

To: American-Made Network

From: First Principle Energy

Subject: Request for Expertise in Vibrational Analysis, Economic Validation, and Agrovoltaic Collaboration

We at First Principle Energy are dedicated to pioneering the future of sustainable energy through innovative solutions. Our wire rope-based PV mounting structure has shown tremendous potential in early assessments, both technically and economically. As we strive to optimize our solution, we recognize the value of collaboration and the invaluable insights that esteemed institutions can offer. Hence, we reach out to the American-Made Network to seek specialized assistance in certain key areas that are instrumental to the success and realization of our vision.

- Vibrational Analysis - Sandia National Laboratories or similar:
 - Nature of Assistance: We are keen to understand the system-level vibrational dynamics of our wire rope-based PV mounting structure. Given the unique design considerations and the material choice, it becomes imperative to ascertain the natural frequencies and resonant behavior under varied conditions.
 - Specific Needs: We aim to explore the natural frequency of different configurations, primarily driven by variations in module size and wind loads based on geographical locations. Sandia National Laboratories, with its world-class expertise and infrastructure, is ideally positioned to help us with this.
 - Outcome: A thorough vibrational analysis will ensure that our design is resilient against resonant vibrations, thereby guaranteeing longevity and consistent performance.
- Economic Analysis Validation - National Renewable Energy Laboratory (NREL):

- Nature of Assistance: As we inch closer to commercializing our solution, understanding the economic feasibility and validating our in-house financial models is crucial.
- Specific Needs: We request NREL's expertise in validating the economic analysis conducted by our team. Their insights, derived from a vast reservoir of industry data and experience, will be instrumental in fortifying our business case.
- Outcome: This collaboration will strengthen our business foundation, ensuring that our solution is not only technically viable but also economically compelling.
- Agrovoltaic Collaboration - University of Arizona:
 - Nature of Assistance: Agrovoltaics, the synergistic production of both solar power and crops on the same land, is gaining momentum. We believe our wire rope PV structure can significantly contribute to this domain.
 - Specific Needs: We are eager to be included in the University of Arizona's agrovoltaic project. Our goal is to explore the advantages and feasibility of integrating our wire rope PV structure into agrovoltaic systems.
 - Outcome: Successful collaboration will lead to a holistic solution that addresses energy and food production simultaneously, maximizing land utility.

By leveraging the unparalleled expertise of Sandia National Laboratories, NREL, and the University of Arizona, we are confident that we can refine our solution to meet the highest standards of technical robustness, economic feasibility, and societal impact.

We are optimistic about forging collaborative partnerships and are open to discussions, workshops, and hands-on engagements that will mutually benefit all stakeholders and propel our shared vision of a sustainable energy future

Nikhil Kumar (First Principle Energy)

+1-520-328-5246