American-Made Solar Prize Round 7 Ready! Contest Submission; Technical Submission Request

Sustainable and affordable solar panel recycling.

OnePlanet Solar Recycling: Innovating eco-friendly, cost-effective solar panel recycling for a sustainable future.

Manufacturing; Hardware – Photovoltaics (PV); PV – Recycling; Project Development Lifecycle – End of Life / Recycling

Team

André Pujadas (CEO), andre@1planetrecycling.com, Nashville, TN

Mike Creel (COO), mike@1planetrecycling.com, Jacksonville, FL

Connor Hogan (Director of Finance), connor@1planetrecycling.com, Jacksonville, FL

Will Creel (Director of Business Development), will@1planetrecycling.com, 256-682-2073, Jacksonville, FL

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Technical Assistance Request

Introduction: OnePlanet Solar Recycling is dedicated to revolutionizing the solar panel recycling industry by providing an innovative and sustainable solution. We recognize that to achieve our ambitious goals, we need the support of the American-Made Network and its affiliated entities. Specifically, we are seeking technical assistance in the form of a diverse supply of end-of-life solar panels for testing purposes. This assistance will significantly contribute to our research and development efforts, allowing us to optimize our technology and increase material recovery rates.

Technical Assistance Request: One of the critical challenges we currently face is the availability of diverse and representative end-of-life solar panels for testing and refining our recycling technology. This testing is essential to:

1. Validate Material Recovery Rates: We need to assess and optimize our technology's ability to recover valuable materials from various types of solar panels. Different panels may have varying compositions, and it's crucial that our recycling process is effective across the spectrum.
2. Enhance Throughput Efficiency: Testing with a diverse panel supply will help us fine-tune the efficiency and throughput of our recycling equipment. Different panel designs may require adjustments to maximize processing speed.
3. Validate Environmental Impact: Solar panels can contain hazardous materials. Testing with real end-of-life panels is essential to ensure that our recycling process minimizes environmental impact and avoids the release of harmful substances.

Unique Capabilities Needed: To address these challenges, we are seeking the unique capabilities of the American-Made Network, national labs, private facilities, and other relevant stakeholders. Specifically, we require:

1. **Diverse Supply of End-of-Life Solar Panels:** Access to a wide range of end-of-life solar panels from different manufacturers and models. These panels should represent the diversity of the solar panel market, including varying technologies, sizes, and ages.
2. **Material Composition Analysis:** Assistance in analyzing the material composition of the provided panels, including the types and quantities of materials used. This data will be invaluable for optimizing our recycling process.
3. **Testing Facilities:** Access to testing facilities equipped with the necessary equipment to assess material recovery rates, throughput efficiency, and environmental impact. These facilities should be capable of handling various types of solar panels.
4. **Technical Expertise:** Guidance and expertise from experts in solar panel technology and recycling processes to help us interpret test results, make necessary adjustments, and ensure the safety and sustainability of our recycling process.

Benefits of Assistance: The provision of a diverse supply of end-of-life solar panels and associated technical assistance will yield several benefits:

1. **Technology Refinement:** It will enable us to fine-tune our recycling process, increasing material recovery rates and efficiency.
2. **Environmental Impact Mitigation:** Testing with real panels will help us ensure that our process minimizes environmental impact and complies with sustainability standards.
3. **Market Readiness:** By addressing these technical challenges, we can accelerate our technology's readiness for large-scale deployment, contributing to a sustainable solar industry.

Recognition Rewards: We understand the value of collaboration and are committed to recognizing the contributions of the American-Made Network and affiliated entities. Recognition rewards will be provided to acknowledge the support and expertise received.

Conclusion: OnePlanet Solar Recycling is at the forefront of transforming solar panel recycling into a sustainable and economically viable process. To achieve this vision, we kindly request the support and technical assistance of the American-Made Network, national labs, private facilities, and experts in the field. Together, we can enhance the sustainability of the solar industry and promote a cleaner, greener future.