OutBack POWER™
an EnerSys company

Little Brown Church

GRID/HYBRID CASE STUDY

SYSTEM SPECIFICATIONS	
Location	Clinton, Washington
System Power	9.36kW
Components	• Radian GS8048 inverter/charger, • (3) FLEXmax 80 charge controllers • MATE3 system display and controller • (12) OutBack EnergyCell RE batteries

OVERVIEW

Founded in 2002, Western Solar, Inc. is a leading provider of residential and commercial renewable energy systems in Washington State. The company's 10-member team designs and installs custom solar electric systems and electric vehicle charging stations, which help customers generate electricity sustainably and cut utility costs. In 2013, George Mills approached Western Solar to find a reliable solution for supplying electricity to his recent purchase, a local landmark called the Little Brown Church.

Established in 1910 with the help of Mills' grandparents, the Little Brown Church was a longtime community fixture in Clinton, a small coastal town at the southern edge of Whidbey Island in Washington. When the Little Brown Church went up for sale in 2007, Mills purchased the landmark with plans to revive the community center that his grandparents helped build. Their vision was for the Little Brown Church to be a place of refuge for the community during powerful storms and emergencies, somewhere that neighbors could gather to charge electronics, warm up, refrigerate medication and even access Wi-Fi.

CHALLENGE

- Install a renewable energy system to maximize cost savings from Washington State production credits and federal tax incentives
- Incorporate battery backup to ensure 24/7 power continuity during storms and other emergencies
- Ensure uninterrupted power supply during blackouts

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SOLUTION

As Western Solar began to design the Little Brown Church's solar electricity system, the company knew from experience that OutBack Power's Radian Series inverter/charger was the right product for the job. In order to help Mills maximize production credits and ensure a steady supply of reserve power, Western Solar installed a customized 9.36kW PV solar system, which allowed the couple to optimize renewable energy yield and reduce grid dependency, leading to significant cost savings. As a bonus, because the OutBack Power products in the system are made locally in Washington State, Mills could take advantage of the highest tier of production credits. Additionally, the couple was able to take advantage of a 30% Federal Tax Credit on labor and equipment.

Along with the 8kW Radian inverter/charger, Western Solar customized the system with three FLEXmax charge controllers and two banks of OutBack's EnergyCell RE batteries, a VRLA/AGM design that is essentially maintenance-free. These batteries, with chemistry optimized for deep-cycle (frequent usage) applications, use valve-release design and absorbed glass mat technology for safety, longevity and reliability. Thanks to this installation, the Little Brown Church now serves as a safe haven (and Wi-Fi hot spot) for the small community during blackouts and storms.

OUTCOME

- The Mills' power bill significantly decreased after the solar power system installation; the couple also received Washington's maximum rebate thanks to Western Solar's custom installation
- The Little Brown Church now has a guaranteed 24/7 source of electricity that kicks in whenever the grid goes down. The Mills are no longer reliant solely on the grid for electricity
- Using OutBack's battery-backed system, the Mills can now offer power and shelter to the island's residents during prolonged blackouts and storms

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