

American-Made Solar Prize Technical Assistance Request



Apollo Hybrid Microgrid

The first fully portable hybrid microgrid that can produce 500watts to 30kW continuously.

Energy Solutions, LLC

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PARTNERS AND AMERICAN-MADE NETWORK

N/A



Unfortunately, the concept of portable hybrid microgrids has not been addressed by Underwriters Laboratories (UL) or the National Electrical Code (NEC). The first hurdle which Energy Solutions will need to tackle before marketing the Apollo Hybrid Microgrid system is that of certification and electrical code adoption.

Underwriters Laboratory (UL)

Underwriters Laboratory evaluates solar tracking systems according to several UL standards. However, in reviewing the current standards, some of the criteria do not apply the ApolloMMX technology and modifications to the standards may be required before an accurate system assessment could be performed by UL. Energy Solutions would like to request technical assistance from the community to assist in bridging the certification hurdle with UL.

National Electrical Code (NEC)

The National Electrical Code (NEC), is a regionally adoptable standard for the safe installation of electrical wiring and equipment in the United States. Most government authorities tasked with residential approval installations of an electrical nature adopt the standards presented in NEC and use these standards to approve or deny electrical equipment installations. In order for portable hybrid microgrids to be widely accepted among emergency response entities, it will need to be accepted by the local electrical inspection authorities. This means that the connection of the Apollo Hybrid Microgrid system to a home or business (even temporarily) will need to be addressed by the National Electrical Code. Statements will need to be drafted, approved and introduced in the NEC Code Book during the next publication cycle which occurs every 3 years. An argument for the inclusion of plug and play PV generator technology into the NEC code will need to be carefully crafted with assistance from industry professionals, licensed contractors, and public officials and Energy Solutions is requesting assistance in drafting these statements and presenting them to NEC for approval and adoption.

Introduction to Stakeholders in Disaster Recovery and Foreign Aid Sectors

As mentioned in our team submission, one of the areas of assistance that Energy Solutions needs is help in getting in front of decision makers in the Disaster Recovery industry, both government stakeholders and private businesses. Additionally, we would like some assistance in finding players in the global renewable energy sector and in the foreign aid sectors. What Energy Solutions needs most from the Hero X competition are opportunities to showcase our technology and convey its benefits to decision makers in targeted industries.