

Technical Assistance Request

Sun EPower's Microgrid-in-a-box

SunEPower is creating a microgrid-in-a-box product. The project is all about product design to make it usable, transportable, economic, robust and reliable. This is meant to be a game changer, as it will be a unique 3-generator product that has both everyday use cases and a meaningful microgrid mode. The project will not include chemical or material level R&D, but rather system design, system optimization and system R&D, Analysis, Procurement and testing. We have to grow our team and our partner network and hope to take advantage of the "Ready" phase to do so. Once our ideas have been vetted by the HeroX team and the peer participants, we will be full steam ahead. We look forward to hearing from individuals, national labs and connectors anywhere, but we are particularly interested in growing and maintaining partnerships with groups that are local to Pittsburgh (our Team location), Upstate NY (our manufacturing facility site) and the DC metropolitan area or Puerto Rico (two possible field-testing sites).



Figure 2: System packed for transport

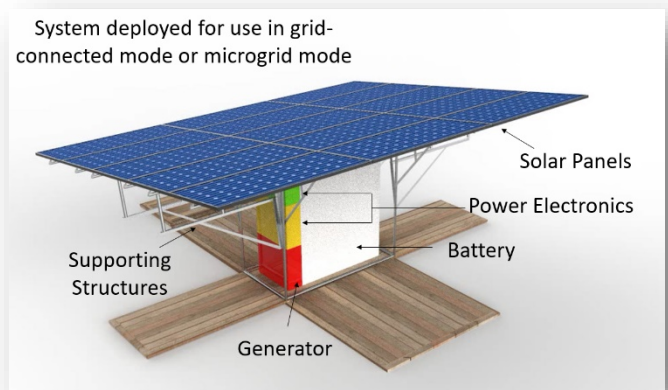


Figure 1: Deployed System Preliminary Design

In order to complete the Ready! and Set! stages of this product development SunEPower will require outside assistance as described below.

Networking: Sun EPower hopes to participate in the conference, such as that hosted by our local connectors, to network with possible mentors, sites and vendors, and to receive technical input on the current product and plan.

Mentorship: Seek mentors in similar business areas or attempting to break into a new technology market of any type. We would like mentors to assist us in making connections, vetting our business and technical decisions and advise us on our planning and development

Personnel:

- **Controls Engineer:** We are seeking a controls engineer with software and hardware interfacing experience. Our controller platform is still not firm and we are open to your suggestions on that topic.
- **Interface Designer:** We will need to work with a Graphical user interface designer to create a user-friendly face to our controller.
- **Mechanical Engineering Analyst:** We are seeking a mechanical engineer capable of conducting mechanical analyses and thermal analyses as well as optimizing design decisions to meet the requirements at a minimal cost.
- **Draftsperson:** We are seeking someone able to expand upon and refine the current CAD models for the system.
- **Electrical Engineer, PE:** We are seeking an Electrical Engineer to design the system and system interconnection hardware and components to meet most interconnection requirements.

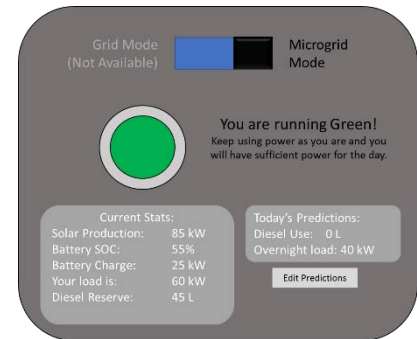


Figure 3: GUI Mockup

Facilities:

- Vibration Test Laboratory
- EMI/EMC test facility
- Microgrid Test facility

Site: While the team has chosen a handful of possible sites and target market locations, we are still working to identify and firm up a site. The site must have a suitable load to test the day-to-day and microgrid use-case. Ideally the site will be located in a location that is either a target market for microgrids (NY, MA, Puerto Rico, FL, CA), or located close to the team and/or other major project partners/vendors.

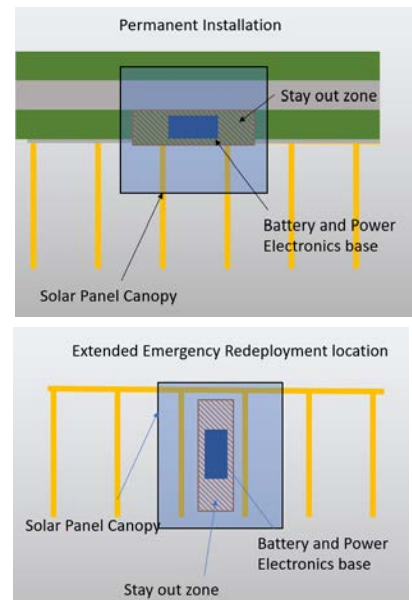


Figure 4: Possible deployment locations