SPAN

Span Technical Assistance Request

American Made Solar Prize

Span's mission is to advance clean energy adoption and deliver an intuitive interface to the home. We believe that powering your home with clean energy should be a simple and delightful experience that is technology-forward and human-centered. Span is requesting technical assistance to help in the validation, production scaling, and deployment of our new-to-market smart electrical panels.

The Span Smart Panel is designed to make it faster and more intuitive to adopt distributed energy resources like solar, battery storage, and electric vehicles. It provides all the safety features of a standard electrical panel with added functionality and aesthetics designed for the modern, clean-powered home. Span offers real-time metering and circuit controls through the Span app.

Combined with residential battery storage, Span provides configurable whole-home backup. Span provides controls for each circuit, enabling homeowners to choose the loads that are a priority to power in the case of a power outage (blackout, brownout, Public Safety Power Shutoff, etc.). This is completely differentiated from most of the home battery backup solutions today, which only offer "partial home" or "protected loads" backup. These partial backup solutions have to be separately wired into another panel, requiring additional electrician labor and ending with a solution that is inflexible to the homeowner with regards to changing what loads are powered, which could vary based on situational circumstances like the length of an outage or a seasonal shift for heating vs cooling need.

As a key piece of home infrastructure and a connection point between the grid, the home, and any home-sited distributed energy solutions (solar and storage), safety and reliability are critical. Additionally, Span's product is both indoor and outdoor rated (NEMA 3R) to provide needed flexibility in siting/panel location across different markets, regions, and individual homes. Providing an indoor/outdoor rating is consistent with the needs for many

standard electrical panels, as well as the solar PV inverters and battery storage products that often get installed alongside Span's panel.

Span's product is undergoing performance, environmental, reliability, and safety testing but in general, testing through third-party labs and nationally recognized test labs is expensive. To help with additional testing with these entities, such as further reliability testing and accelerated life testing, Span is requesting assistance from the American Made Solar prize and American Made Network. Having resources to perform further testing will help ensure the product and warranty Span provides are ready to scale up to volume deployments in the coming year.

In addition to testing and validation assistance through third-party labs and nationally recognized test labs, the American Made Network will be an invaluable resource as Span scales up it's production and manufacturing. Much of Span's manufacturing process is based in the U.S. today and as we scale over the course of 2020, we will be seeking new production facilities, assembly processes, and supply chain logistics.

Using the American Made Network to more easily assess domestic options will be a huge asset to Span in the coming year and will increase the likelihood domestic options can continue to be utilized. This could include manufacturing facilities, contracted assembly, and third party / supply chain logistics.

At scale, Span's products have huge potential to leapfrog existing electrical panel technologies, enable faster adoption of clean energy, and provide completely differentiated home energy controls and energy optimization insights. The power outages in multiple utility territories in California this year have demonstrated the need for better distributed generation solutions and backup power options. Given these clear needs and the potential of Span's technology to improve distributed clean energy solutions, we hope to be able to work with the American Made Solar prize to advance our goals and better scale clean energy in the United States.