# OutBack is Leaning Forward with SA

YOUR SOURCE FOR UL 1741 SA LISTED PRODUCTS



OutBack built its reputation in the demanding off-grid market where continuing product development is crucial. As more PV is installed on electrical grids, grid operators need flexible tools to help ensure stability and reliability. Regions with the highest PV penetration rates, like Hawaii and California, will soon require grid interconnected systems to have specific "grid support" functions. OutBack is certifying the Radian Series inverter/chargers under the new UL 1741 SA test standard to demonstrate compliance with these new requirements.

## What is UL 1741 SA and the roll out timing?

UL 1741 SA: Standard for Safety—inverters, converters, controller and interconnection systems equipment for use with distributed energy resources. **Grid support or** "smart inverter" functionality will be required by **Hawaii and California beginning September 8, 2017**. UL 1741 SA is the new safety standard certifying products which meet the rigorous requirements needed to ensure safe and reliable operation in support of grid

Although HI & CA are the first states to require grid support functions, expected updates to the IEEE 1547 interconnection standard will make these functions mandatory throughout most of North America within two to three years—be aware of what is happening in your area and prepare accordingly.

modernization efforts.

## Hawaii—Meet updated HECO Rule 14H requirements

All inverters interconnected under CSS or CGS after 10/2015 in Hawaii must update their system on 9/8/2017 to provide grid support functions. After 9/8/2017 all new installations will require inverters be listed to UL 1741 SA.

## California—Meet updated CA Rule 21 requirements

Starting 9/8/2017, applications for interconnection will require inverters be listed to UL 1741 SA. Applications before that date can use any inverter that is on the CEC list of approved equipment.

## Why is grid support functionality important?

As the PV market has grown, the industry has seen increasing grid instability, voltage rise limits and a lack of standard communication protocol. With OutBack's added grid support functions, the Radian Series inverter/chargers are being listed to UL 1741 SA and solve key grid integration challenges including:

## Challenge

Existing "twitchy" trip settings required by previous standards increased potential for grid instability.

## **UL 1741 SA Solution**

Add new grid support functionality which can prevent loss of power generation due to grid disturbances with voltage and frequency ride through.

### Challenge

Voltage rise limits the amount of solar a region can support as the status quo.

#### **UL 1741 SA Solution**

Inverter/charger functions will include Volt/VAr, Volt-Watt and Frequency-Watt to help regulate voltage and power.