

# American-Made Solar Prize TECH ASSIST FOR READY!



U.S. DEPARTMENT OF ENERGY

## PROJECT NAME

### Small Form Factor Cell Site Power System

Providing long duration power to rural 5G and wireless internet service provider (WISP) sites at a lower cost and environmental impact than diesel generators.

### TEAM: Sol Donum

Clift Briscoe, Alexandria, VA, 22301, [cbriscoe@soldonum.com](mailto:cbriscoe@soldonum.com), ([Clift's LinkedIn](#))

Brandon Frederick, Warrenton, VA, 85281, [brandon@soldonum.com](mailto:brandon@soldonum.com), ([Brandon's LinkedIn](#))

Amari Adams, Shady Side, MD 20764, [amariradams@gmail.com](mailto:amariradams@gmail.com)

## PARTNERS AND AMERICAN-MADE NETWORK

Positive Deviancy: <https://positivedeviancy.com/>

[Sol Donum 90 Second Video](#)

## **TECHNICAL ASSISTANCE REQUEST FOR READY!**

Our plan for the READY! phase is to develop a Set! Demo Day proof of concept that demonstrates roadmap advances to our 5kWh Virginia Broadband prototype for a mass-producible system with the following features and capabilities:

1. 8kWh storage capacity vs. 5kWh using the existing two-unit form factor
2. Peak rate shaving when connected to a utility feed
3. Internet of Things (IoT) system metrics data capture, storage and reporting
4. Ability to perpetually power a broadband site as a solar plus storage off grid system
5. Ability to power a broadband site for 24+ hours as a backup solution when utility tied
6. Ability to sell back excess energy to the utility

We are therefore seeking help form the National Labs and Connectors in the network that can provide the following:

1. Emulated load testbed
2. Grid impacts testing to support our goal of achieving a UL1778 product certification for multiport power converters
3. Chambers evaluation for wall and air moisture penetration and multi-zone chambers evaluation
4. Benchtop testing support
5. Custom energy modeling

We are also seeking PC board fabricators, engineering firms and sheet metal specialists who are interested in having their products incorporated into the demo test run. These include but are not limited to:

1. Engineering firms specializing in partial and full turn-key outsourcing solutions and low volume production
2. Sheet metal fabricators specializing in NEMA rated enclosure fabrication
3. PC board prototyping
4. Schematic capture software