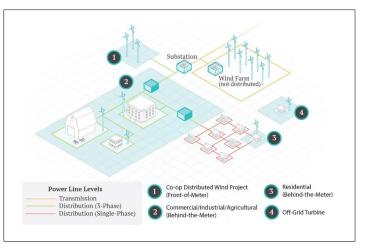
Business & Technology Advisory

March 2023



Summary of RADWIND Project Resources

The Rural Area Distributed Wind Integration Network Development (<u>RADWIND</u>) project's¹ funding concludes in April of 2023, but the project's many resources—case studies, advisories, reports, videos, and tools—will remain available to help rural utilities evaluate how distributed wind (DW) projects can support utility and community goals. All of the resources below, and other related NRECA and program partner resources, can be found on the project's landing page, <u>www.cooperative.com/radwind</u>.



CASE REPORTS

- <u>Use Cases for Distributed Wind in Rural Electric Cooperative Service Areas</u> Beneficial uses of DW across three major use cases: Front-of-Meter, Behind-the-Meter, and Off-Grid
- <u>Value Case for Distributed Wind in Rural Electric Cooperative Service Areas</u> Potential values of DW projects, including peak shaving, grid support, and economic development
- Business Case for Distributed Wind in Rural Electric Cooperative Service Areas Business cases for DW across three major use cases: Front-of-Meter, Behind-the-Meter, and Off-Grid

FINANCIAL RESOURCES

- Financing Distributed Wind Projects in Rural Electric Cooperative Service Areas Financing, incentives, and business models for rural DW deployments
- Finance Methods Case Studies
 - o <u>Opportunities for On-Bill Financing for Distributed Wind</u>
 - Long-Term Savings with Distributed Wind: 10 kW for 40+ Years
 - o <u>Member-Financed Distributed Wind</u>
 - Partnering with Developers (available Spring 2023)

DISTRIBUTED WIND SURVEY REPORTS

- Reports summarizing the results of surveys of NRECA's distribution utility members:
 - o February 2021 Results
 - February 2023 Results (available Spring 2023)

¹ This material is based on 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.

DISTRIBUTED WIND PROJECT DATABASE

• NRECA collaborated with PNNL on a new searchable and filterable national <u>Distributed Wind</u> <u>Project Database</u>, including member projects. Video of an instructional webinar is also available.

DEPLOYMENT CASE STUDIES

RADWIND <u>case studies</u> profile DW projects at rural utilities. They include details on project background, planning, financing, technology, interconnection, and impacts to cooperatives and consumer-members.

- Iowa Lakes Electric Cooperative (IA) Leveraging industrial substations and federal financing for DW
- Lake Region Electric Cooperative (MN) Clean energy and rate stabilization from a wind-solar project
- Homer Electric Association (AK) Net metering for member-owned DW
- Rural Electric Convenience Cooperative (IL) DW development at a closed coal mine
- Cuming County Public Power District (NE) Partnership with a regional developer
- Fox Islands Electric Cooperative (ME) Local wind energy and resiliency for island communities
- San Isabel Electric Cooperative (CO) Meeting state requirements and co-op goals with DW
- Kotzebue Electric Association (AK) Replacing diesel fuel with a hybrid wind system
- Adams Electric (IL) Experience owning and operating two DW projects (in development)

TECHNICAL RESOURCES

Distributed Wind Project Development Practices in REC Service Areas
This report offers a high-level overview of how DW projects of various scales and us

This report offers a high-level overview of how DW projects of various scales and use-cases progress from concept to reality, as well as the costs and cash flows of distributed wind assets; there are also two associated <u>videos</u> with subject matter experts on wind resource modeling for DW.

• <u>Distributed Wind Toolkit</u>, <u>Advisory</u>, and <u>RE Magazine Article</u> Resources to help co-ops evaluate and execute DW projects. The toolkit can be accessed on the RADWIND project landing page, or directly at <u>www.cooperative.com/distributed-wind</u>.

Technical Advisories

- <u>RADWIND Project Summary of NREL Report: Wind and Solar Hybrid Power Plants for</u> <u>Energy Resilience</u>
- o Applicable Standards for Small and Medium Wind Turbines for Electric Cooperatives
- Improving Cost Competitiveness of Small and Medium Wind Turbines and the Competitiveness Improvement Project (CIP)
- o Important Certifications when Considering Small and Medium Wind Turbines

<u>Webinar Recording</u> and <u>Related Advisory</u>

• Modeling Tools for Distributed Wind Hybrid System Sizing, Integration & Optimization

CONTACT FOR QUESTIONS

Michael Leitman - Project Manager

NRECA Director, System Optimization Michael.Leitman@nreca.coop