage systems (BESS), or other complementary technologies.

The purpose of this advisory is to increase co-ops' readiness for member- or developer-owned DW at C&I and other larger consumer-members' facilities, and to identify ways that co-ops could leverage these projects to also meet some of their goals. Much of the growth in rural DW is expected to be in projects installed behind the meter (BTM); however, there is also potential for growth in DW projects installed in front of the meter (FTM) as well.[1] While some co-ops already have experience with large member-owned

[1] A behind-the-meter (BTM) wind turbine is connected on the customer side of the meter to serve a local load. A front-of-the meter (FTM) installation is connected directly to the distribution grid as a utility generating asset. For more information, see: The RADWIND report *Use Cases for Distributed Wind in Rural Electric Cooperative Service Areas* available from: https://www.cooperative.com/programs-services/bts/radwind/Documents/RADWIND-Use-Cases-Report-April-2021.pdf

DW or other distributed generation (DG) projects, other co-ops may have not yet had requests to interconnect and net meter these kinds of projects.

Such projects may present contractual, procedural, and/or technical challenges for distribution interconnection. Some member-owned projects may involve developers that may have limited experience working in rural utility territories, and importantly, because every co-op is different, even developers that have worked with one co-op in the past may encounter a different environment at another co-op. Further, because these projects are likely to be larger than residential distributed wind turbines, they may exceed the size that many net-metering and other co-op policies accommodate. However, DW projects can be designed to achieve mutually beneficial outcomes for co-ops and communities.

Background

Distributed wind projects are defined as such because of where they are connected to the grid rather than the size of the wind turbines. As the name implies, DW projects are connected on the distribution level of the electric grid, including the consumer side of the meter to serve a local load (BTM), or at a substation or other interconnection point serving the local distribution grid (FTM). DW projects may also have no grid interconnection; these power off-grid loads directly. DW turbine capacities range from a few kilowatts (kW) up to multi-megawatt (MW) units, and projects may have a variety of owners, including generation and transmission (G&T) cooperatives, distribution cooperatives and other distribution utilities, energy developers, communities, farms and ranches, industrial facilities, schools, governments, and individual consumers.

The National Renewable Energy Laboratory's (NREL) 2022 *Distributed Wind Energy Futures Study*[2] reports that there are about 1,400 gigawatts (GW) of economic potential for DW in the U.S. today, where economic potential is defined as projects with a positive rate of return given specific benchmark costs. Further, the study reports that there is the potential for several terawatts (TW) of U.S. DW energy by 2035.

However, only a tiny fraction—less than 1%—of this potential has been developed to date. According to the U.S. DOE Wind Energy Technologies Office (WETO) report *Distributed Wind Market Report: 2022 Edition*,[3] prepared by the Pacific Northwest National Laboratory (PNNL), DW projects accounted for just over 1 GW of electric generating capacity in the U.S. in 2022.

At least 216 megawatts (MW) of DW capacity from 184 projects were installed in electric cooperative[4] territories from 2003-2021. Most (89%) of this DW capacity in electric cooperative territories is owned or purchased through power purchase agreements (PPAs) by electric cooperatives themselves and is installed in front of the meter. The remainder of DW in co-op territories is owned by members and installed behind the meter.

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[2] https://www.nrel.gov/analysis/distributed-wind-futures.html

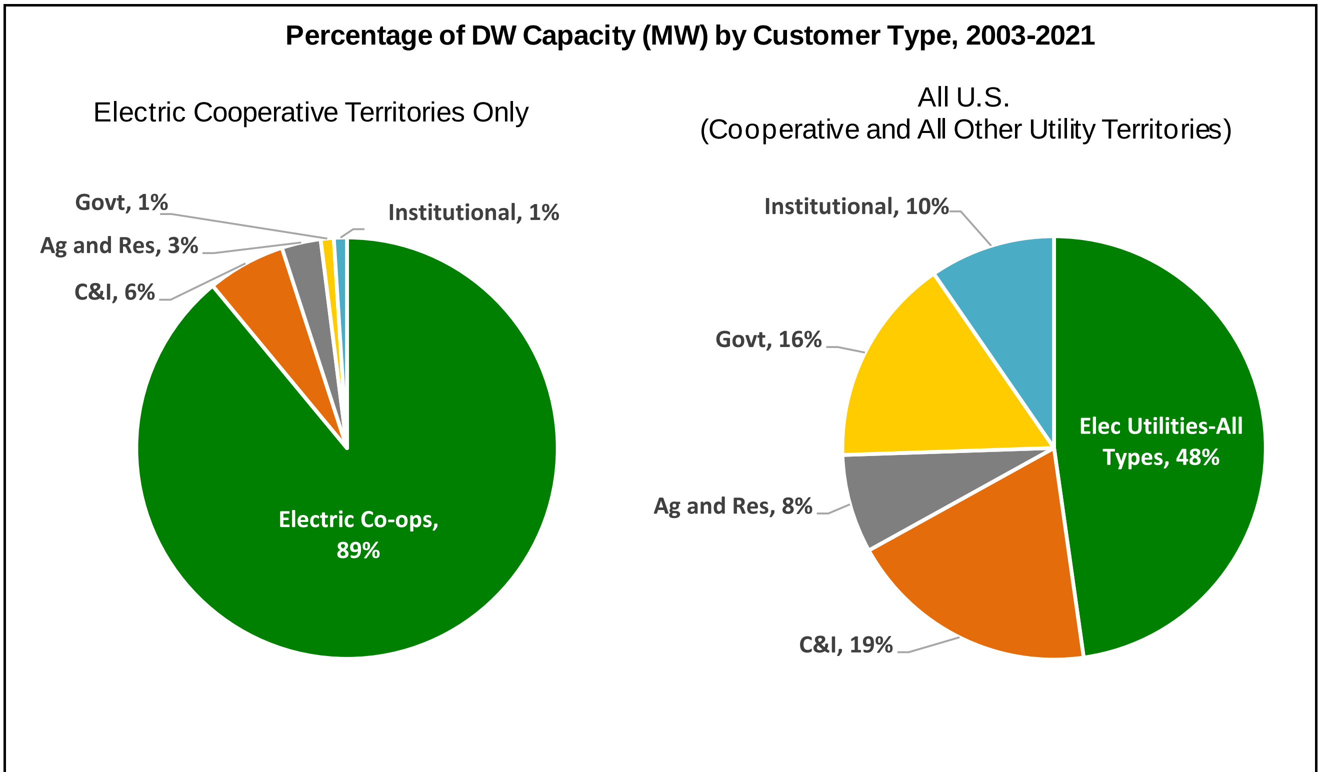
[3] https://www.energy.gov/sites/default/files/2022-08/distributed_wind_market_report_2022.pdf

[4] Electric cooperative or co-op is used as a shorthand, but this also includes projects in the territory of rural public power districts that are members of NRECA.

The complete breakout is:

- Electric cooperatives (through direct ownership or PPA)—89%
- Commercial and industrial (C&I) (e.g., car dealerships, manufacturing, plants, mining)—6%
- Agricultural and residential (e.g., pumping stations, farms, homes)—3%
- Government (e.g., municipal facilities, Tribal governments)—1%
- Institutional (e.g., schools, universities, houses of worship, community centers)—1%.[5]

Shares of total DW capacity by end-user in cooperative territories differs significantly from the national capacity distribution. Across the U.S., including co-op and non-co-op territories, less than half (48%) of DW capacity is owned by or purchased through PPAs by utilities. The remaining 52% is owned by governments, C&I customers, institutional organizations, and agricultural and residential customers. See Figure 1 for a comparison.



Source of graph data: Orrell, Alice, Kazimierczuk, Kamila, Sheridan, Lindsay, and Watson, Trisha. Distributed Wind Project Database. United States: N. p., 2022. Web. doi:10.25584/1959185.

Figure 1. Comparison of DW capacity distributions in co-op territories and nationally.

[5] Orrell, Alice, Kazimierczuk, Kamila, Sheridan, Lindsay, and Watson, Trisha. Distributed Wind Project Database. United States: N. p., 2022. Web. doi:10.25584/1959185. Developed in collaboration with the RADWIND team.

The different allocation of end-user DW capacity highlights two key points:

1. In co-op territories, most of the DW capacity has been deployed in front of the meter by co-ops to serve a local distribution grid rather than an individual member load.
2. Nationally, utility customers also have a strong interest in developing DW.

As of 2021, more than half of DW capacity in the entire U.S. is owned by consumers, and it is plausible that this trend could extend to co-op territories. Given new incentives, C&I and other large co-op consumer-members may increasingly seek to have BTM DW projects developed for them and connected to the grid, so that excess generation can be net metered by the distribution utility.

New Federal Financing Opportunities

Billions of dollars of federal funding and incentives have recently been authorized in the U.S. to promote a transition to clean energy through the Inflation Reduction Act of 2022 (IRA)[6] and the Infrastructure Investments and Jobs Act of 2021 (IIJA), also known as the Bipartisan Infrastructure Law (BIL).[7] This includes numerous grants, loans, and awards available for distributed renewable energy, as well as extensions for the Business Energy Investment Tax Credit (ITC) and Production Tax Credit (PTC) which can significantly improve the economics for DW projects, as well as multi-technology hybrid projects. There are new prevailing wage and apprenticeship requirements to access the full tax credits, as well as stackable "bonuses" for domestic content, location in "energy communities," and for project that serve low-income communities.

Specifically for distributed-scale projects, there are additional bonus credit opportunities available for projects up to 5 MW that serve low-income or tribal communities. The ITC also allows for the inclusion of interconnection costs for projects up to 5 MW. Smaller projects of 1 MW or less are exempted from the prevailing wage and apprenticeship requirements that larger projects must meet to access the full tax credit amount.

These extended tax credits also include "direct pay" provisions that allow not-for-profit utilities like electric cooperatives and rural public power districts, as well as other rural non-profit entities, to directly access them for the first time. Another provision, "transferability," allows for-profit entities without sufficient tax appetite to sell the tax credits to an unrelated third-party.[8] Both of these provisions can greatly simplify financing of projects, without the complicated "tax equity" models necessary under the prior version of the tax credits.

This influx of funding, tax credits, and the provisions allowing more entities to access them is expected to drive renewable energy developments across the U.S. by multiple parties. Rural areas—most of which are served by electric cooperatives—are expected to see much of this activity. According to NREL's 2022 *Distributed Wind Energy Futures Study*, "[T]he overlap for potential DW development and rural communities is quite large" (p. 6).[9] Because of the tax credits and other incentives, agricultural businesses, regional governments, schools, and C&I entities may seek to have DW projects developed for

6 https://www.whitehouse.gov/cleanenergy/inflation-reduction-act-guidebook/
7 https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/06/fact-sheet-the-bipartisan-infrastructure-deal/
8 Note that transferability does not apply to taxable G&Ts since they are eligible for direct pay tax credits.
9 https://www.nrel.gov/docs/fy22osti/82519.pdf

them. According to Steve Sherr, executive vice president at Foundation Windpower, a DW developer that operates predominately in California, given the tax incentives, these organizations may begin to evaluate if they could "cost effectively replace their existing source of power" with DW. He expects DW development to be appealing to many businesses in rural areas, including:

- Those that are dependent on natural gas, including cold storage for produce, and therefore exposed to natural gas price increases,
- Those that are likely to achieve savings through electrification of their fleets, including forklifts and delivery trucks, and
- Those with corporate sustainability goals and mandates.

With all of the policies expected to drive renewable growth in rural areas at all scales and on both sides of the meter, now is a good time for co-ops that do not have experience with C&I member-owned DW to prepare for how to engage with these efforts, both directly and as the Trusted Energy Advisor for their members. Co-ops may want to consider seeking funding themselves, partnering on projects and proposals with other organizations, and/or evaluating internal policies for how to proactively advise and work with individual members interested in DW or other DG in ways that can best benefit the entire membership and the co-op.

NRECA is developing many resources to help its members access these new federal programs, as more guidance becomes available from the U.S. Treasury and the IRS:

- Infrastructure Resource Hub, website[10]
- *"Inflation Reduction Act" & Congressional Update*, PPT[11]
- *Inflation Reduction Act of 2022*, 1-page factsheet[12]

Existing Project Examples

RADWIND case studies[13] profiled eleven DW projects at distribution cooperatives and other rural utilities. These case studies illustrate a variety of ownership and power purchase models:

- Distribution utility or subsidiary owns FTM DW project, energy offsets wholesale power purchases
- Distribution utility owns FTM DW project, energy sold to G&T through PPA
- Developer owns FTM DW project, energy sold to distribution utility through PPA

[10] https://www.cooperative.com/programs-services/government-relations/infrastructure-resource-hub/Pages/Secure/home.aspx

[11] https://www.cooperative.com/people-networking/NREEA/Documents/Secure/IRA%20and%20Congressional%20Update.pdf

[12] : https://www.cooperative.com/programs-services/government-relations/Documents/Legislative%20Issues/NRECA%20IRA%20short%20summary%20-%20PUBLIC%20LAW.pdf

[13] https://www.cooperative.com/programs-services/bts/radwind/Pages/RADWIND-Case-Studies.aspx; https://www.cooperative.com/programs-services/bts/radwind/Pages/Member-Financed-Distributed-Wind.aspx; and https://www.cooperative.com/programs-services/bts/radwind/Pages/Long-Term-Savings-with-Distributed-Wind.aspx

- Residential members own BTM DW turbines, energy offsets residential energy purchases, excess net metered by distribution utility
- C&I member owns BTM DW turbines, energy offsets its energy purchases, excess energy net metered by distribution utility.

See **Table *1*** for an overview of DW ownership models profiled in RADWIND case studies.

Table 1. DW Ownership Models Profiled in RADWIND Case Studies.

Distribution Utility	Project Ownership	DW Project Capacity (MW)	Location on Dist. Grid	Offsets Wholesale Power	Energy Sold to G&T	PPA—Developer & Dist. Utility	Net-Metered by Dist. Utility
Adams Electric Cooperative (IL)	Distribution co-op	2.4	FTM	X			
Cuming County Public Power District (NE)	Developer	2.5	FTM			X	
Fox Islands Electric Cooperative (ME)	Distribution co-op subsidiary	4.5	FTM	X			
Homer Electric Association (AK)	Residential members	0.12	BTM				X
Iowa Lakes Electric Cooperative (IA)	Distribution co-op	21.0	FTM		X		
Kotzebue Electric Association (AK)	Distribution co-op	4.0	FTM	X			
Lake Region Electric Cooperative (MN)	Developer	2.0	FTM			X	
Oklahoma Electric Association (OK)	Residential member	0.01	BTM				X
Rural Electric Convenience Cooperative (IL)	Distribution co-op	0.9	FTM		X		
San Isabel Electric Cooperative (CO)	Wind turbine manufacturer	8.0	FTM			X	
Y-W Electric Association, Inc. (CO)	Commercial (Ag) member	0.3	BTM				X

While developers may be involved in any DW project, this advisory primarily addresses the last ownership model above—BTM DW owned by C&I or other large members. These projects are likely to be larger than standard residential DG projects and not entirely under the co-op's control. Therefore, they are more likely to affect co-ops' distribution systems and wholesale power purchases, and require more involved approval processes.

For example, a 300-kW BTM DW project owned by a commercial cattle operation that is a member of Y-W Electric Association, Inc. offsets some of the cattle operation's energy usage; excess energy is net metered by the co-op. To connect the project to the distribution grid, the co-op completed grid infrastructure upgrades. Colorado's renewable energy standard, SB 13 – 252,[14] permits distribution co-ops to have up to 2 MW of net-metered distributed renewable generation; however, because the project is larger than 25 kW, it required approval from the co-op's board of directors to be net-metered.[15]

Figure 2. Heritage Dairy's cows and wind turbine in Y-W Electric Association, Inc.'s service area. Photo credit: Heritage Dairy

Although the following BTM projects are in California investor-owned utility (IOU) territories, they are useful examples of the kinds of C&I DW projects that may become more common in co-op territories, as private entities have new funding and financing available for DW projects:

- 1 MW project at a Walmart distribution center
- 1.85 MW project at a vineyard
- 3.45 MW project at an Anheuser Busch facility[16]

For more details on DW ownership models, see the RADWIND Case Reports on the project landing page, www.cooperative.com/radwind.

Potential Risks and Benefits of DW Projects

Interconnecting C&I DW projects may not be a good fit in all locations for all utilities, and some utilities may have concerns about lost revenue. However, for distribution utilities that could incorporate this scale of DW, there are many potential benefits for co-ops, members, and the community, including:

- Member satisfaction from locally-produced renewable energy.
- Economic development by increasing tax base, attracting and supporting businesses with sustainability goals, leasing land from community members, increasing the value of produced goods, and possibly providing jobs for local technicians.
- Educational opportunities for students and communities.
- Support for domestic manufacturing, as the ITC and other financial incentives reward or require domestic content and/or domestic manufacturing.
- Overall savings to the utility from reduced peak demand charges depending on wind energy production times and wholesale price structures.

In addition, collaboration by distribution utilities, developers, and project owners early in the design process may allow for DW projects to fill certain utility needs. For example:

[14] https://www.aeltracker.org/bill-details/1996/colorado-2013-sb-13-252
[15] https://www.cooperative.com/programs-services/bts/radwind/Pages/Member-Financed-Distributed-Wind.aspx
[16] https://foundationwindpower.com/projects.html

- Could a co-op benefit from owning a BTM DW project at a C&I consumer location, then selling energy as a service (EaaS) to that site?
- If the project would generate electricity off-peak, what kind of load shifting efforts at the project site could be implemented? Electric vehicle charging? Water heating? Battery storage?
- Could the distribution grid benefit from frequency support provided by DW turbines?
- If battery storage is used as part of a BTM DW project, what is the optimal discharge time for all parties? Could the distribution utility call on that storage as needed to reduce high peaks?
- Is there an opportunity to form a microgrid with DW and battery storage to power certain community or C&I loads in the event of an outage?
- Could the DW project be located to reduce strain on a distribution line resulting in deferred line upgrade expenses?
- To avoid a long interconnection queue, could multiple FTM DW projects be interconnected to distribution grids instead of one large project connected to the transmission grid, thereby adding wind energy to the grid faster?
- Could increasing BTM C&I member-owned local generation help reduce stress on the grid in one area, which could in turn help the co-op meet growing new consumer demands for electrification, including EVs, heat pumps, and induction cooktops?

If additional equipment like BESS or upgrades related to interconnection are required, projects may also be able to offset these costs with federal funding available in the IRA and IIJA. According to Sherr, large industrial or agricultural processing facilities, or renewable energy project developers working with those facilities, may be willing and able to pay for these types of upgrades because federal incentives will help with project budgets.

Despite the many potential benefits, new projects connected to the grid are not without risks. Co-ops considering interconnecting DW projects may want to address:

- How to ensure interconnected assets follow cybersecurity best-practices.
- What happens in the event of faulty or poorly-maintained equipment.
- If the ratio of fixed versus volumetric rate charges[17] equitably distributes service and energy costs.

For more details on DW risks, benefits, and development models, see the RADWIND Case Report series on the project landing page, www.cooperative.com/radwind.

[17] https://www.nrel.gov/state-local-tribal/blog/posts/word-of-the-day-fixed-charges-and-volumetric-charges.html#:~:text=Fixed%20charges%20are%20electricity%20costs,vary%20due%20to%20electricity%20use

How Can Co-ops Prepare?

Distribution co-ops and other rural utilities that haven't already done so can take steps immediately so that they are prepared if large C&I members and/or developers inquire about interconnecting DW projects to their grids.

Create, Amend, and Clarify Policies

While nearly all U.S. states and territories have net metering policies, BTM DW projects proposed by C&I, governments, institutions, and large agricultural operations may be large enough to trigger different rules or procedures from smaller, residential projects. For example, in Minnesota, net metering rates change for projects larger than 40 kW. Other states and co-ops may have similar project capacity thresholds that cause various other net metering and/or interconnection policies to apply. DW projects designed to meet C&I and other large member loads may have capacities of several hundred kW up to several MW.

Figure 3. Heritage Dairy's Wind Turbines in Y-W Electric Association, Inc. Service Area.
Photo credit: Charles Newcomb, Hoss Consulting

Policy is a key area where co-ops can prepare. Based on Lake Region's experience with DW, hybrid, and other resources, Dylan Aafedt, vice president of business solutions advises: "Develop a plan to address these large projects. Know who you will need to contact at your G&T and who from your co-op needs to be a part of the planning sessions when a member approaches you with a large-scale project." Because Lake Region is in Minnesota where projects larger than 40 kW trigger different rules, "we involve our G&T in [larger than 40-kW] projects," said Aafedt.

Padma Kasthurirangan, founder and chief engineer at New York-based Buffalo Renewables, Inc.,[18] recommends that utilities "consider a threshold of simpler interconnection for projects less than 1 MW."

[18] https://buffalorenewables.green/

In addition, she pointed out that some utilities in New York limit interconnection costs for some projects to $5,000, as a cost relief for farms with wind projects under 500 kW that benefit those farms.

Regarding net metering, Aafedt said, "Ensure that your net metering rates are clearly published for your members to view" and establish policies ahead of time that explain "who pays for what" when larger projects are proposed, including loading studies and system upgrade costs. "Clarity on compensation is important," echoed Steve Sherr.

Kasthurirangan noted that remote, virtual, and/or aggregate net metering "can be very valuable for both co-ops and consumers." This practice allows members to install DW systems at the best site, even if it is not where the member's load is. For utilities, it can limit the number of interconnection agreements and enables them to incentivize members for installing DW in locations where additional generation is most beneficial.

Sherr points out that sometimes net metering and interconnection rules mention solar but not wind. This may simply be an oversight because distributed solar is more common or more promoted in some areas than DW. However, he suggests that if utilities are open to net metering DW, it is helpful to mention wind along with solar, or to simply say "renewables," in policy text. Doing so helps developers know that policies are not intended only for solar. However, some utilities follow policies for all DG sources that were written primarily for solar; this can penalize non-solar projects. For example, feeder capacities may be based on daylight load, explained Kasthurirangan, but DW "does not have the daylight constraint." Similarly, a commonly-used unintentional islanding guideline[19] is focused on solar and, therefore, may result in additional costs and study requirements for DW, even for small projects.

For system studies for larger DW projects, Andy Molt, director of member services at Y-W Electric Association, Inc., emphasized the required practice of an impact analysis for new generation, which identifies what backfeed capabilities are on the circuit and what the impacts could be to nearby substations related to reliability and power quality. "Power has to go somewhere," he said, so it is critical to understand where it will go if it is not used on-site. In many DW projects, all of the energy generated is used on-site and/or by other consumer-members on the project's feeder lines. On some grids, it is acceptable for generated power to backfeed from one distribution substation to another; however, some G&T or other wholesale power supplier substations will not accept backfeed from the distribution grid. Those substation meters may be designed for one-way power flow only and do not turn backwards. In this case, a line could "trip off if there is too much current," he said. Sherr suggests that utility engineers may want to review specifications from current, typical C&I-scale wind turbines to understand the capabilities of turbines on the market today and how that might affect system study requirements. The RADWIND project has produced several resources on technical specifications and interconnection.[20]

Address Cybersecurity

If it has not already been done, establish cybersecurity recommendations for distributed energy resources (DERs). Several industry organizations and research institutions offer guidance. NREL's Microgrids, Infrastructure Resilience, and Advanced Controls Launchpad (MIRACL) project developed several DW-

[19] SAND 2012- 1365 guideline, available from: https://energy.sandia.gov/wp-content/gallery/uploads/SAND2012-1365-v2.pdf
[20] See Technical Resources: https://www.cooperative.com/programs-services/bts/radwind/Pages/default.aspx

specific cybersecurity reports for a variety of stakeholders that can be accessed on the RADWIND website.[21]

Engage with Proposed Projects Early

Once a member or developer proposes a DW or other DER project, Aafedt recommends getting the project specifications as early as possible. In addition to helping the co-op plan, it is important to ensure the developer/contractor is in compliance with all interconnection rules. Further, this is a critical time that the co-op can help the member: "Run calculations to confirm that the value the developer says [the member] will receive is actually there," he said.

Similarly, Molt highlights the important Trusted Energy Advisor role that co-ops have in these projects, even if the co-op will not develop or own it. "Co-ops have an educational role, to explain the importance of interconnection requirements and the consequences of adding DW or other resources" to the distribution grid, he said.

For an in-depth report that addresses these topics, see the 2023 RADWIND report *Distributed Wind Project Development Practices in Rural Electric Cooperative Service Areas*.[22]

Considerations for Developers and Project Owners

Developers that do not have experience working with electric cooperative and other rural utilities may benefit by learning about electric cooperatives' business models, service territories, distribution grids, and contract structures prior to proposing developments in co-op territories.

Together, more than 830 electric distribution cooperatives provide electricity to 56% of the U.S. by landmass and maintain 42% of the nation's electric distribution lines, but serve only 13% of the U.S. electric consumers.[23] Distribution cooperatives purchase wholesale electricity and may own some generation assets, but their primary role is to distribute electricity to rural homes, businesses, and farms. The average distribution cooperative serves about 24,500 consumers; more than 300 co-ops have fewer than 10,000 members each. For comparison, the average investor-owned utility (IOU) has about 650,000 customer accounts.

In addition to size, cooperatives and IOUs differ significantly in their business models. IOUs are owned by profit-seeking investors. Co-ops are locally-owned nonprofits that are managed by their customers. That is why electric cooperative customers are typically referred to as "members," "member-owners," or "member-consumers," as opposed to IOU "customers" or "ratepayers."

For DW developers, there are two key points to note:

1. Rural utility grids may not be able to accommodate large DW projects as easily as non-rural grids, and there may not be enough consumers on the distribution line to absorb excess load. On average,

[21] https://www.cooperative.com/programs-services/bts/radwind/Pages/MIRACL.aspx
[22] https://www.cooperative.com/programs-services/bts/radwind/Pages/RADWIND-Report-Distributed-Wind-Project-Development-Practices.aspx
[23] https://www.cooperative.com/programs-services/bts/pages/data/electric-co-op-fact-sheet.aspx

co-ops serve eight consumers per mile compared to 32 customers per mile for all other utilities.[24] Aafedt explained that "a lot of [cooperative] distribution grids are not built to take on loads this large. Members/developers installing projects of this size will need to be prepared to pay for loading studies and system upgrades to interconnect."

2. First and foremost, for electric cooperatives, "Our members are our #1 priority. We will help the member ensure that these types of projects are in their best interest," said Aafedt. Similarly, Sherr advises developers to keep in mind that co-ops have equal responsibility to all their members, not only the one member with a large DW energy project. "Figure out what the local utility needs in terms of protection, and be prepared to make that investment," he said.

Conclusion

The physical and contractual environments in which some co-ops operate may be daunting to wind developers at first glance. But, as demonstrated by the RADWIND case studies and other resources, there are numerous successful DW projects in electric cooperative territories.

With new sources of funding and financing, DW is likely to increase in rural areas. Large co-op members like C&I facilities, agricultural businesses, governments, and institutions may determine that owning DW is not only cost-effective, but also responsive to corporate and national decarbonization goals. Co-ops that have previously not explored interconnecting and net metering larger DW projects may begin to do so. While new, C&I member-owned projects installed behind the meter may present some challenges. Early planning and collaboration can help these projects support broader co-op and community needs like economic development and resiliency.

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Additional Information on NRECA's RADWIND Project

For more information on the RADWIND project and additional resources, please visit the project landing page at www.cooperative.com/radwind.

[24] https://www.cooperative.com/programs-services/government-relations/regulatory-issues/Documents/NRECA%20Comments%20RM19-15%20AD16-16%20PURPA%20NOPR%2020191203.pdf