MobiGrid

We believe that there’s beauty in practicality. We believe that the true performance lies back-stage. On Playa, our favorite art piece is the Emergency Services Department’s red cross glowing out into the dark from Station 11.

When the first DPW vehicle turns off County Road 34 onto the blank slate of the desert to build the next Black Rock City, what type of electrons will they bring? How will they run the first light towers, charge the first set of power tools, power the first RV?

Our artwork is a mobile clean energy grid based on the swarm principle. We do not seek to create one monolith power generator, but thousands of moveable solar + energy storage systems, of various shapes and sizes, that interconnect to meet the real power requirements for specific Fly or Playa energy loads.

We’ve designed three types of solar + energy storage systems ready to assemble at Fly, all which integrate upcycled solar power and electric vehicle battery components:

1. Towable / Containerized Nanogrids: Replace 5-20 kW fossil fuel generators while providing shade. Dimensions: 10-35ft L x 6-8ft W x 5-10ft H
2. Fabric Solar Shelters: Replace 2-5 kW fossil fuel generators while providing shade. Dimensions: 10ft W x 35-45 ft L x 10ft H
3. Portable Solar Kits: Replace 2-5 kW fossil fuel generators. Dimensions: 6ft W x 6-30 ft L x 4ft H

Technologies and Materials: All our designs incorporate off-the-shelf solar power electronics, mounted in/on to mobile and/or portable structures using racking made of steel and aluminum. We will prioritize the sourcing and use of repurposed, upcycled components through our network of second-life solar panels and electric vehicle battery partners.

We would like to emphasize that, when at all possible, we intend to utilize existing BMOrg infrastructure (containers, RVs, tent pole structures etc) to reduce the materials costs and improve our environmental impact. Why build a new solar trailer when we can mount a solar + energy storage system on one BMOrg already owns?

Conceptual Cost: We estimate an average cost of $1,000 / kWh of turn-key mobile power (this includes all power electronics - solar panels, batteries, inverter/chargers, wiring). This estimate is most dependent on 1) second-life power solar electronics sourcing (our primary field of expertise), 2) integration of existing BMOrg infrastructure (containers, RVs, tent pole structures etc), and 3) assembly labor (volunteers and/or workforce development grants to hire local technicians).

Development Strategy: In the event we are chosen for an honorarium grant, we would first work with BMOrg and Fly Ranch staff to determine what type of system(s) would be most appropriate to prototype (based on time and cost constraints). We believe our strength lies in the fact that MobiGrid is adaptable to the need and assembled by the users. While our current goal is to retrofit one BMOrg trailer or container with a 10kWh solar + energy storage system and assemble two 2kWh portable solar kits, this is entirely dependent on the needs and goals of BMOrg leadership.

Environmental Impact Summary: We recognize mobile clean energy isn’t clean, just *cleaner* than fossil-fuel generators. By focusing our efforts on sourcing upcycled solar power and electric vehicle battery components, we seek to create an outlet for the green energy industries “waste” by building BMOrg’s MobiGrid, effectively achieving “double-green” impact. We expect the largest percentage of carbon emissions generated from this project will be from shipping components and materials.