

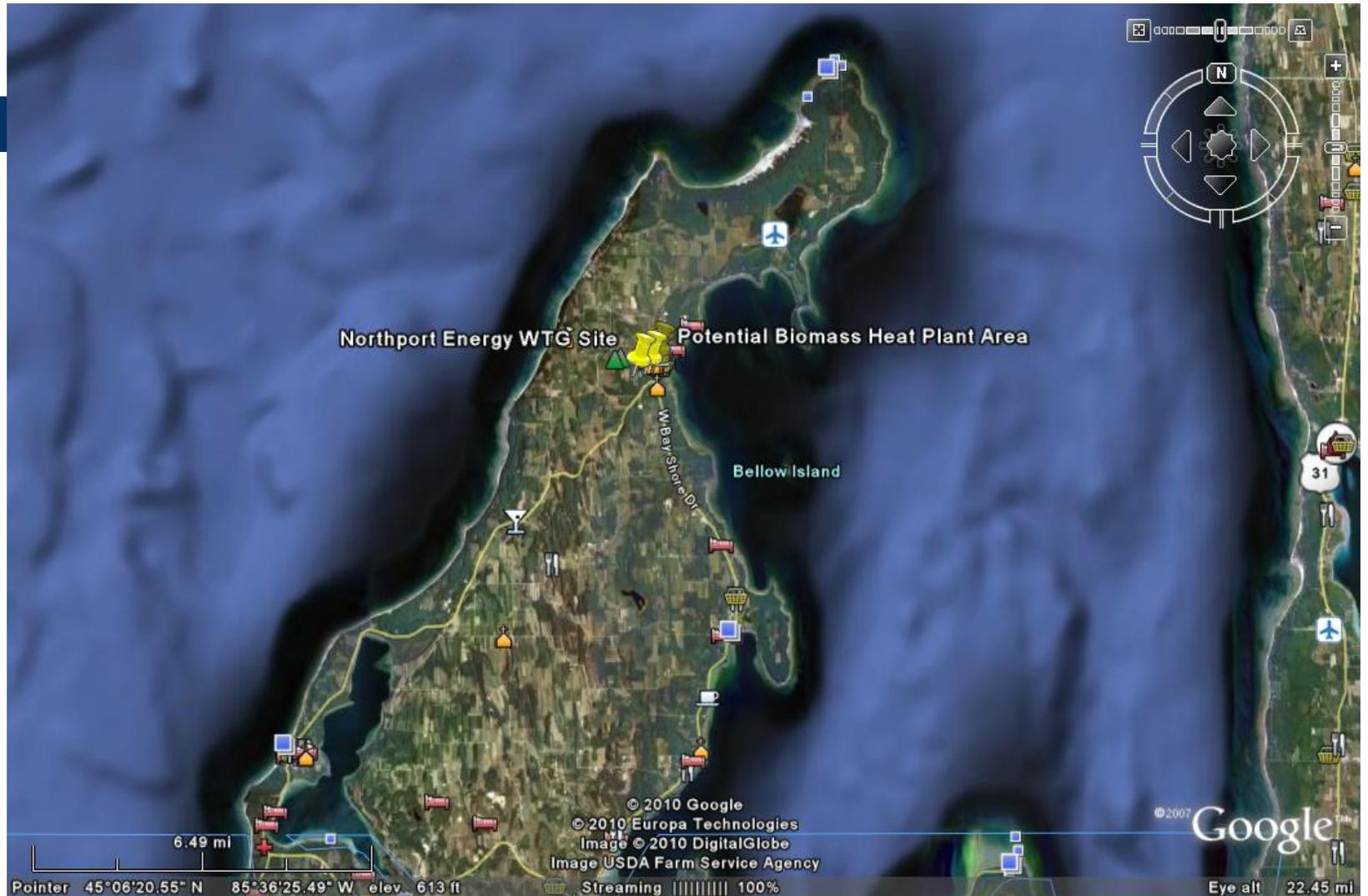
**Northport Energy Action
Taskforce
Leelanau Community Energy, LLC**

Ensuring Michigan's Future

Traverse City
April 22, 2013



Leelanau Township



Demographics

Northport Village

Pop 500

Leelanau Township

Pop 2000 including
Northport Village



The Mission

The mission: to encourage energy efficiency and the installation and use of renewable energy to achieve, in the future, 100 percent renewable energy to power Northport Village and Leelanau Township.

Community Power Project Model

- Non-profit versus profit financing model
- Leelanau Community Energy, LLC
- Local financing and ownership
- Local jobs: engineering, construction, installation
- Can be duplicated across state

Project Areas

1. Northport Wind Turbine
2. Energy Efficiency Initiatives
3. Distributed energy – solar & wind

1. Northport wind turbine

- A. Vestas 120 kW wind turbine
- Village Site
- Provides 50 % waste water treatment plant electrical needs
- Net metering



Turbine Project Cost

- Total Capital Cost: \$353,000
cost per watt - \$3.00
- Treasury Grant (30%): \$106,000
cost per watt - \$2.10
- Loan-Investors \$ 280,000
- Pay back 10 -12 years

Solar PV Summary – NEAT Members

NEAT Solar PV		Peak KW	KW-hrs/Yr
Todd		6.0	9,461
Light of Day		8.8	13,876
Spencer		5.9	9,303
Abbott-Hauser		7.4	11,668
Gallery		4.9	7,726
Smiley - Kopka		1.1	1,400
McInnis		4.6	7,253
Total		38.7	60,687

Doug & Ann McInnis 4.6 kW

Roof Mounted

Consumers Energy
“Feed-in-Tariff”
Program



Tom Gallery – 4.9 kW

Cherryland Electric – Net Metering
Program



NEAT Renewable Electricity

- Wind Turbine – 120 KW
- Solar PV Installations: 39 KW +
- Estimated Township Installed kW – 160 kW

Watts / Capita:

Leelanau Twp: Solar: 17.5 watts Wind: 62.5 watts

USA: Solar 14 watts, Wind 150 watts

Germany: Solar 301 watts, Wind 355

2. Energy Efficiency Initiatives

- A. Education and demonstrations
- B. Low income family programs
- C. Utility rebate programs



Energy Conservation Demonstration

- Smart power strips
- Water heater blanket
- Programmable thermostat
- Window wrap
- Compact Fluorescent bulbs
- Pipe wrap
- Water saving devices



3. Distributed Energy

1. Energy resources – small, modular
2. Located near where energy used
3. Grid connected or off-grid
4. Small scale power generation

Distributed Energy Benefits

- Strengthen local economies
- Reduces energy transmission losses
- Reduces number of powerlines
- Minimal impact to environment and viewsheds
- Mitigate and slow climate instability

Recommendations

- Metering aggregation for homeowners, businesses and municipalities
- Raise net metering cap - current limit 1% of utility's peak load

Thanks for your attention

Northport Energy meets monthly – second Thursday

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www.northportenergy.org