Michele De Bastiani

Technical Assistance Request

Mirai Solar

EXPLANATION

From a technical perspective, we are seeking assistance in the creation of a safety system aimed at safeguarding our foldable solar panels in the event of adverse weather conditions. This protective mechanism will be activated by a nearby weather station, relying on criteria such as wind speed, precipitation, and solar irradiation. When atmospheric conditions pose a potential risk to the stability of the panels, the system will automatically retract them into a secure enclosure.

The determination of what constitutes a "threat" will be established in collaboration with the American Made Network, focusing on reliability standards specific to photovoltaic systems. The support will be divided into two key aspects. Firstly, there will be an emphasis on developing the electrical system, encompassing both hardware and software, responsible for initiating the panel retraction process under threatening atmospheric conditions. Secondly, a dedicated effort will be made to design and construct the protective enclosure where the panels will be stored once retracted, including daily nighttime use to shield them from dust and contamination.

From a legal standpoint, we are actively seeking assistance regarding the regulatory aspects of agrivoltaic systems. Our specific focus is on obtaining product certification in accordance with UL standards. It's worth noting that the conventional certification process for standard solar panels may not be an ideal fit for our foldable solar panel technology. This is because our glass-free modules are distinct from traditional flexible solar panels, as the folding mechanism does not involve bending the panel material.

Furthermore, we require guidance and support when it comes to navigating regulations related to the installation of our innovative technology. In particular, we are looking for assistance in understanding and complying with regulations concerning grid connections and the efficient utilization of energy. American Made Network's expertise in these matters will be invaluable as we work towards ensuring our agrivoltaic systems meet all necessary legal and safety standards.

KEY NEEDS

- Manufacturing: We need support for the design and manufacturing of the safeguard box and the protection mechanism, both from a hardware and software perspective
- Testing and validation: We need extensive testing of the protection mechanism, first in the lab environment and later outdoors. These tests must be conducted according to PV reliability standards. The outcomes of the tests are used to improve the protection mechanism and the design of the safeguard box.
- Legal and public policy: We need to ensure compliance with building code legislation for agrivoltaics and we need support toward achieving certification standards for our technology