OutBack POWER™
an EnerSys® company

# Aim High Solar

## WHOLE HOME MULTI-MODE SYSTEM CASE STUDY

| SYSTEM SPECIFICATIONS | |
|---|---|
| **Location** | Colorado Springs, CO |
| **System Power** | 9.6kW solar power, 1,800AH storage |
| **Components** | • Radian GS8048A inverter/chargers<br>• FLEXmax 100 charge controllers<br>• EnergyCell® RE VRLA batteries |

## OVERVIEW

**Colorado Springs sits at the base of the Rocky Mountain Continental divide, experiencing sudden and extreme weather outbreaks.** These weather flares cause many utility outages, especially in the unincorporated community of Black Forest where power lines are strung overhead and susceptible to damage from wind, ice, snow and forest fires. Aim High Solar, an Air Force Veteran owned and operated solar installation company, designed and installed a whole-home, grid-tied/off-grid, multi-mode solar system utilizing the inherent compatibility of all OutBack Power™ equipment to meet the unique challenges of their local community.

## CHALLENGE

- Provide the homeowner a solar/storage solution to power their whole home for indefinite periods of grid outage, yet also provide net-metered/grid-tied sell back when grid is available.
- Solution needed to be silent and emission free to maintain the pristine nature of the homeowners and neighboring property; no generators.
- Storage solution needed to be compatible with installation altitude of property (>2,000m alt).

## SOLUTION

- Install a 9.6kW ground mount solar array, dual Radian 8048 inverter/chargers, dual FLEXmax 100 charge controllers, connected to grid via an automatic transfer switch. The system has an 88kWh battery (44kWh usable at 50% DoD) and can provide up to 16,000W continuous/33,940W instantaneous power to whole home loads.
- Many lithium-ion batteries have altitude installation restrictions of <2,000m. If these batteries are installed above manufactures specs for altitude, the warranty will be voided. Because the customer property is above 2000m, Aim High Solar chose the OutBack Power™ EnergyCell® 2200RE (1,800Ah) VRLA battery which has no such altitude installation restriction.

## OUTCOME

- Homeowner now has peace of mind during extreme Rocky Mountain front range weather outbreaks.
- The system can automatically and seamlessly provide silent power to his entire family for outages lasting minutes/hours or outages lasting days/weeks.
- Grid is down—system can fully sustain whole home power in off-grid mode, indefinitely.
- Grid is up—system sells back to the grid to fully pay for customers annual electricity costs.

AIM HIGH SOLAR
• Integrity • Service • Excellence

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