

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

WES-2024-145 | Author's Response

Below are responses to referee report #2 in *blue italics*.

Referee Comments

This paper contributes to knowledge on how US workforce development efforts in distributed wind (DW) can proceed in a more just and equitable manner, taking into account demographic disparities in representation, as well as scalar challenges (the rural nature of work). The creation of a replicable rubric to guide workforce development assessments and potential collaborators gives other researchers an important tool to aid in future workforce planning.

However, several areas warrant further clarification or development—especially as it relates to the different dimensions they weight. I would like to see an acknowledgement of other dimensions of justice (not just procedural and representational). The authors may choose not to include this in their rubric, but they should make a case for why they have not chosen to include it.

Thank you for this thoughtful and reflective comment. Our engagement with the justice dimensions in this paper was not based on selective preference, but rather shaped by the scope, objectives, and methodological approach of the work. Specifically, our emphasis on demographic disparities and scalar challenges in distributed wind workforce development naturally aligned with procedural and recognition (representational) justice dimensions. These were the areas where our project activities could make direct and measurable contributions. Rather than prescribing in advance which justice dimensions to address, we allowed our project's goals and constraints to inform which dimensions were realistically achievable within this effort.

That said, we acknowledge the importance of other justice dimensions, particularly distributional justice, and have mentioned it on Line 237 in the revised manuscript to better situate our work within the broader environmental justice literature.

This can be achieved by bringing in more environmental justice-oriented scholarship.

We appreciate the recommendation to engage more environmental justice-oriented scholarship. While environmental justice literature, like foundational works by Schlosberg (2004), offers important early contributions, we view it as a conceptual precursor to more recent and field-relevant frameworks such as energy justice and energy equity, which we reference throughout the manuscript. These contemporary frameworks offer a more applicable lens for understanding justice in the context of distributed energy systems and workforce development, particularly because they have evolved to address the limitations of early liberal justice critiques, including those raised in Schlosberg's work. Further, the frameworks build on Schlosberg's key idea that justice is inherently multi-dimensional,

encompassing recognition, equity, and participation in outcomes. We have added text to this point starting on Line 237.

Furthermore, the different weights/scores given in the rubric require greater justification—what is it about an HBCU versus an all-girls school that gives it different weight? Perhaps the point is self-evident, but given the gender disparity in the DW workforce, further elaboration could help to clarify the different weights given.

We appreciate this comment and have expanded our justification in Section 2.2 - Rubric Development (Line 248) to clarify why certain institution types are assigned different point values. We explain that the weightings reflect both the scale of underrepresentation in the workforce with reference to relevant statistics (USEER 2024) on gender and race-based disparities in the sector.

Related to this, the paper presents the scoring metrics as “objective”, but they are, indeed, normative assessments—I for one don’t have an issue with this, but the authors may wish to consider more clearly stating that because the paper is focused on equity objectives anchored in different notions of justice, this influences their scoring criteria given the rubric’s purpose (or something to that effect).

We fully agree. The revised manuscript now explicitly acknowledges that the rubric reflects normative choices based on equity objectives. This clarification is added in Section 2.2 (Line 212) and reinforced in Section 4 (Line 340), where we position the rubric as a strategic tool for advancing justice-driven priorities rather than a neutral selection mechanism.

Overall, I do believe that the paper achieves its mission. It successfully introduces a rubric that can guide future workforce development efforts. Whether or not this rubric can be implemented right now (at least in the US), however, is another matter. I recommend accepting this paper with minor revisions to address the above critique, and to consider implementing a few other suggested changes to enhance the articles clarity and depth of the analysis.

Specific Suggestions

Line 29-31: *I suggest that the authors revise the language given changes to the federal landscape.*

We chose to keep this language intact considering the federal landscape is still in flux as it relates to the Inflation Reduction Act (IRA) in particular, and the IRA itself was a key motivator for this work though it may be a historic document by the time this manuscript is published.

Lines 134 to 143: *The authors should explain why they did not work with workers, those actually employed by DW, and what they understand as the rationale for the workforce gap, including its demographic makeup.*

We added clarification that the first phase of this effort was focused on partner identification not engagement with the current workforce because of the focus on

foundation partnerships for hiring which was a previously identified immediate industry need (Line 135).

While we agree that a deeper exploration of the underlying causes of the workforce gap is important, doing so in detail was outside the scope of this phase of work. Our focus was on developing a collaborator identification framework grounded in equity metrics rather than diagnosing root causes. Subsequent phase of this work seeks to understand the rationale for distributed wind workforce gaps and this phased approach is already discussed briefly in Section 1 (line 77).

Line 201: The authors should elaborate on why the radius selected is 100 miles. Why not 50 or some other number? They might also consider that 100 miles “as the crow flies”; i.e., in a straight line, is not how people travel in rural communities.

We acknowledge the reviewer’s important point that a 100-mile radius reflects straight-line (“as the crow flies”) distance, which may not correspond directly to actual travel routes in rural areas. We selected a 100-mile radius to represent a regional catchment area around the focal point, based on both prior workforce development studies and practical considerations for postsecondary education access. The 100-mile radius is a commonly used planning metric that captures reasonable reach for rural populations while balancing data feasibility and geographic coverage. While this limitation is inherent in any radial analysis, we chose this method for its simplicity, replicability, and alignment with existing workforce and higher education planning frameworks. We now clarify this in the revised manuscript and note that travel times and road infrastructure are important considerations for future work (Line 207).

Line 213: The authors should explicitly reference to Schlosberg’s work. A great deal has been written in response to his work, which should also be considered. They might also explain why distribution isn’t considered as part of their criteria. This especially opens the rubric up to a critique of “tokenizing” or perpetuating a “checkbox” notion of justice.

Schlosberg, D. (2004). Reconceiving Environmental Justice: Global Movements And Political Theories. Environmental Politics, 13(3), 517–540. <https://doi-org.ezproxy2.library.colostate.edu/10.1080/0964401042000229025>.

We have responded to this comment above and the corresponding edits start on Lines 212, 248, and 340.