

## **Report on Grant # 2195377**

**1<sup>st</sup> reporting period ending 30<sup>th</sup> June 2010**

**Grantee : Northwest Arctic Borough**

**Project name :**

**Buckland, Deering, Noorvik Wind Farm Construction**

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*prepared by:*

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### **Activities this reporting period.**

#### ***Milestone 1 Progress***

The NWAB and WHPacific have an agreement in place for beginning work on the NWAB wind-diesel power systems project in Noorvik, Buckland and Deering.

The project will proceed in accordance with the AEA-NWAB grant agreement in terms of sequentially completing project “milestones”. WHPacific is beginning milestone 1 and will be accomplishing the following:

- ***Updating and completing the project execution plan.*** A draft plan had been assembled in 2009 and the update will take into account the new schedule and scope variations.
- ***Updating and completing wind resource assessments for each community and conducting feasibility reports for each.*** WHPacific estimates that sufficient data has been collected for Deering and Buckland but additional data will be needed in Noorvik.
- ***Re-deploying met towers.*** A met tower will be redeployed in Noorvik in July 2010 and possibly in Buckland at a location closer to the village along the gravel pit road.
- ***De-mobilizing towers back to AEA once wind studies are complete.*** Towers will be taken down once sufficient data is collected and has been analyzed.

Work has begun on tabulating all available wind data from each site and summarizing the data. The format and content of the feasibility study is being analyzed for compliance with the requirements of the AEA milestone.

Milestone 1 will be completed for Deering and Buckland in Fall 2010 based on enough wind data capture over the preceding years. Noorvik wind data collection will need to resume until sufficient data is collected. Noorvik Milestone 1 completion is expected in Spring/Summer 2011.

### ***Individual Community Updates***

#### ***Buckland***

A community informational presentation was held on May 13<sup>th</sup>, 2010 during a joint City-Tribal Council meeting. Information presented included:

- Wind resource summary based on data collected to date at the site south of Buckland and the present location west of Buckland on Clem Mountain. Wind resource is anticipated to be class 4-5 and data collected over winter 2010 will help to confirm.
- Project is progressing in sequential "milestones". Milestone 1 involves proving out wind resource and then conducting full feasibility analysis of the project.
- A moderate wind resource coupled with a high cost of diesel may lead to a positive analysis.
- FAA limitations in vicinity of Buckland will need to be considered for placement of turbines.
- Milestone 1 completion planned for late-Summer 2010.



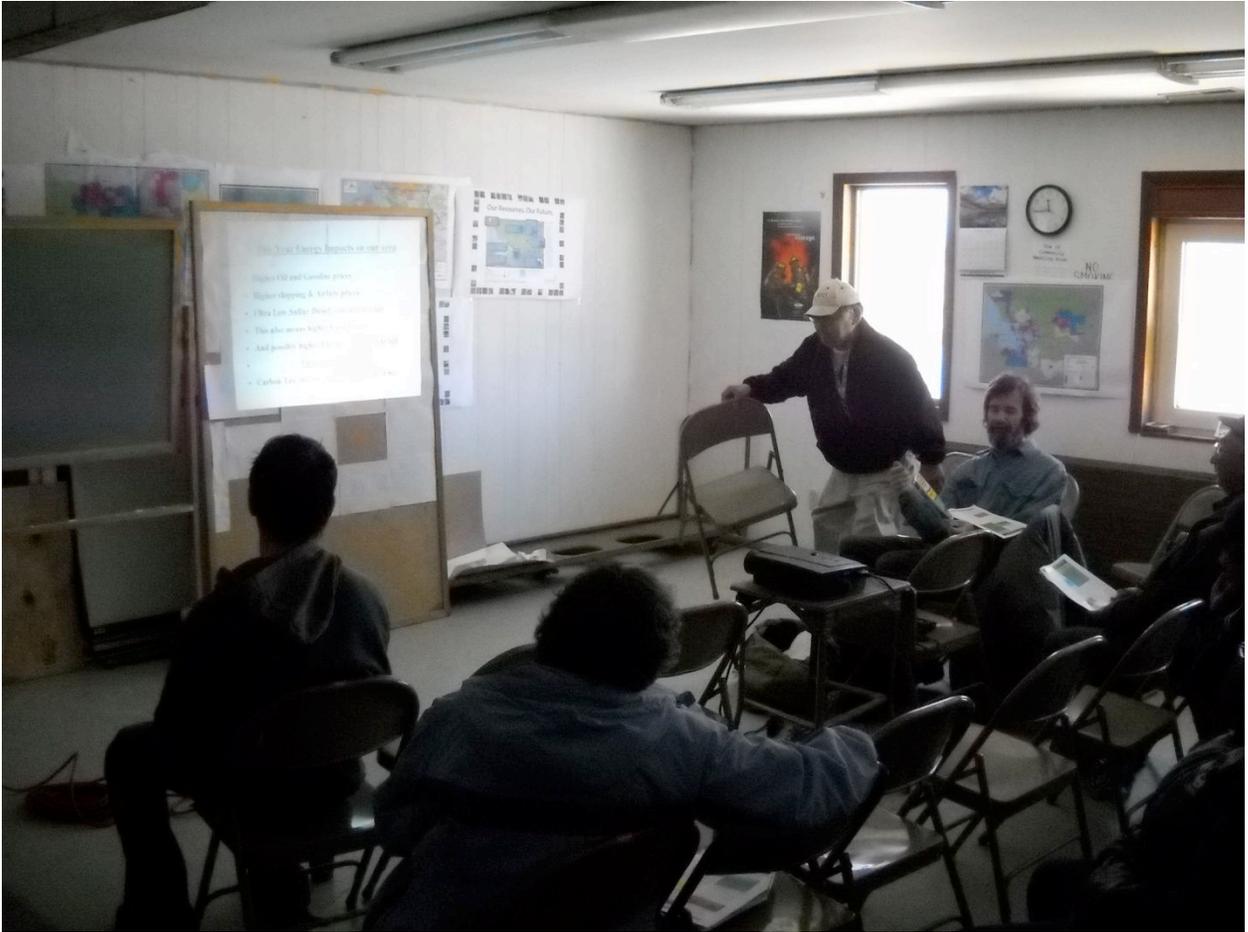
Figure 1. View from met tower site west of Buckland toward the village. Ingemar Mathiasson in photo (May 13, 2010). Photo by Matt Bergan, WHPacific.

Teleconference with City of Buckland Electric utility planned for Summer 2010 to discuss the project in more depth as to the role of the utility and how the project will be operated and supported once commissioned.

WHPacific will continue to work with Tim Gavin of Buckland to collect data from the met tower. New data card to be changed out in late May once snow is melted from area.

### *Deering*

A community informational meeting was held on June 4<sup>th</sup> in Deering. The meeting was well attended and there was a good exchange of information about wind energy and about the project in general. WHPacific inspected the met tower and also made visits to the power plant, waterplant/washeteria and other community infrastructure. Wind data was last collected from Deering met tower logger in February 2010.



**Figure 2. Deering community informational meeting. Also covered other regional energy issues such as low-sulfur diesel (June 4, 2010).**

A teleconference with Ipnatchiaq Electric utility is planned for Summer 2010 to discuss the project in more depth as to the role of the utility and how the project will be operated and supported once commissioned.

### ***Noorvik***

Discussion with Brent Petrie of AVEC on June 8, 2010 to discuss the Noorvik project and a follow on community informational meeting is planned for July 15, 2010. AVEC is planning to attend the July 15<sup>th</sup> community meeting in Noorvik.

Met tower move to new location planned for early-July. Location of original met tower at gravel pit being considered along with location between airport and gravel pit. Gravel pit location has been shown to have excellent wind potential (2002 study) but is far from Noorvik (5-6 miles). A wind site closer to town with a good wind resource may provide the best means of balancing power line extension cost with overall project cost.



Figure 3. Noorvik "old airport" site met tower take down.

## Activities Planned for July 2010 Reporting Period

### *Deering*

- 1) Complete evaluation of wind data collected to determine if tower is ready for takedown and make plan accordingly.
- 2) Continue preparation of feasibility report. Collect fuel cost and other financial data from utility.
- 3) Have teleconference with Ipnatchiaq Electric to provide project update and address any concerns.

### *Buckland*

- 1) Complete evaluation of wind data collected. Determine if tower is ready for takedown and make plan accordingly.
- 2) Continue preparation of feasibility report. Collect fuel cost and other financial data from utility.
- 3) Have teleconference with City of Buckland Electric Utility to provide project update and address any concerns.

### *Noorvik*

- 1) Install met tower at site near gravel pit, east of Noorvik and begin supplemental data collection. WHPacific will work with GCI to determine if the local cellular phone service in Noorvik can be used for retrieving data from the logger resulting in more frequent data collection and higher quality data.
- 2) Conduct community informational meeting on July 15 in Noorvik with AVEC. Meet with AVEC representatives during meeting discuss wind integration with the existing diesel power plant.
- 3) Continue preparation of feasibility report.

