

RESIDENTIAL SOLAR REPOWER



Location: Wareham, MA

Project Overview

After years of operation, this waterfront home's existing solar system had reached the point where aging equipment and deteriorating solar modules made continued repairs less practical.

BD Electrical & Solar was brought in to evaluate the existing system and develop a long-term solution. Rather than continue investing in obsolete equipment, we completed a full solar repower, removing the aging array and replacing it with a modern solar system designed for improved reliability, serviceability, and long-term energy production.



The scope

- Removal of the existing solar array
- Removal of obsolete solar equipment
- Inspection of the roof and existing penetrations
- New solar racking and mounting system
- New module-level power electronics
- New high-efficiency solar modules
- Updated electrical BOS
- System testing and commissioning

The finished array provides the homeowner with a modern platform that can be monitored and serviced at the individual module level rather than relying on the home's aging centralized inverter architecture.



The Challenge

The home had an older-generation solar installation built around legacy SunPower equipment and a centralized string inverter.

As the system aged, the solar modules began showing visible deterioration and the original equipment was becoming increasingly difficult to support. Continuing to replace individual components would leave the homeowner tied to an aging system architecture with limited long-term service options. The waterfront location also makes equipment durability and proper installation especially important.



The Solution

BD removed the existing solar modules, racking, and aging system components to bring the installation forward with current solar technology.

With the old array removed, our team was able to inspect the existing roof conditions and rebuild the solar system using new mounting equipment, module-level electronics, wiring, and high-efficiency solar modules.

The Result

The completed repower transformed an aging residential solar installation into a modern system while allowing the homeowner to continue benefiting from a property already well suited for solar.

Instead of repeatedly repairing equipment approaching the end of its serviceable life, the homeowner now has a new solar array built around current technology with improved monitoring, serviceability, and long-term support.

For Massachusetts homeowners with older solar installations, repowering can be an effective option when modules, inverters, or other components begin failing and replacement parts become difficult to source.

