**Request for Technical Assistance**

Locally Grown Power

Our project involves two fascinating challenges: The first is to bring into production the world’s first technology that wholly eliminates reverse conduction and hot spots in solar modules. The second is to comply with the inventor’s four conditions:

• Make the panels in the US,

• Deploy them for the benefit of economically disadvantaged communities,

• Develop a regenerative business plan that keeps profits in the local economy, and

• Design a pilot micro-factory that can be replicated in cities across the country.

**Locally Grown Power** is a joint project of idealPV (headed by Kent Kernahan, who invented the technology) and CHERP, a non-profit dedicated to energy retrofitting and sustainability.

Locally Grown Power brings together physicists, engineers, social scientists, and entrepreneurs who are working to design a dual non-profit/for-profit business strategy. The panels will be sold on the open market for profits that will be funneled back into the non-profit work for economically disadvantaged communities. We have designed a micro-factory, raised $450,000 in donations, and been awared $2.1 for our first pilot factory in Pomona, California. But these funding are specific to testing, developing our prototypes, and beginning to equip the factory. We have a long way to go and would benefit from quite specific assistance in a number of areas:

**Regarding our technology**:

* We wish to conduct further field trials. For example, one of the most fascinating aspects of our technology is how well it performs in cloudy conditions. In fact the greatest differential in yield between our modules and stock modules was in cloudy conditions. We would like to set up field trials in particularly cloudy locations and in ones where rapid changes in illumination are frequent.
* In field tests, we found that our modules yielded 59% more energy than panels with a rated efficiency of 18.1%. We wish to run the laboratory tests that will certify our efficiency level and Wattage in industry-specific terms.
* We wish to document in diverse field conditions the energy yield of complete systems with our technology and traditional string inverters versus the most efficient PV modules currently available in conjunction with microinverters and optimizers.
* We wish to test the efficiency of inverters using our technology versus other available technology.
* We wish to conduct the testing that will establish accurate degradation rates for our modules, which, owing to a series of innovations in our architecture, we anticipate will prove to be the lowest in the industry.

**For the non-profit side of operations**:

* An immediate goal is to establish a development department in charge of identifying opportunities both in the public sector (cap and trade funding, California state allocations for renewable energy for disadvantaged communities, etc.) and philanthropic organizations that may want to support our work. We would benefit from advice on how to set up this department and effectively run development operations.
* We wish to understand better how we can work with CCA’s (Community Choice Aggregation entities, such as those in California that procure clean energy in many areas) and how to pursue community solar projects.

**For the for-profit side of operations**:

* We would benefit from technical assistance from PV manufacturing specialists. We have done a lot of work in this area, but still have much to learn.
* Another goal is to understand how best to harness tax credits when installing solar on non-profit entities such as municipal buildings, public housing, and places of worship, through third party ownership and PPAs.