

TECHNICAL ASSISTANCE REQUEST – POWER SHIELD, INC.

This solar tile solution is integrated onto a unique and patented roof tile system that will last three to seven decades. A four-cell crystalline solar panel is mounted on the base tile and wire routed through and under the tile system. The tile system is a whole roof solution for steep slope roofs. This base metal tile has proven longevity based on the material (galvalume) and a factory baked-on finish (Kynar) warranted for thirty years plus. The roof tile system has a cool roof coating and an installation configuration (above sheath ventilation) that has been tested by NREL on similar tiles.

Request #1

We request NREL support for this tile system. Although this is similar to roofs with a cool roof coating and above sheath ventilation that NREL has previously tested, this tile design is unique, and some of the tiles have a solar component that is also important to characterize. Testing is needed to characterize such things as equivalent R values and the temperature of the solar panel component on typical days. This information is important for building designers to use for energy calculations, rebates and related requests.

Request #2

A few hand-made prototypes have been produced, each taking a couple of hours. A 2,500 square foot roof with 3,000 watts of solar will need about 1,400 tiles. Our target initial low production level is 20 to 50 roofs per month. Producing tiles over this level will require tooling for a stamping press.

Power Shield, Inc. is interested in tooling support and partnerships that would enable reaching the initial low level production level.

Request # 3

Homeowners and homebuilders have expressed enthusiastic support for the design and aesthetics of the tile system. PSI won a booth at the Solar Power International Start-up Alley.

We request marketing support help from professionals with background in building materials and solar sales to architects, builders, solar contractors and roofing contractors.

Request # 4

PSI is continuing to raise investment money for project completion. PSI is also actively entering grant applications.

We request help and inquiries from professionals in this area of investing.