Masters of the Off-Grid™ …

OutBack Power Technologies is the leading designer and manufacturer of advanced power conversion components and systems for renewable energy, back-up, and mobile applications. From Baja to Bangladesh, from the Equator to the poles, OutBack components transform energy from renewable and conventional sources into the clean, reliable power people need to transform the quality of their lives. OutBack systems power hospitals, schools, homes, businesses, and much more, in installations of every type and on all continents.

First Choice for the New Grid

Identified by Pike Research as “far and away the leading brand in the remote microgrid market,” OutBack’s leadership across all segments is rooted in the brand’s reputation for extreme reliability and dedication to technical innovation. The new and noteworthy products here continue that tradition of excellence while bringing OutBack’s legendary off-grid technology and performance to a much wider range of energy production and power management applications.

OutBack Grid/Hybrid technology combines the best of both off-grid and grid-tied design to lead the way for the next generation of flexible, interactive renewable energy systems.

Nordhavn Yachts depend on OutBack inverters for AC power on extended ocean voyages.

Sacred Power has installed 650 renewable energy systems using OutBack components for the Navajo Nation in New Mexico.

OutBack systems power life-saving clinics and hospitals throughout the world, including this one in Haiti.

Columbia University’s Solar Journey project used OutBack Power to generate electricity on Thanksgiving at the community-center in Rockaway Island, New York, after Hurricane Sandy struck the town.

Florida’s SunSmart E-Shelter Program has equipped over 100 public schools with grid/hybrid OutBack Power systems for both educational purposes and to provide life-saving power during emergencies.
Radian AC-Coupled system

Getting more utility out of an existing grid-tied PV/solar system means adding AC-coupling. OutBack’s solution brings Grid/Hybrid capability (grid-tied during normal conditions, off-grid when you really need it) to an existing grid-tied-only system by integrating a second smarter Radian inverter/charger along with a battery bank for energy storage. The result is a system that saves money when the grid’s up and saves everything when it’s down by combining grid-tied savings with off-grid dependability and security.

OutBack’s system is the only AC-coupling solution that meets the UL-1741 standard from end-to-end. Based on the renowned Radian inverter/charger and incorporating the new EON Technology™ batteries, OutBack’s 8 kW system takes features and technology proven in demanding off-grid applications and applies them to meet next-grid needs, including superior power quality and generator protection, and tighter voltage regulation to better handle dynamic grid conditions.

Built-in split/phase design eliminates the need for an external transformer, another benefit derived from the demanding off-grid world. AC-coupling represents the next step in renewable energy’s evolution for business and residential applications; OutBack’s system is a powerful, flexible one-brand solution designed to bring the benefits of AC-coupling to a wide range of users.

Availability: Second Quarter 2013
GS-7048E Radian Inverter/Charger for Grid/Hybrid Systems

The all-new 230V 50Hz Radian reflects OutBack’s ongoing commitment to clean, reliable power for homes, businesses and other facilities around the world, delivering 7,000 Watts of continuous power using the same twin power-module design as the GS8048 for redundancy, maximum reliability, and improved efficiency.

The GS7048E can support three-phase systems up to 63kW using the new HUB10.3 communications hub, and single-phase inverter arrays up to 70kW. The new Radian can handle energy flow from diverse directions, and is capable of managing a wide range of energy production and use scenarios including: off-grid, grid-connected, generator (controlling a generator to either stand-in for the grid or augment renewable sources), back-up, support (augmenting weak local AC sources), offset (using renewable sources to run loads and storing the excess instead of selling-back), and mini-grid (using batteries and renewables as the primary source).

Availability: now

IRB-2 Integrated Battery Rack (IBR) and New EnergyCell Batteries with EON Technology™

The OutBack Integrated Battery Rack is a comprehensive battery enclosure solution with cell interconnects, cabling, and series string over-current protection and disconnects included, making it easy to order and install. All electrical connections are made at the factory and ship fully assembled with the exception of the batteries, which can be quickly added and connected on the jobsite. The new IRB-2-48-175 two-shelf version joins the original three-shelf IBR, making it easy to locate an energy storage solution of up to eight batteries under a Radian inverter/charger system.

Availability: Third quarter 2013

OutBack’s new 200GH batteries are designed to support critical power applications in Grid/Hybrid systems where renewable sources normally augment grid power, but the power-conversion system switches to off-grid operation during emergencies or outages. EON Technology delivers optimal performance in traditional float applications with longer shelf life (up to two years) and superior discharge and charge performance.

Availability: Third Quarter 2013
**FLEXmax™ Extreme Charge Controller**

OutBack created the de facto industry standard when the company introduced the first multi-voltage MPPT (Maximum Power Point Tracking) charge controllers. Now OutBack follows up on its original breakthrough with another first: a sealed, outdoor-rated high-performance charge controller with unprecedented thermal management capabilities designed for the most extreme environmental conditions.

FLEXmax Extreme is engineered around the concept that the strongest chain is one with no weak links. In this case that’s the cooling fan, and removing it removes the greatest obstacle to long service life and high reliability, as fan problems severely limit power output. Advanced thermal engineering provides full power output from -20 to 45°C without a fan, and up to 53 amps at 60°C passively-cooled. And because a passively-cooled unit can be sealed, circuit boards and other sensitive electronics can be fully protected from dust, dirt, insects, and other external sources of contamination. An optional, easily-replaceable external fan is available to allow full power to 55°C, 71 amps at 60°C, yet allows unobstructed airflow in case of failure.

Nominal battery voltages 12, 24, 36, 48 or 60 VDC. Maximum output current 80A @ 45°C/104°F with adjustable current limit. Environmentally-rated sealed enclosure: IP54 design for international market; NEMA 3R for North American market. Built-in AXS Card Modbus/TCP interface option provides powerful command, control and integration for industrial customers.

Availability: Third Quarter 2013

**AXS Port™ Modbus/TCP Interface**

Now with expanded inverter and OutBack FLEXnet-DC capability. Locally or remotely monitor and control OutBack components without the need for a dedicated system display. The SunSpec-compliant AXS Port Interface gives industrial and commercial users advanced connectivity options with FLEXmax charge controllers and other OutBack devices, enabling them to access an OutBack power system anywhere in the world via an Ethernet connection using Modbus Transmission Control Protocol (TCP). Communicate directly to a single device, or to multiple devices using OutBack’s HUB4 or HUB10 communications management components.

Availability: Now
Communications Products

OutBack’s flexible and powerful MATE3 system programmer/controller now has serial port communications capability through an optional MATE3 USB card allowing for remote monitoring and control when used with third-party software applications such as greenHouse Computers™ greenMonitor™ Renewable Energy System monitoring software.

Availability: Now

The newest addition to OutBack’s communications family is the HUB 10.3, a device which allows the new 230V Radian to be configured in three-phase systems. Now it’s possible to build 21, 42 and 63 kW 230V three-phase systems with up to three 7kW 230V inverters per phase.

Availability: Now

FLEXpower™ Pre-Wired Systems

OutBack makes a best-seller even better, with new standard models and a new system configurator. All pre-wired and tested FLEXpower systems now come standard with OutBack’s advanced MATE3 system programmer/controller; dual-inverter FP-2 systems also ship with two FLEXmax charge controllers as standard. System options include off-grid, grid-interactive, and 120, 120/240, and 230V versions; other configurations are available with OutBack’s new FLEXpower System Configurator. Contact OutBack for more information.
Certificate Training Program

As de facto leader in the off grid world and emerging leader for the next grid, OutBack Power recognizes that even the best products are only as good as the systems in which they are installed—and that the best systems are built by the best installation talent. Toward that end, OutBack is launching its Certificate Training Program, a multi-day accelerated solar/PV training course which includes class modules, learning labs, hands-on configuration and installation training, and much more.

The program is registered with NABCEP, the North American Board of Certified Energy Practitioners. NABCEP certification is considered the industry's highest standard for solar/PV installers. The OutBack Training Program is registered for NABCEP Continuing Education Contact Hours (credits) at two levels:

• 18 contact hours toward **PV Installer Certification** (requires 58 hours total plus 3 qualifying PV systems installed)

• 12 hours Continuing Education Credits toward **Solar PV Recertification** 3-year requirement (requires 18 hours total (6 in NEC) plus 3 qualifying PV systems installed)

OutBack Power Technologies is offering this unique program in two locations: at company headquarters in Arlington, Washington (north of Seattle), and in Phoenix, Arizona, with classes starting in May at the Washington location.

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This brochure contains current, new and forthcoming products from OutBack and may include preliminary features, specifications and images. Due to OutBack’s policy of continuous improvement product availability, features, specifications and appearance are subject to change.

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