

David James Peterson's challenge details for challenge: [Solar Prize Round 6](#)

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Explanation

For the SET portions of the HeroX Solar Prize, I need assistance with the following.

Power Electronics and Electronics design; Assistance with development of specialized Sine Wave Inverter and for refinement and commercialization control circuits for various appliances, PCB layout design.

For the GO contest of the HeroX Solar Prize I need assistance with the following.

Prototype manufacturing : PCB / PCBA, Enclosure design

Would like further help with the following : Production manufacturing engineer, Microprocessor programming specialist.

Power Electronics design is the number one thing I'll need help with for the SET part of the contest (for the "Solar Prize Round 6"). My project will involve designing and building specialized inverters and related power electronics.

Key Needs

- Procurement of Raw Materials (1 / 5): Might have issues with procuring needed chips or electronic components due to chip shortage.
- Manufacturing (4 / 5): Will need help from established electronic manufacturers, if successful in contest, moving product to a commercially mass produced set of products
- Product Design (3 / 5): Need help with Power Electronics development for Sine Wave Inverter and other needed improvements in various circuits/products.
- Fabrication & Prototyping (4 / 5): Will need help with getting PCB/PCBA prototypes done for the GO portion of the contest.
- Business Development & Commercialization (3 / 5): Will need help with developing system into commercially available product. Partners with experience with electronics manufacturing would be beneficial.
- Testing and Validation (2 / 5): While concept has been proven in smaller prototypes, additional validation work needs to be done to ensure nothing has been missed in the development of the full system.
- Product Development (3 / 5): Assistance with full product development, including electronics design work, microprocessor programming, & development of enclosures for commercial versions.
- Funding & Investments (4 / 5): If successful in contest will need partners in manufacturing and additional funding to bring product to market.
- Hardware Development (4 / 5): Power Electronics, circuit design work, PCB design layout, and enclosure design for commercially available products.
- Software Development (2 / 5): Microprocessor electronics programming for creation of wirelessly controlled versions of the devices.
- Marketing & Promotion (3 / 5): Will need help marketing and promoting device if successful in getting it into manufacturing (potentially using crowdfunding to advertise / garner interest).

- Legal, Insurance, and Public Policy (1 / 5): Will need help with patent related work, as well as getting business setup correct, and getting system tested through UL testing

Matches

1. [Positive Deviancy](#): 87.65%
2. [Circuit Launch](#): 87.61%
3. [Mendiak Systems](#): 87.59%
4. [BlochSoft Technologies Inc](#): 87.58%
5. [Solar Inventions](#): 86.52%
6. [Bauw Consulting](#): 86.50%
7. [mHUB](#): 86.49%
8. [GoSun](#): 86.48%
9. [Georgia Institute of Technology](#): 85.40%
10. [Weldlogic Inc.](#): 85.40%