The purpose of this project was to engineer an operational wind turbine electrical generation system. Sensors monitor power outputs and wind speed then display the data to a website.

**Purpose**

The system is located on the roof of the Engineering Lab building on the USU campus. The two turbines are spaced far enough apart to reduce interference on each other which in turn increases efficiency. The turbines were placed on towers to provide as much unobstructed wind as possible to help reach the 600-W “cut-out” power capacity of each turbine.

**Design**

The power output from the turbines correlates well with the wind speed data collected. As the wind speed goes above the “cut-in” speed, or the speed at which power begins to generate, the power output of the turbines increases as the cube of the wind speed. The cut-in wind speed for both generators is approximately 5 MPH.

**Wiring Diagram**

Having the output data will help to ascertain whether or not future wind turbine electricity generation projects are viable in areas where lower wind speeds are measured.

**Impact**

**Acknowledgements:**

- Dr. Doran Baker
- Dr. Douglas Lemon
- Mr. Alan Marchant

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- Michael Engh – Team Leader
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