

## Building a Diverse and Equitable Distributed Wind Workforce: A Strategic Approach to Collaborator Selection

### Supplement - Feedback RC 2

Overall - The Building a Diverse and Equitable Distributed Wind Workforce: A Strategic Approach to Collaborator Selection provided a novel and reasonable approach to identifying training programs that can increase diversity and equity in wind energy workforce through distributed wind technology. As an experienced wind workforce analyst, the methods are sound and provide valuable approach for making data driven and informed workforce development decisions. **To strengthen the article, the authors may consider a more detailed discussion on the types of underserved and underrepresented communities. For example, like utility-scale deployment, distributed wind is likely occurring in more rural areas. What are the unique economic and demographic implications of these types of communities on increasing diversity and equity in wind energy.** Several minor comments for authors consideration are also attached as a supplement.

Thank you so much for your thorough and thoughtful feedback. We've made edits to the manuscript to address your supplemented comments and added discussion to section 1.1 on the economic and demographic implications of rural, underserved, and underrepresented communities on wind energy.

In addition, per guidance from our sponsor the project name has been changed from Diverse and Equitable Workforce for Wind (DEWWind) to **Workforce Innovation for Distributed Wind Advancement, Recruitment, and Development (WINDWARD)**. The comment responses below and the updated manuscript will reflect this name change.

Line 10 – Suggest looking to the U.S. Energy and Employment Report for wind energy demographic data. Discuss what improvements distributed wind could provide.

Thank you for suggesting this resource. We've added some insights that reflect the findings in the USEER.

Line 55 – I would like to see a discussion if distributed wind has specialized skills (or different from utility scale LBW) that may impact industry and workforce development for these programs.

We've added a few sentences of discussion on the unique skills distributed wind requires compared to LBW. A key piece of future work for the WINDWARD project is to further map and define these skills. So far, previous work has identified that DW needs multifunction workers - employees with broad abilities that can perform various tasks, from installation and maintenance to troubleshooting and customer service.<sup>1</sup>

Line 85 – I'm confused why Development and Siting is after listed after Construction in Figures. Consider putting more professional type phases next to each other?

The top heading bars incorrectly illustrate the industry segments as if they are sequential. We've updated the graphic to make the industry segments more individualized instead of them seemingly depicting a process. The order of the segments reflects the selection order in the survey question.

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<sup>1</sup> Parker, Kendall M., Esaki-Kua, Lauren A., & Preziuso, Danielle C. (2024). Towards a Workforce Roadmap for Distributed Wind: Phase 1 - Identifying Needs and Barriers. <https://doi.org/10.2172/2440158>

Figure 2 – How was the question asked to manufacturers different than installers? How much insight would a manufacturer have into construction hiring or development?

The question was identical for both. There are manufacturers that identified themselves as also conducting turbine construction.

Line 115 – Adding a discussion about distributed wind energy demand (current and future employment) may strengthen this discussion. Even empirical information on how many folks are in an installation crew or how many folks are needed for different deployment phases would help add context.

Thank you for this suggestion. We've added additional context.

Line 109 – Do you have any information on how different underserved and underrepresented communities could be from those communities where utility-scale LBW is constructed? Present different economic or demographic data. While the power is transferred somewhere else, is it generated at similar locations. How demographically diverse are these communities? Rural populations are underserved and underrepresented communities, but their workforce development may continue to have a smaller impact on the worker demographics. Which parts of increasing diversity and equity would this project have the biggest influence?

Thank you for this thoughtful comment. We've made a few updates in this section to incorporate your suggestions.

- Added examples of LBW and DW turbine to corroborate the locality claims
- Started a new paragraph to highlight that the "local loads and local workers" contribution is advances equity
- Clarified the previous paragraph to explain that WINDWARD major contribution is to increasing diversity

Line 110 – what is the definition of "multifunction workers" – workers trained across job or sectors with overlapping skillsets?

This definition was added to address your comment at line 55 and reiterated in the manuscript at line 110 for clarity.

Line 125 – is the project objectives DEWWind – maybe add that explicitly?

We've clarified the connection between the WINDWARD project objectives and approach showcased in this work.

Line 165 – list dates or administration of EO?

We've removed mention of these Executive Orders per our sponsor's guidelines.

Line 175 – How are registered apprenticeship programs considered? Do you prioritize RAPs to comply with IRA PWA (since it was mentioned as important in the intro?)

RAPs are not given extra weight beyond what is already specified for technical and trade programs. We have added additional context to clarify this.

Line 240 – Were institutions filtered to include those programs that had a program type that had relevant skillsets for distributed wind energy? If a program has an existing wind programs, how does that apply? Meaning, if there was an existing wind training program within a particular area, should it get plus points?

No, institutions were not pre-filtered based on overlap with distributed wind skillsets because no current resource exists that identifies the necessary skills for a DW worker. In addition, existing wind programs did not get additional points because of WINDWARD's objective to build up new programs and curriculum (1) through partnerships with new institutions and (2) in areas with predominantly underserved and underrepresented groups.

Line 295 – indication that training development needs to be around installers; but could you also run a specific analysis to understand training program expansion or development for new market areas?

This is a great suggestion and aligns well with the next steps of WINDWARD to use the place-based characteristics near academic-industry partnerships to assess potential workforce program development. We've added more detail on these next steps.