

# Wind Resource Summary for Seibert Site

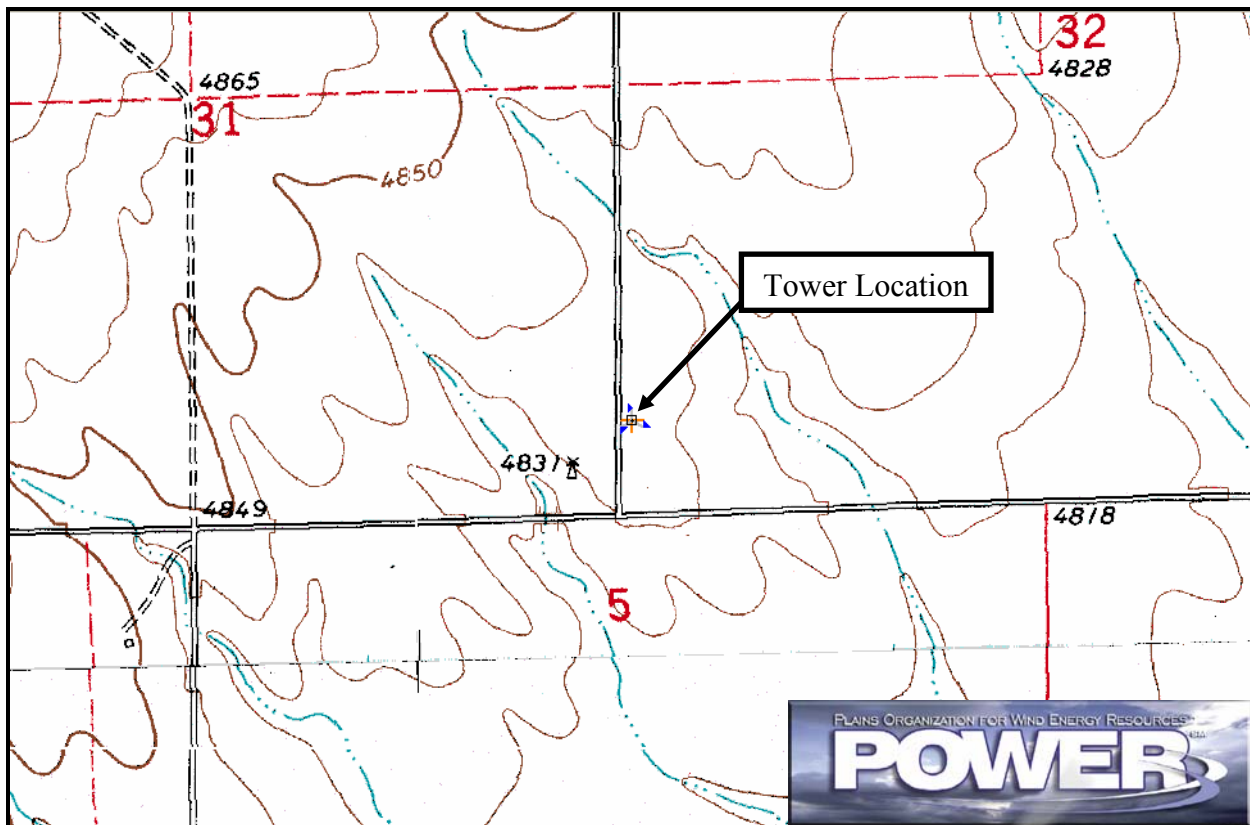
Colorado Anemometer Loan Program

Monitoring Period<sup>a</sup>: 8/29/2006 – 3/1/2007

## Site Description:

|                           |                       |
|---------------------------|-----------------------|
| Latitude: N 39° 7' 44"    | Township: 10 S        |
| Longitude: W 102° 54' 44" | Range: 49 W           |
| Elevation: 4902 feet      | Section: 32           |
|                           |                       |
| Tower Type: NRG Tilt-Up   | Tower Height: 66 feet |

The site is located 12 miles south-southwest of the town of Seibert, Colorado, and 2 miles west of State Highway 59. The tower is located in a rural area predominately used for agriculture. The region's land form consists of gently rolling terrain associated with the plains east of the Rocky Mountains. The site should have good exposure to the wind due to its rural location and relatively flat terrain.



|   |                                 |
|---|---------------------------------|
| Summary Wind Data                       | 66 ft AGL <sup>b</sup>          |
| Mean Wind Speed                         | 14.0 mph                        |
| Maximum, 10-min Mean Wind Speed         | 57.0 mph – 2/24/2007 10:20 a.m. |
| Estimated Wind Power Class <sup>c</sup> | Class 3 (242 W/m <sup>2</sup> ) |

<sup>a</sup> Data recovery rate was 95%.

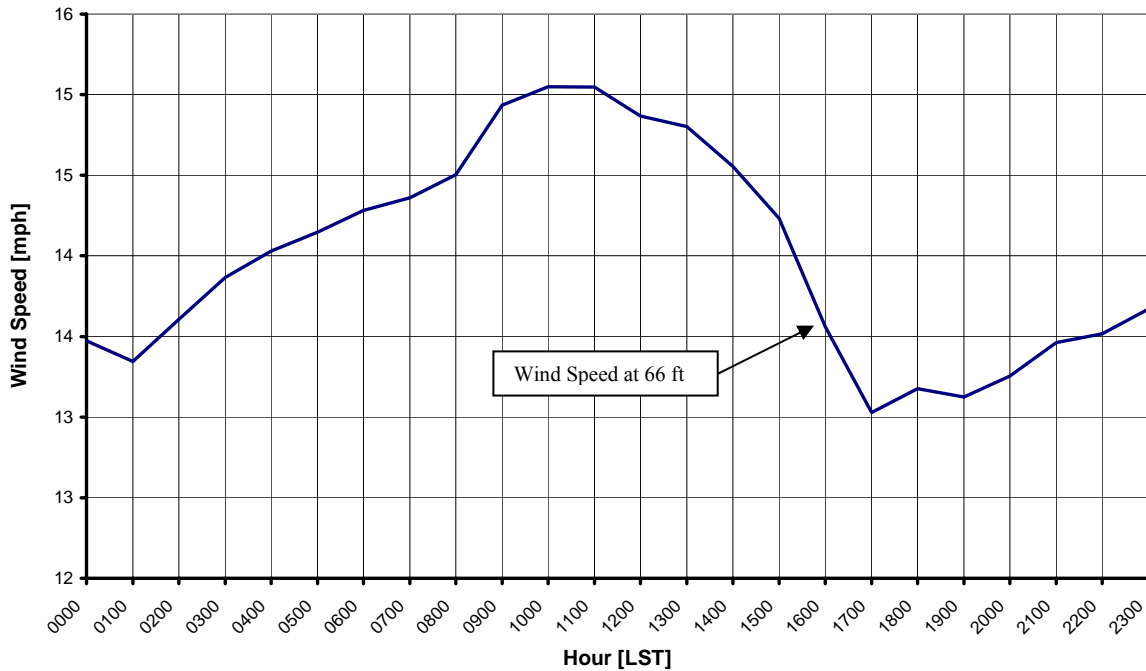
<sup>b</sup> Above ground level.

<sup>c</sup> Air temperature was not factored into calculation.

## Average Hourly Wind Speeds

| 66 ft AGL        |      |      |
|------------------|------|------|
| LST <sup>d</sup> | mph  | m/s  |
| 0000             | 13.5 | 6.02 |
| 0100             | 13.3 | 5.97 |
| 0200             | 13.6 | 6.08 |
| 0300             | 13.9 | 6.20 |
| 0400             | 14.0 | 6.27 |
| 0500             | 14.1 | 6.32 |
| 0600             | 14.3 | 6.38 |
| 0700             | 14.4 | 6.42 |
| 0800             | 14.5 | 6.48 |
| 0900             | 14.9 | 6.68 |
| 1000             | 15.1 | 6.73 |
| 1100             | 15.0 | 6.73 |
| 1200             | 14.9 | 6.65 |
| 1300             | 14.8 | 6.62 |
| 1400             | 14.6 | 6.51 |
| 1500             | 14.2 | 6.36 |
| 1600             | 13.6 | 6.06 |
| 1700             | 13.0 | 5.82 |
| 1800             | 13.2 | 5.89 |
| 1900             | 13.1 | 5.87 |
| 2000             | 13.3 | 5.93 |
| 2100             | 13.5 | 6.02 |
| 2200             | 13.5 | 6.04 |
| 2300             | 13.7 | 6.11 |

**Colorado Anemometer Loan Program – Seibert Site**  
10/2/2006 – 2/27/2007



<sup>d</sup> Local standard time.



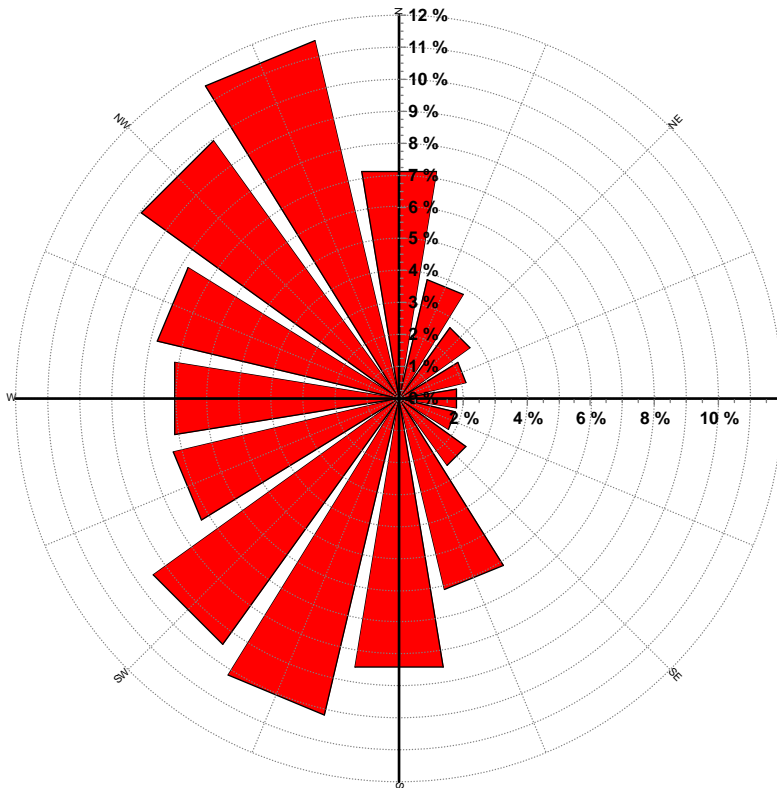
Energy & Environmental Research Center  
701-777-5000 or [bstevens@undeerc.org](mailto:bstevens@undeerc.org)

Creation Date: 3/30/2007

## Wind Directional Frequency

| Winds from the... | Frequency (%) |
|-------------------|---------------|
| NNW               | 11.5          |
| NW                | 10.0          |
| WNW               | 7.8           |
| W                 | 7.1           |
| WSW               | 7.3           |
| SW                | 9.5           |
| SSW               | 10.2          |
| S                 | 8.5           |
| SSE               | 6.2           |
| SE                | 2.6           |
| ESE               | 1.8           |
| E                 | 1.8           |
| ENE               | 2.1           |
| NE                | 2.7           |
| NNE               | 3.8           |
| N                 | 7.2           |

Colorado Anemometer Loan Program – Seibert Site  
 Wind Rose for 66 ft AGL  
 8/29/2006 – 3/1/2007



Energy & Environmental Research Center  
 701-777-5000 or [bstevens@undeerc.org](mailto:bstevens@undeerc.org)

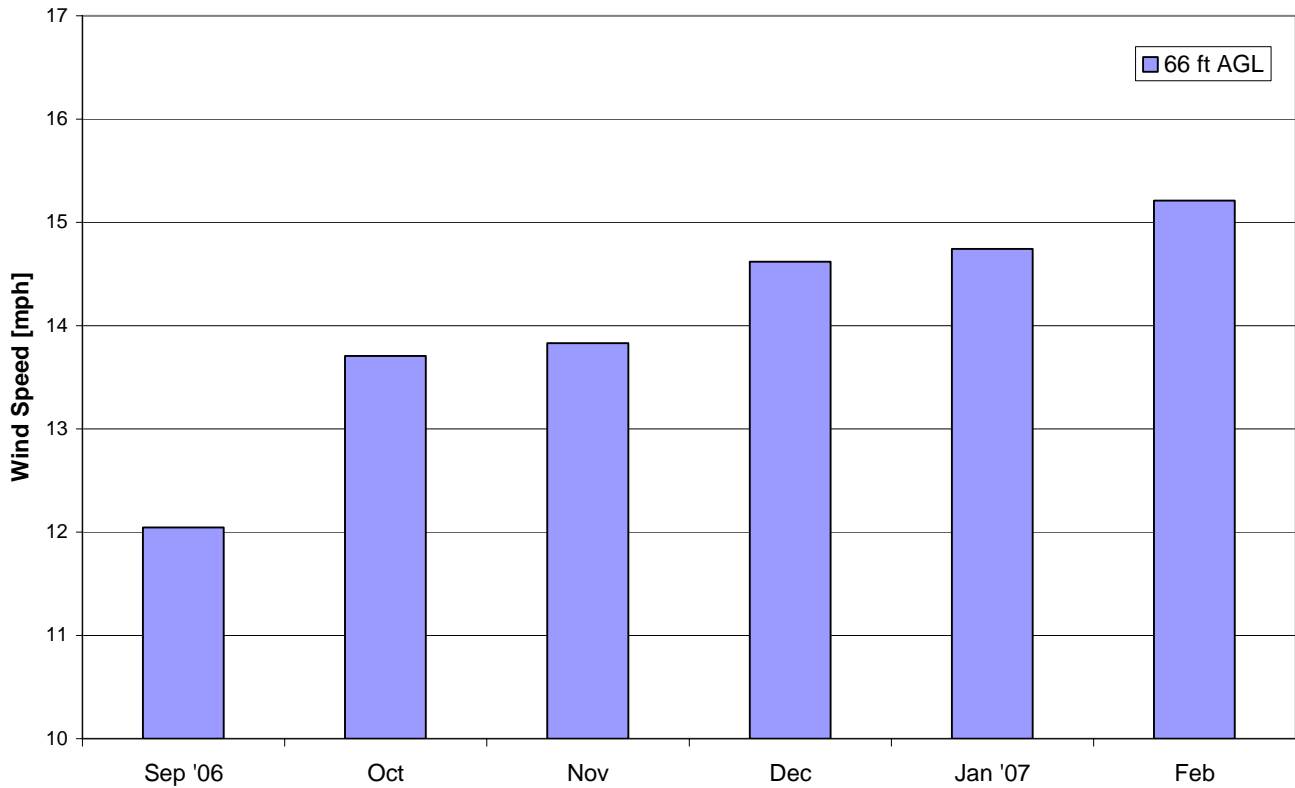
Creation Date: 3/30/2007

## Monthly Wind Speed Averages

66 ft AGL

| Month   | mph  | m/s  |
|---------|------|------|
| Sep '06 | 12.0 | 5.38 |
| Oct     | 13.7 | 6.13 |
| Nov     | 13.8 | 6.18 |
| Dec     | 14.6 | 6.53 |
| Jan '07 | 14.7 | 6.59 |
| Feb     | 15.2 | 6.80 |

Colorado Anemometer Loan Program – Seibert Site  
9/1/2006 – 2/28/2007



Energy & Environmental Research Center  
701-777-5000 or [bstevens@undeerc.org](mailto:bstevens@undeerc.org)

Creation Date: 3/30/2007