Sac and Fox Tribe of the Mississippi in Iowa

Meskwaki Nation

Department of Energy
Tribal Energy Program Review 2011
Denver, Colorado

Wind Energy Resource Assessment on Tribal Land
Presented by: Donald Wanatee
November 15, 2011

Project Participants:
Technical POC: Vacant
Business POC: Lucas Smith (Grants/Contracts Officer)
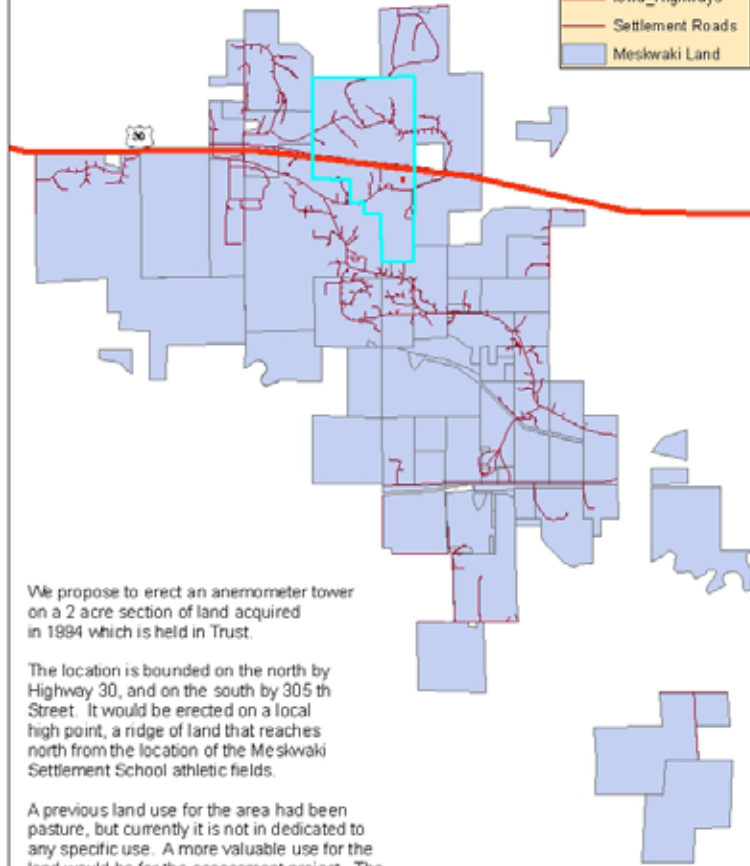Tribal Council Liaison: Donald Wanatee

Project location

Meskwaki Settlement - Land Proposed For Wind Assessment

Wind Assessment - Project Location

Legend
- ▼ Anemometer Tower
- —— Iowa_Highways
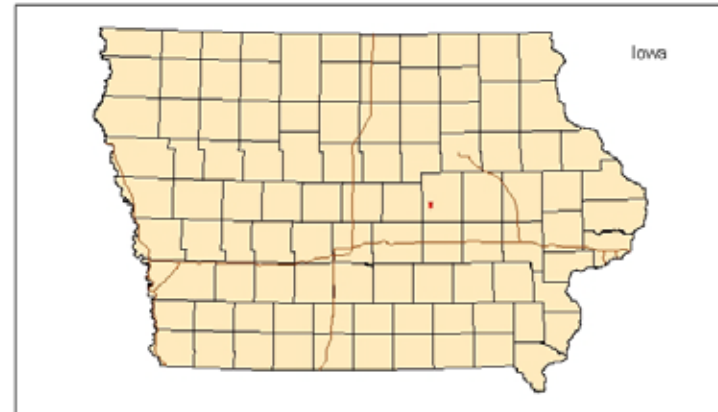- —— Settlement Roads
- ▢ Meskwaki Land

Iowa

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We propose to erect an anemometer tower on a 2 acre section of land acquired in 1994 which is held in Trust.

The location is bounded on the north by Highway 30, and on the south by 305 th Street. It would be erected on a local high point, a ridge of land that reaches north from the location of the Meskwaki Settlement School athletic fields.

A previous land use for the area had been pasture, but currently it is not in dedicated to any specific use. A more valuable use for the land would be for the assessment project. The Tribal Realty Officer has stated that there are no current plans to use the parcel for any other purpose.

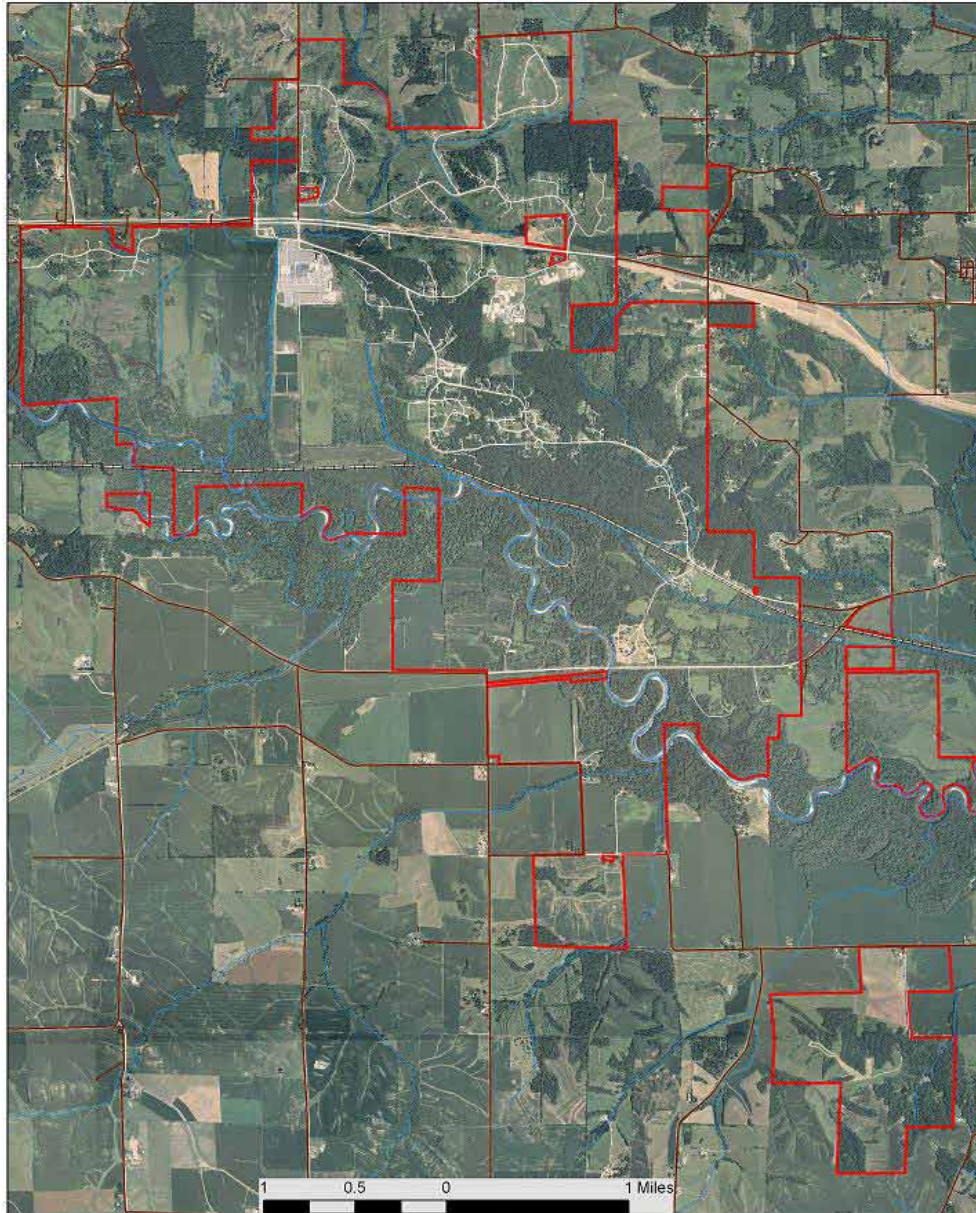Path & File: C:\Project\0129_DOE\Grant_Forms\Mapping\Land_Proposed_For_Assessment2.mxd
Plot by: Tom Gearing April 14, 2009

Tama and Surrounding Counties

Black Hawk Co.

Grundy Co.

Tama Co.

Benton Co.

Marshall Co.

Jasper Co.

Poweshiek Co.

Iowa Co.

Meskwaki Settlement

Aerial Photography - NAIP 2009

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W E
S

Meskwaki Planning Department
Looking to a Brighter Future

Meskwaki Nation

1   0.5   0   1 Miles

SAC & FOX TRIBE OF THE MISSISSIPPI IN IOWA

MESKWAKI RENEWAL ENERGY ASSESSMENT NARRATIVE

MESKWAKI SETTLEMENT, TAMA, IA 52339

**Assessing the Feasibility of Renewable Energy Development and Energy Efficiency
Deployment on Tribal Lands
Funding Opportunity Number: DE-PS36-09GO99024**

Topic Area: Renewable Energy Feasibility Studies

Contact Information:

**Technical POC
Thomas Gearing (Technical Principal Investigator)
349 Meskwaki Road
Tama, IA 52339**

Assess Energy Needs

Meskwaki Settlement: Kilowatt Hours Used, 2007 - 2008
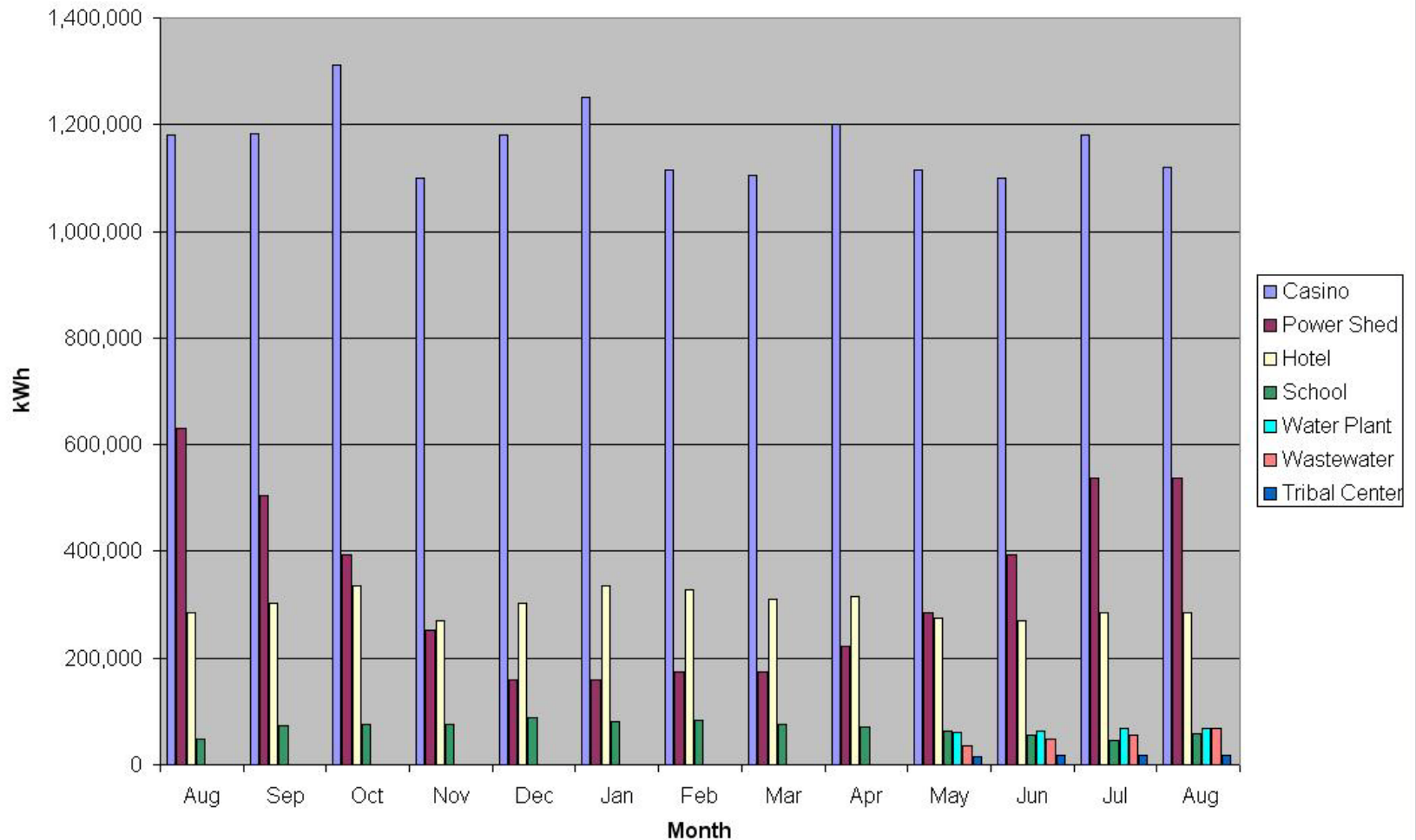
Summary of Project Objectives

- Anemometer tower deployed in September 2010. Average wind speed at 58.5 meters= 14.56 mph. 12 months worth of data. 24 months would be better.

- Recent total usage at Meskwaki reported by rural electric cooperative (REC) to be 30,411,092 kwh.

- Interconnection/transmission discussed with REC and Central Iowa Power Cooperative. Feasibility analyses pending.

Summary of Project Objectives

- Current project assumes 3.47 mwh average monthly usage. Low of 2.0 mwh. High of 6.0 mwh.

- Project scope and size proposes Two-1.6 mw Wind Energy Generators. Maximum output of 3.2 mw. Net Capacity Factor will be over 40%.

- Preliminary environmental assessment soon to be underway.

Summary of Project Objectives

- Economic/Financial analysis to be completed within next 4 months.

- Preliminary System Design to be completed within next 4 months.

Anemometer Tower Goes Up!

Jin-Pole Technique, No Crane Needed

Current Status:

- Downloading from email every morning
- 1) 14k bytes file of 24 hours data – midnight to midnight
- 2) 5k bytes file of last 6 hours data – from midnight to 6:00 AM
- Run NRG Symphonie software daily.
- Read Data and view wind speed graphs
- Load the 24 hour file to site database.

Thank You!

- Questions?