

Energy I-Corps 2023: Distributed Wind Energy Toolkit

Anthony Teixeira, National Renewable Energy Laboratory (NREL) Distributed Wind Energy Association (DWEA) Distributed Wind 2023 Feb. 28, 2023

Photo by Dennis Schroeder, NREL 55200

Energy I-Corps Overview

<u>Goal</u>: Increase the transfer of promising technologies from national labs to the market.

Core Program Benefits:

- Directly engages industry stakeholders and customers to drive future research
- Builds market awareness among researchers.

Program Components:

- Defining technology value propositions
- Conducting customer discovery interviews
- Exploring viable market pathways.



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Distributed Wind Energy Toolkit

Project Goal: Ensure that U.S. Department of Energy-funded analytical tools are accessible, are user-friendly, and meet industry and customer needs.

I-Corps Project Team







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Tool Development Leads

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Initial Toolkit Components

Distributed Generation Market Demand (dWind): Calculates system costs and value for many individual sites across a wide geographic area

Distributed Wind Tools Assessing Performance (TAP): Provides granular wind resource data that accounts for terrain and obstacles (e.g., trees)

Hybrid Optimization and Performance Platform (HOPP): Simulates and optimizes component sizing, physical layout, and dispatch of hybrid systems

Microgrids, Infrastructure Resilience, and Advanced Controls Launchpad (MIRACL) Valuation Service: Calculates value streams for distributed wind energy and determines the optimal stack of values to pursue

EWT = *Emergya Wind Technologies, PNNL* = *Pacific Northwest National Laboratory*

Understanding Market Needs



To build as complete a picture as possible, we will include a wide range of perspectives in our interviews, including non-industry stakeholders like end-use customers, policymakers, etc.

Input Needed

What perspectives are critical for understanding the customer value proposition for distributed wind energy?

Which stakeholders have a critical need for information or analysis on distributed wind energy?

What critical topics should we explore in our interviews?

Stay tuned for future outreach!



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