A Unique Participation Opportunity:

Rural Area Distributed Wind Integration Network Development (RADWIND) Project – Year 2

For immediate consideration:

NRECA Research is seeking additional member advisors from distribution and generation and transmission (G&T) cooperatives to actively participate as part of our advisory Member Stakeholder Group (MSG) for the second year of the ongoing wind generation research project funded by the U.S. Department of Energy.

Participants will provide guidance in the identification of gaps and creation of solutions that seek to enable increased deployment of distributed wind generation (alone and in connection with other distributed energy resources, including solar, storage and microgrids) across rural America.

For more information and a list of current participants, see the project landing page at www.cooperative.com/RADWIND. Expressions of interest are requested to be sent to RadwindProject@nreca.coop.

Research Opportunity Summary

The U.S. Department of Energy (DOE)[1] awarded a research grant to support a two-year, $3 million research initiative spearheaded by NRECA Research to study deployment of distributed wind[2] resources by electric cooperatives and other rural utilities. The project objective is to reduce the balance of system costs (i.e., "soft costs") of deploying distributed wind technologies of various scales on rural distribution grids, either as standalone projects or in combination with other distributed energy resources (DER), including solar, storage and microgrids. RADWIND follows the successful research model of the SUNDA program, which provided resources and tools to help advance the deployment of solar throughout rural America. RADWIND has completed its first year and is now transitioning into its second year of activities. A Frequently Asked Questions (FAQ) document is posted on the RADWIND project landing page, along with a podcast and a webinar that gives more information about RADWIND project.

In the first year of RADWIND, NRECA and its project team partners worked with co-ops[3] and industry stakeholders around the country by forming two stakeholder groups – the Member Stakeholder Group (MSG) comprising co-ops, and the Industry Stakeholder Group (ISG) comprising vendors and other third-

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

[2] Distributed wind is the use of wind technologies as a distributed generation resource, either as a standalone resource or as a hybrid combined with other DER. Distributed wind projects can use a wide range of turbine sizes from the small kilowatt-scale up to multi-megawatt utility-scale units interconnected on the distribution side of the grid or directly serving an off-grid load.

[3] In this Advisory, "cooperatives" and "co-ops" are used as shorthand, but participation by NRECA's rural public power and other utility members is open and encouraged.

party entities. As a starting point, the project team surveyed the co-op membership on their thoughts on considering distributed wind as a power supply source and summarized survey results. Using guidance and feedback from MSG and ISG, along with interviews with individual cooperative staff, the project team created a set of reports as part of the deliverables for Year 1 of the project. These reports include descriptions of possible use-cases for deploying distributed wind, potential value-streams that can be realized, various financing models and incentives that could be explored for project investments, and the business models (report under development) that can be implemented for sustainable deployment of distributed wind projects. In addition, the project team identified several co-ops that have deployed distributed wind projects and created case studies that highlighted several of these projects and their characteristics in detail. Finally, a distributed wind toolkit for cooperatives interested in considering distributed wind for their power supply, is under development. An advisory document describing this toolkit is also available.

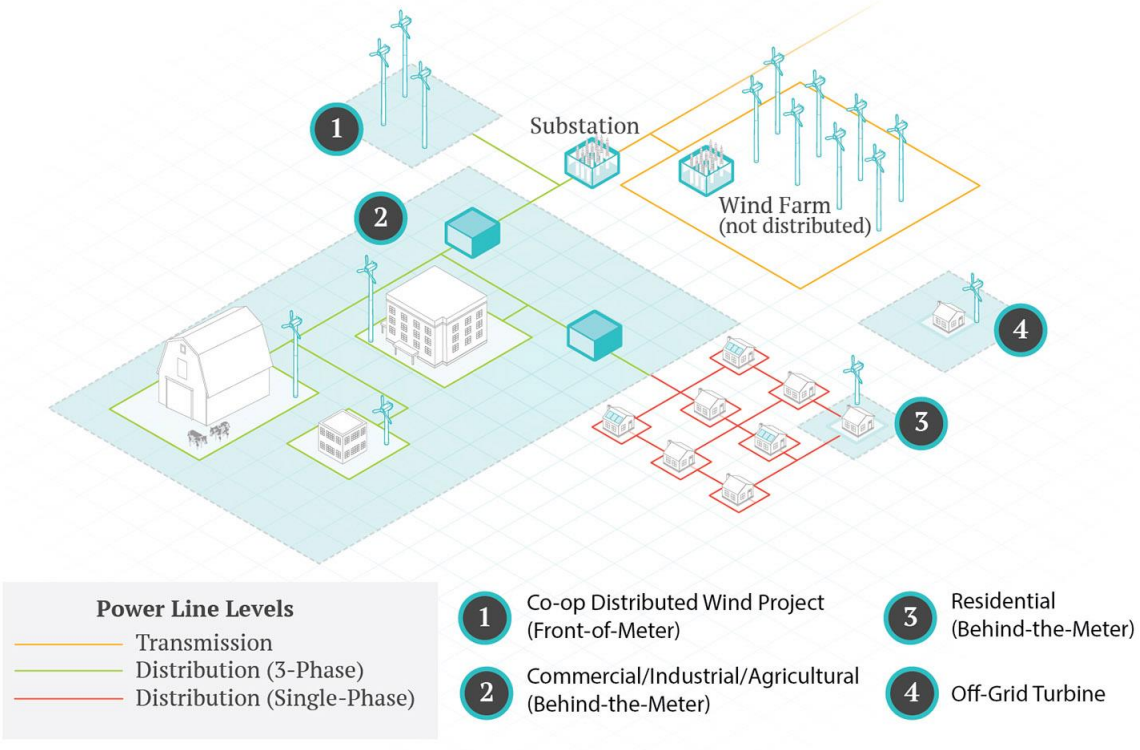

Figure 1: On-Grid and Off-Grid Uses for Distributed Wind (standalone or hybrid with other DER)

Building on the findings from Year 1 of the project, the second year of RADWIND will focus first on identifying and analyzing key gaps, challenges and opportunities to deploy distributed wind projects, and the pathways through which these deployments can be accelerated – either for "stand-alone" distributed wind projects or distributed wind hybrid projects that combine distributed wind with other generation/demand technologies. Next, in close collaboration with the MSG and ISG members, tools, resources, and actionable solutions that can assist in successfully deploying diverse types of distributed wind projects while reducing soft costs will be developed and validated with stakeholder feedback and disseminated widely, as deliverables for Year 2 of this project. Through these activities, the project aims to increase awareness of the potential benefits of distributed wind, reduce the market barriers for the adoption of these technologies in rural areas, and provide tools and resources for rural utilities to analyze the feasibility of deploying distributed wind in their service territories.

Participants in the RADWIND MSG in Year 2 will have the opportunity to be on the front line of this research, helping identify and validate the gaps, challenges and opportunities to increase deployment of distributed wind. MSG participants will also guide the development of tools and resources that will assist in deploying distributed wind and be among the first to use and benefit from them. Further, MSG participants will have the unique and valuable opportunity to provide input to the Department of Energy – Wind Energy Technologies Office on distributed wind, which will then be used by DOE as input into decisions on funding distributed wind-related programs and initiatives. Finally, interaction with peers in the MSG, and with vendors and other stakeholders through the ISG, will provide MSG participants with valuable knowledge about distributed wind projects, along with a network of stakeholders.

Cooperatives interested in joining the RADWIND Member Stakeholder Group for Year 2 of the project are asked to **provide expression of interest by December 20, 2021 to RadwindProject@nreca.coop.**

Project Team

NRECA Research is the lead for the project team that consists of Pacific Northwest National Laboratory, Hoss Consulting, and Mana Group LLC. The research is funded by the Department of Energy's Office of Energy Efficiency and Renewable Energy – Wind Energy Technologies Office - which aims to maximize stakeholder confidence in turbine performance and safety and improve project performance, while reducing installed cost, in order to be competitive with retail electric rates and other forms of distributed generation.

Meet at TechAdvantage

The RADWIND project team is planning to hold an in-person event in Nashville immediately following the 2022 TechAdvantage Conference on March 9, 2022 for interested distribution and G&T members. The project team will provide an update on the completed and ongoing project work, and there will be an opportunity to meet industry stakeholders and current participants from the MSG and ISG. Lunch will be provided. More details will be forthcoming, but please contact us at RadwindProject@nreca.coop if you would be interested in attending.

Contacts for More Information and How to Participate

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