SESAME SOLAR
TURNKEY NANOGRIDS. SOLUTIONS INSIDE.

TECHNICAL ASSISTANCE REQUEST

The Sesame Solar Nanogrid Solution was successfully deployed in several regions throughout the United States and internationally. To further develop this technology and increase its usability and durability in various humanitarian relief situations such as wildfires, hurricanes, and other natural disasters, Sesame Solar seeks nanogrid ruggedization for remote deployment and monitoring. The ability to pre-position units for severe weather events, such as a hurricane, would allow Sesame Solar Nanogrids to begin power generation immediately after dangerous weather conditions end.

TECHNICAL ASSISTANCE FOR NANOGRID RUGGEDIZATION

To remotely monitor the Sesame Solar Nanogrids, rugged industry-standard sensors that can withstand austere and inclement conditions need to be installed. These sensors allow monitoring of the perimeter of the Sesame Solar Nanogrids and enable the identification of conditions requiring the closure of the nanogrid walls. It also can prompt the user to ensure an unobstructed opening and closing of the solar panel walls.

We would also work to integrate these sensors with the current reporting technology in our data collection framework. Technical studies will be done to conduct wind resistance analysis, finite element analysis, and stress analysis for the two form factors to increase the useable life of the Nanogrids.

TECHNICAL ASSISTANCE TO SYNCHRONIZE ELECTRONIC MOTION CONTROLLERS

All Sesame Solar Nanogrids have a patent-pending innovative and proprietary technology, including the opening and closing mechanisms. To make opening and closing operations autonomous, these mechanisms will need to be further refined as they are currently not electronic.

Synchronizing electronic motion controllers will allow remote monitoring and the operation of the Nanogrids. The ability to switch from a manual opening and closing mechanism to an electronic motion controller will be studied. Additionally, an extension of research on the opening and closing mechanisms will be completed.

TECHNICAL ASSISTANCE TO IMPLEMENT MORE EFFICIENT ENERGY STORAGE

Collaboration with partners from within the American Made Solar Network will help meet Sesame Solar's goals to implement a new, more efficient energy storage technology. This storage technology benefits include longer life cycles, longer shelf life, lower cost per kWh, more rugged, reduced thermal runway, and lighter in weight. This new, more efficient energy storage technology will extend the lifecycle of the Sesame Solar Nanogrids and reduce the total cost of ownership.

TECHNICAL ASSISTANCE TO DEVELOP SMARTPHONE AND TABLET APPLICATION

By using a tablet or smartphone, the operator would be able to monitor the status of the system and deploy the solar panels remotely, generating power within fifteen minutes from anywhere with internet access.