

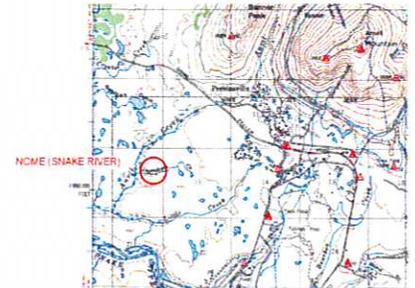
Wind Resource Assessment for NOME (SNAKE RIVER), ALASKA

Date last modified: 5/12/2006
 Compiled by: Cliff Dolchok

SITE SUMMARY

Site #: 7311
 Latitude (NAD27): 64° 32' 17.4" N
 Longitude (NAD27): 165° 28' 12.6" W
 Magnetic Declination: 13° 31' East
 Tower Type: 30-meter NRG Tall Tower
 Sensor Heights: 30m, 20m
 Elevation: 18.3 meters (60 ft)
 Monitor Start: 11/8/2005 24:00
 Monitor End: 3/14/2006 14:50

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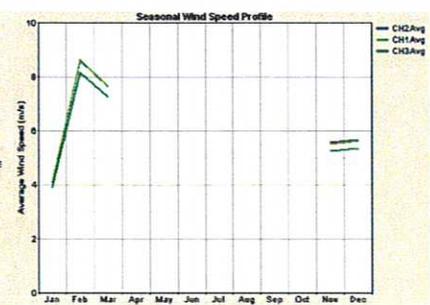
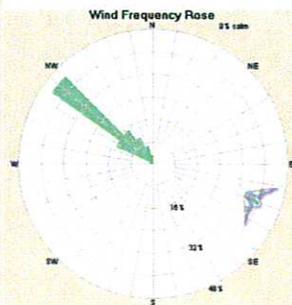
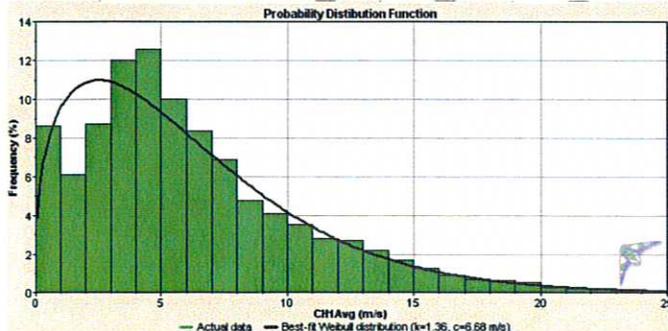
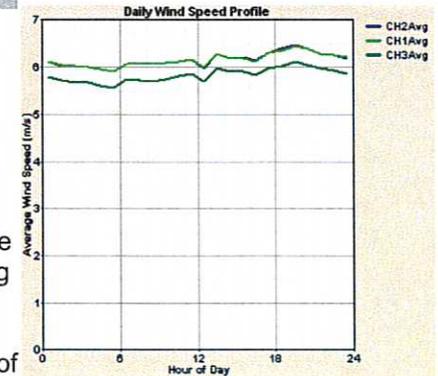


Nome was built along the Bering Sea, on the south coast of the Seward Peninsula, facing Norton Sound. It lies 539 air miles northwest of Anchorage. Nome is located in the Cape Nome Recording District. (source: Department of Community & Economic Development)

WIND RESOURCE SUMMARY

Annual Average Wind Speed (30m height): To be determined
 Average Wind Power Density (30m height): To be determined
 Wind Power Class (range = 1 to 7): To be determined
 Rating (Poor, Marginal, Fair, Good, Excellent, Outstanding, Superb): To be determined
 Prevailing Wind Direction: To be determined

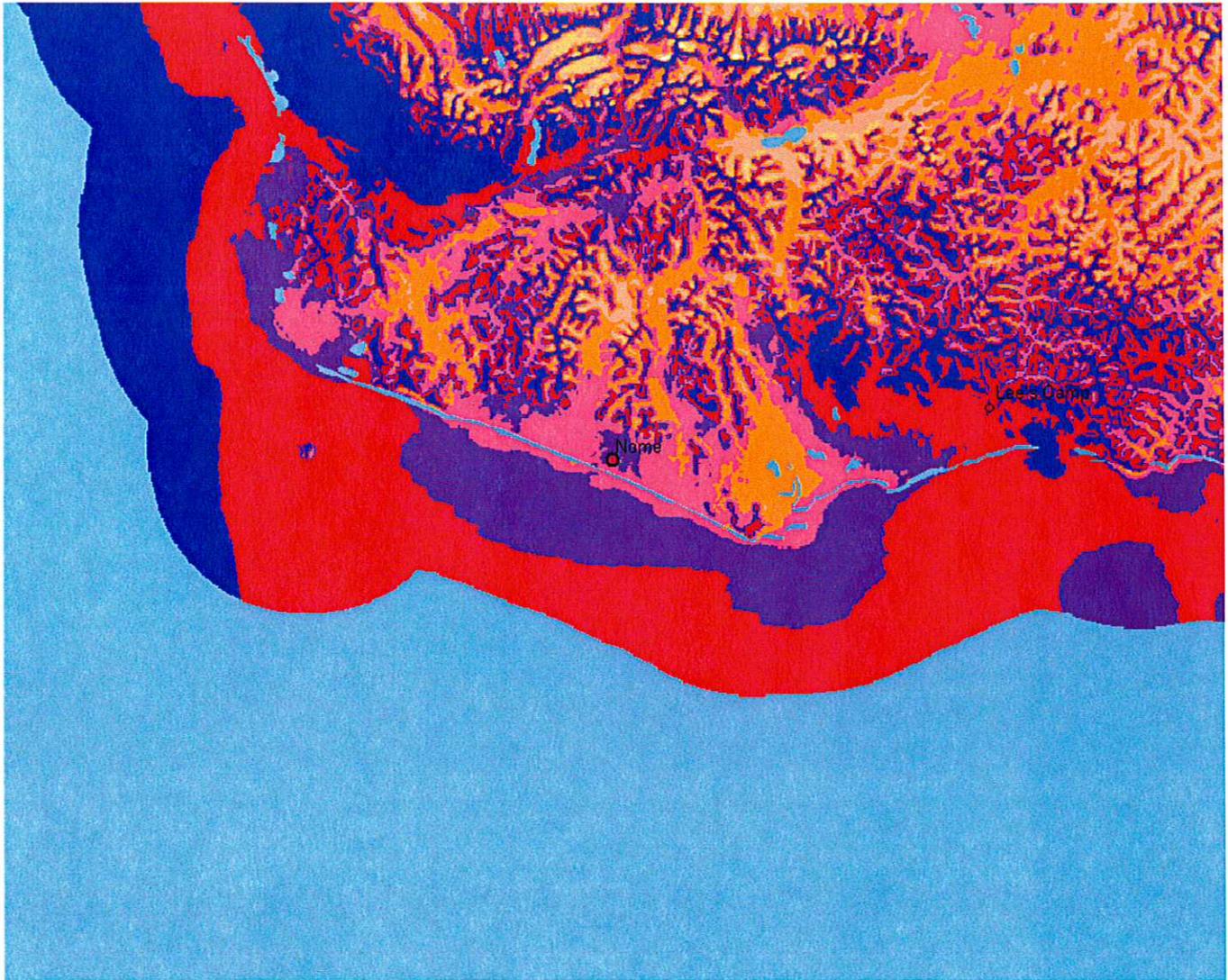
In October 2005, a 30-meter meteorological tower was installed in Nome at Snake River. The purpose of this monitoring effort is to evaluate the feasibility of utilizing utility-scale wind energy in the community. The measured wind speed and direction data at the site was compared to long-term trends in the area and estimates were calculated for the potential energy production from various types of wind turbines.



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INTRODUCTION

Nome was built along the Bering Sea, on the south coast of the Seward Peninsula, facing Norton Sound. It lies 539 air miles northwest of Anchorage. On initial review, the community of Nome at Snake River appears to be a **“To be determined”** candidate for wind power. The wind resource map below shows that Nome at Snake River is in close proximity to areas from a Class 4 to 7 wind resource. Areas of Class 4 and higher are considered suitable for utility-scale wind power development.



Power Density at 50 m	2	200 - 300	6	600 - 800
NREL Class W/m2	3	300 - 400	7	> 800
1-	4	400 - 500		
1+	5	500 - 600		
		< 100		
		100 - 200		

Source: AWS Truewind

Figure 1. Wind Resource Map of Alaska

With support from the Alaska Energy Authority, a 30-meter tall meteorological tower was installed in the village of Nome at Snake River by AEA. The purpose of this monitoring effort is to verify the wind resource in Nome at Snake River and evaluate the feasibility of utilizing utility-scale wind energy in the community. This report summarizes the wind resource data collected and the long-term energy production potential of the site.

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SITE DESCRIPTION

The photos below document the meteorological tower equipment that was installed in Nome at Snake River.

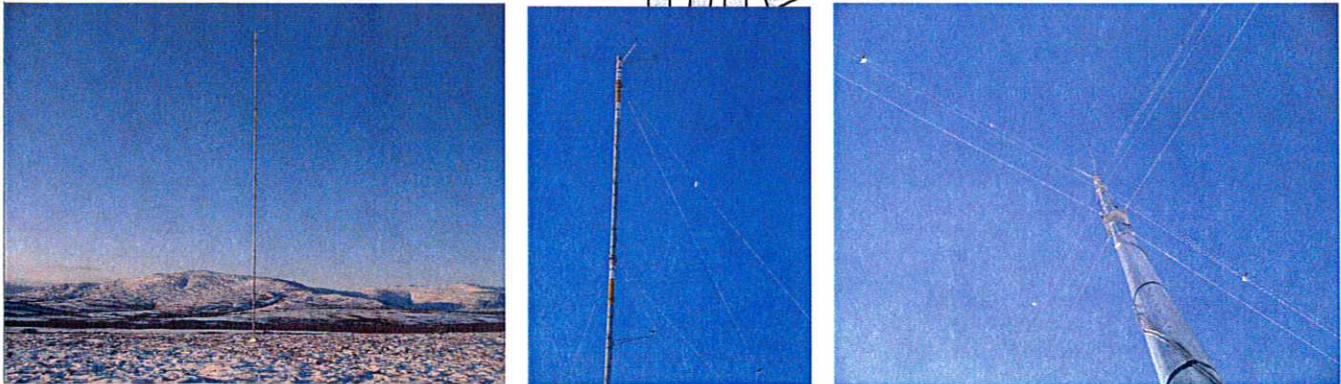


Figure 2. Photos of the Met Tower Installation in Nome at Snake River, AK

The photos in Figure 3 illustrate the surrounding ground cover and any major obstructions, which could affect how the wind flows over the terrain from a particular direction. As shown, the landscape surrounding the met tower site is free of obstructions and relatively flat, except for Anvil Mountain off in the distance with an elevation of 1134 feet.

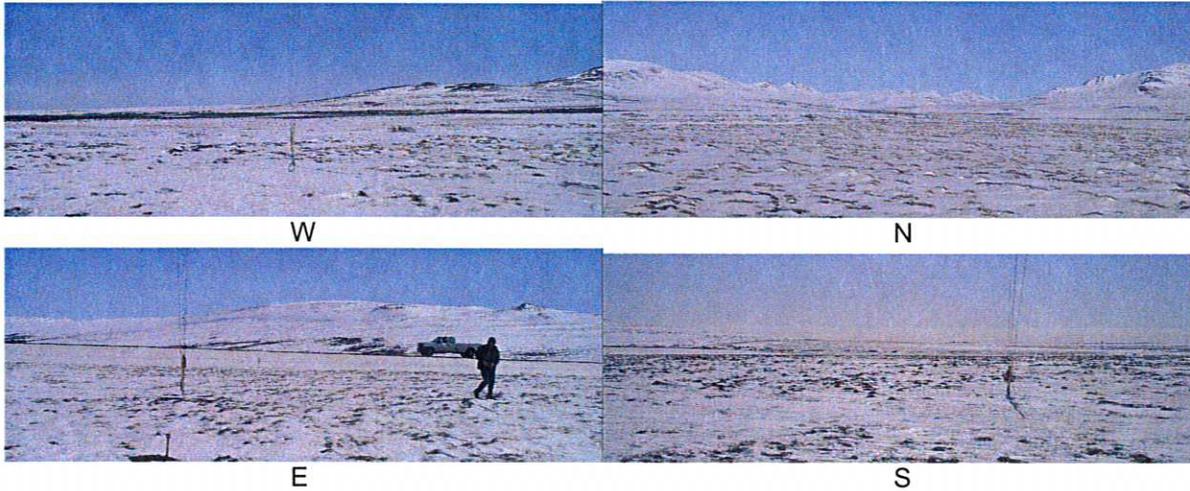


Figure 3. Views Taken from Met Tower Base

Table 1 lists the types of sensors that were used, the channel of the data logger that each sensor was wired into, and where each sensor was mounted on the tower.

Table 1. Summary of Sensors Installed on the Met Tower

Ch #	Sensor Type	Height	Offset	Boom Orientation
1	#40 Anemometer	30 m	NRG Standard	NE
2	#40 Anemometer	30 m	NRG Standard	SW
3	#40 Anemometer	20 m	NRG Standard	NE
8	#200P Wind Vane	30 m	-	E
9	#110S Temperature	2 m	NRG Standard	-

