

Technical Assistance Request

Enertronics engineering team is capable of inventing new circuits, performing FEA, modeling and simulation, engineering design, and prototype development. Additional talents and resources are needed in the area of manufacturing, company set up, sales, marketing, and legal advices. Further we will also need a PV panel manufacturer partner to integrate our optimizer into their junction box. At this stage, we have demonstrated a business-card size 400-W paralleled DC power optimizer with 380-V output and greater than 99% efficiency.

After winning the “Set” prize, our immediate need for technical assistance is the third-party test to verify the performance of our product. We have started working with National Renewable Energy Laboratory (NREL) for the use of the voucher provided by this competition. The prize will be used to assist our move into “pre-production” stage by covering all the non-recurring engineering (NRE) work and small quantity production cost to supply units for performance verification testing at NREL.

By the end of the “Go!” stage, we would like to work with partners who can provide mentorship and training to help us bring the innovative concept to the market. We will need assistance to pass the Underwriters Laboratory (UL) and EMI compliance testing, product modification, manufacturing and marketing. We also need the help to set up highly automated production plants in the US and to source most components within US. All these goals require substantial help from manufacturing and supply chain experts.

We would need technical assistance to link up with all available resources including technical experts in national labs, PV panel and power electronics manufacturers, investors, legal advisors, and marketing experts. The connection with a PV panel manufacturer is very important and is the key to PV panel integration that puts our product inside the junction box to form a so-called “DC module” that eliminates one set of connection cables and makes our design compatible with existing PV panels. Therefore, we would need to get the advice from PV panel manufacturers on the product specifications and development direction.

In summary, we have four areas that we would like to receive the help: (1) product certification, (2) manufacturing and production, (3) business management, and (4) PV panel manufacturer partnering.

Mentoring Request

In addition to technical assistance, we would also like to request the following mentoring support:

- Business Strategy & Planning
- Finances & Accounting
- Fundraising & Business Development
- Technology Development & Validation
- Government & Regulations
- Human Resources & Team Building
- Legal & IP
- Manufacturing
- Marketing & Communications
- Operations
- Product Development -- Hardware
- Product Development -- Software
- Product Development -- Services
- Sales
- Supply Chain & Distribution
- Sustainability