

Solar and Wind Hybrid Power System

Alpha Group Campus in Bellingham, WA



Hybrid Power
Case Studies

The Alpha HPS Test Facility features a 7.5kW wind turbine mounted on a 100' lattice tower and a fully integrated Hybrid Power System (HPS). The HPS skid will house a 3960 Watt solar array, 533Ah 48V battery bank, 5kW AlphaGen and a DC Power Plant housing all power management electronics and controls.

System Specifications

Wind Turbine:
7.5kW

Solar Array:
3960W

Generator:
5kW AlphaGen

Battery Bank:
533Ah, 48V

Alpha DC Power Plant:
450A, 48V

Off-Grid Electrical Load:

- Electric Vehicle Charging Station
- Informational LED Sign



Alpha Energy's Hybrid Power Supply (HPS) systems are engineered to compensate for larger power load requirements or obstructed weather conditions like cloud coverage or low sun exposure. Solar power is a highly reliable power source, but including additional resources like wind, a battery bank or generator, you protect yourself after the sun goes down. Wind turbines can operate 24/7 depending on wind conditions, and generators or a battery bank can supplement additional power needs in nighttime hours, while getting recharged during peak sun hours.

The need for renewable energy resources is at an all time high. And by incorporating multiple types of energy resources, like solar and wind power, customers can protect themselves from unreliable power supplies and rising energy costs. Systems are available from 1 to 6kW for solar installations and up to 7.5kW for wind installations, and are pre-engineered to ensure highly reliable operation in the harshest of environments.

Initially installed in Spring 2010, this system will serve as a test and demonstration site, with future additions to include expanded solar capacity and a solar vehicle charging station.

One of the nation's leading developers of turnkey photovoltaic systems for commercial, institutional and remote (off-grid) applications, Alpha Energy is recognized as a market innovator in packaging renewable energy technologies.

Power



Alpha Group Campus in Bellingham, WA (Cont.)

Progression Photos



Alpha integrated Solar and Wind Hybrid Power System



Comprehensive design, engineering and installation capabilities



7.5kW wind turbine generates energy in winds as little as 8mph



Experienced Alpha installers



On-site project management



Construction complete in less than 2 weeks



Hybrid Power System (HPS) with solar, generator and battery power



Visible from the street, highlighting renewable energy commitment

