The Wind-diesel Grant AEA # 2195377

This project started in 2008, with a round one Grant request to State of Alaska’s Alternate Energy Fund together with an in-kind of $162,500 from NANA Regional Corporation.

- 3 Communities with Wind potential was chosen, Buckland, Deering and Noorvik.

A Total of $10,758,928 was requested from AEA for wind-data collection, Feasibility studies, Conceptual design and Construction for the 3 communities.

Time line
- During 2009-2011, sufficient data from Buckland and Deering showed that adequate wind was available to proceed to conceptual design phase and possible construction.
- The Data from Noorvik did not show good enough wind, so 2 new sites was found to continue data collection.

Buckland:

Project complete...
At this time we are mopping up the last bills and adjusting the budget.
Deering:

**Project complete**
Pictures from Deering

![Picture from Deering]

Noorvik:

A project to measure wind strength at “Hot ham peak” has been initiated and approval has been obtained from the FAA and the Selawik Refuge management.

- Installation of the tower at Hotham has been completed and the equipment is reporting wind conditions.
- Additionally the equipment at the lower “quarry” site has been replaced and is also reporting wind data.
- Contract for ongoing measurement has been executed with V3, Doug Vaught.
- The project of measure the wind at Hotham was going to go on for one year, however
due to an “Icing” event the tower became inoperable in September 2015.

- A Complete an updated CDR study has been generated to validate data collected from Hotham peak in comparison with the existing MET tower at the Quarry site.
- This will be used for a possible wind-diesel project in Noorvik, including feasibility and economics study for Kiana wind and Interconnect transmission line Kiana-Noorvik and a possible extension to Selawik.
- The report will be available on the NAB Website.

**Breakdown Cost of Wind diesel project.**

**Buckland**

- Wind analysis $ 97,000.00 including MET towers.
- Feasibility/CDR $ 104,000.00
- Geotech $ 107,946.00
- Permits $ 28,000.00
- Final design $ 342,000.00
- Construction $ 5,956,000.00 including turbine cost.
- Total $ 6,687,947.00

**Deering**

- Wind analysis $ 97,000.00 including MET towers.
- Feasibility/CDR $ 89,603.00
- Geotech $ 107,946.00
- Permits $ 15,473.00
- Final design $ 377,320.00
- Construction $ 2,989,135.00 including turbine cost.
- Total $ 3,676,477.00

**Noorvik**

- Wind analysis $ 97,000.00 including MET towers.
- Feasibility/CDR $ 98,868.00
- Geotech $ 107,946.00
- Permits $ 18,588.00
- Final design $ 100,594.00
- Construction Estimated $ 5 Mil needed
- MET tower Hth. $ 58,134.00
- Total $ 481,130.00

**Total Production since commissioning as of February 2016**

**Buckland July-2015**

- WTG 1 66,646 Kwh
- WTG 2 49,855 Kwh
- Total 116,501 Kwh Value @ 14 Kwh/Gallon = 8,322 gallons of Fuel saved

**Deering Nov-2015**

- WTG 1 36,736 Kwh Value @ 14 Kwh/gallon = 2,624 gallons of Fuel saved