rent.solar
#CleanEnergyDelivered

footprintproject.org
#BuildBackGreener

Technical Assistance Request

Introduction

Rent.Solar's mission is to provide cleaner energy to anyone, anywhere. We do this by providing solar+battery systems that are intended to replace portable (fossil fuel powered) generators. To enhance accessibility, these systems are available for purchase or rent, and whenever possible we offer repurposed solar PV panels and/or repurposed EV batteries in our systems.

Rent.Solar is strategically aligned (through a joint venture) with a not-for-profit organization called Footprint Project (footprintproject.org), whose mission is to help communities affected by disasters build back greener through powering their relief and recovery operations using solar energy to displace fossil fuel powered generators. Footprint Project has been active in Minnesota, Wisconsin, California, Puerto Rico and Tennessee as well as Texas/Mexico.

Our objective is to enter the market in Q1 2021 with a product called the SunKit. The SunKit is a portable generator alternative which incorporates a 2000W or 3000W 120V AC true sinewave inverter, a 2 to 4kWh Li battery (repurposed NMC or new LFP) and programmable charge controller capable of using a PV array sized between 200W to 2500W DC to charge the batteries and generate surplus power during the day to charge more energy intensive devices while keeping its battery fully charged.

Every component of the SunKit is field swappable and upgradeable, which differentiates it from other products in the market, particularly sealed all-in-one units which become e-waste when they break down in the field.

The Rent.Solar team would like to make the following technical assistance request:

- We welcome the support/ collaboration of those who can provide new or repurposed components for the SunKit or similar products that we will be working on. Examples of these components include: American made low cost inverters, low cost charge controllers, AC chargers, enclosures, energy storage solutions, lithium cells especially repurposed or remanufactured (from recycled lithium), "surplus" new lithium cells, repurposed and surplus solar panels, remote monitoring solutions and pay as you go hardware and software that can integrate via phone apps.
- We welcome partnerships with products and applications that the Sunkit and future low cost mobile solutions can power. Products or applications that need off grid powering and would otherwise rely on a portable generator.
- We need help setting up a system to do individual (battery) cell validation, including voltage and capacity tests and/or to assist in estimating useful life (cycles) for various EV and other used lithium cells that we can repurpose into useable batteries to pair with solar systems.
- We would like to integrate a BMS with individual cell monitoring of our repurposed batteries to provide battery health reports, runtime estimates and potentially enable maximum/ optimized battery life.
- Explore other cost effective battery or energy storage solutions
- Create path to UL certification

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