ReGenerator™

Renewable Energy Appliance

by ZeroBase Energy, LLC

Model Scenario: ReGenerator for an off-grid cabin (The Robinsons)

The Robinsons own a cabin that is their summer refuge; a green oasis in the woods, far from the city. But they need electricity to power the basics when they visit their retreat, and to keep a few things running when they're not there. Unfortunately, the electric grid stops at the end of their half-mile access road. The local energy utility has told them that it will cost $8,000 (or more) to extend service to their beloved cabin. That, plus the family's desire for some control over their power supply, spurs the Robinsons to consider on-site generation.

The family's energy needs are not large; a full-size refrigerator, cell phones, a few laptops and a few lights make up most of the electric load. And though the cabin is a retreat, the family wants to stay connected with a small satellite dish that provides internet, and a wireless network. They've considered the small gasoline or diesel generators sold locally at the camp store, but fire restrictions make Mr. and Mrs. Robinson nervous about using the generators during the "Code Red" air quality and fire warning days each summer; they're also worried about having unattended flammables close to their home. Not to mention that the generators are loud and dirty, with rattling engines and blue smoke exhaust that seem out of place at their rural retreat. Plus, the fossil fuel goes stale if it isn't used and eventually someone will forget to buy the fuel for the generator. There's also the big question of who will fix the generator when it breaks down.

REQUIREMENTS

For this situation, the need is for a product that will:

- Run without fuel or regular maintenance
- Operate quietly, without emissions
- Power basic loads year-round
- Save them an expensive grid extension

RENEWABLE RESOURCES

The ReGenerator H-Series is an all-in-one unit that provides freedom from fossil-fuels

POWER REQUIREMENTS

The table below describes how much power is needed and for how long:

Load	Watts	Hours / Day	Days / Year
Laptop, x2	60	2	90
Cell phone x2	5	2	90
Lights, CFL x6	15	4	90
Lights, exterior	200	2	365
Wi-Fi	25	24	90
Refrigerator	21	24	90
Heat tape	210	14	80
Well pump	510	2	90

Power Requirement	
Peak Daily Load, kWh	5.99
Monthly Load, kWh	46.10
Annual Load, kWh	553

Model Scenario: ReGenerator for an off-grid cabin (The Robinsons) (continued)

SOLUTION: THE REGENERATOR 3000

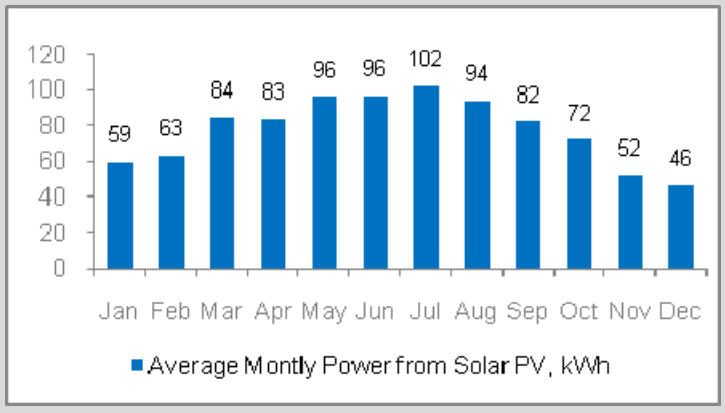
A ReGenerator H3000 is drop-shipped to the cabin, and the Robinsons set it up themselves in about 30 minutes. Although the H3000 can deliver up to 6,000 watts of peak power at a time and recharges its 25,900 Watt-hours battery bank with 720 Watts of integrated solar panels, the family typically only uses 500 Watts at a time. A local electrician connects their well pump to the DC output panel. After a while, the Robinsons forget the device is there. Because it's weather resistant and environmentally sealed, rain, wind and foot-deep snow don't seem to faze it. The batteries let them power throughout a mostly-cloudy week. When they're not using the cabin, the ReGenerator keeps the pipes from freezing and the security system on - something they never could have depended on from a fossil-fueled generator.

REGENERATOR POWER PRODUCTION

The graph below shows the average power this ReGenerator configuration can deliver each month and the amount of power needed to run the required equipment.

Windham, VT USA 42 59" N 72 43' W

Monthly Pwr, kWh	AVG	MIN	MAX	ANN
Internal Solar	77.57	46.39	102.21	931



H-Series Avg Monthly Power Generation Windham, VT USA

Recommended Configuration	ReGenerator 3000
Power Rating	3,000 VA of digital-quality AC power 6,000 Watts of peak power
Integrated Solar	720 W of rated Solar
External Solar	Option to quick-connect to 1.2 kW of Solar or connect up to 1.8 kW of Solar through AC input
Wind Generation	Option to connect a wind turbine up to 1.2 kW
AC Power Output	8 x 110V AC GFCI Outlets
DC Power Output	4 x 12V DC Outlets
Generator Support	Generator Auto-start, up to 12 kW
Storage	6 x 180 Ahr AGM batteries 12.9 kWh of storage
Control & Monitoring	Window desktop client Wireless web monitoring using GSM / GPRS
Weight	1,750 lbs. / 795 kG
Transport	Delivered using a light tilt-bed trailer

For more information:
www.thezerobase.com
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