



CITY OF ELLENSBURG RENEWABLES PARK SMALL WIND PROJECT PHASE 1

Project Summary and Scope

The objective of this project is to demonstrate a variety of different wind machine technologies (both vertical and horizontal axis). The Project is located in Ellensburg, WA, on the west edge of Rotary Park adjacent to Interstate 90.

The scope of work included excavation, concrete foundations, turbine assembly and erection, coordination with the City of Ellensburg for metering and connection to the local electric utility grid, electrical service equipment, grounding systems, and AC Inverters if required. Burke Electric provided the (4) following wind turbine systems:

Equipment and Systems Overview

- Energy Ball V200 2.5 KW Wind Turbine
- Honeywell WindTronics WT6500 2.2 KW Wind Turbine
- Skystream 3.7 KW Wind Turbine
- Windspire Energy 1.2 KW Wind Turbine

Offeror Role

Prime Contractor

Owner Information

City of Ellensburg
Community Development Department
501 N. Anderson, Ellensburg, WA 98926
(509) 962-7239 (Building)
(509) 962-7231 (Planning)
comdev@ci.ellensburg.wa.us

Contract Amount & Type

\$421,447—Public Works Contract

Project Start and Finish Dates

6/22/2011—5/1/2013

Project Location

Ellensburg, WA

Energy Ball V200 2.5 KW Wind Turbine

- The Energy Ball V200 is an artistic spherical wind turbine with 5 rotor blades which was installed on a 40' tall mono-pole. Its patented round form is particularly pleasing to the eye, yet is silent to the ear. The turbine comes equipped with a WindPower Inverter which will deliver power directly to the utility grid. The Energy Ball V200 is designed in Holland and manufactured in the USA.

Honeywell WindTronics WT6500 2.2 KW Wind Turbine

- The WindTronics Wind Turbine is a novel electric generator. It consists of a central wheel made up of an aluminum rim, stainless steel spokes, and an aluminum hub which is attached to a 36' tall mono-pole. Two ceramic bearings are used to attach this wheel to the center shaft of the turbine. Custom shaped glass-filled nylon blades are attached to the spokes of this wheel. Permanent magnets are affixed to the tips of these blades at the rim of the wheel. The wind flows through this wheel and interacts with the aerodynamically designed blades to induce a rotational motion in the wheel around its center hub. The placement of the permanent magnets at the blade tips produces the needed high speed motion without the need of any gearing mechanism.

Skystream 3.7 KW Wind Turbine

- The Skystream 3.7 is a wind powered electricity generator containing an integral AC power inverter which was installed on a 45' tall mono-pole. The Skystream 3.7 is manufactured by Southwest Windpower located in Flagstaff, AZ. Burke Electric partnered with Central Wind Energy in Ellensburg, WA for the installation.

Windspire Energy 1.2 KW Wind Turbine

- The Windspire wind turbine is a vertical axis wind turbine manufactured in Reno, Nevada. Power is generated when the wind blows against the vertical airfoils causing them to spin. The turbine was installed on a 30' tall mono-pole.

Burke Electric Project Personnel

Mark Undseth, Project Manager
Dominic Burke, COO
Katie Morton, Safety Manager

