

TOWN OF LA POINTE MADELINE ISLAND

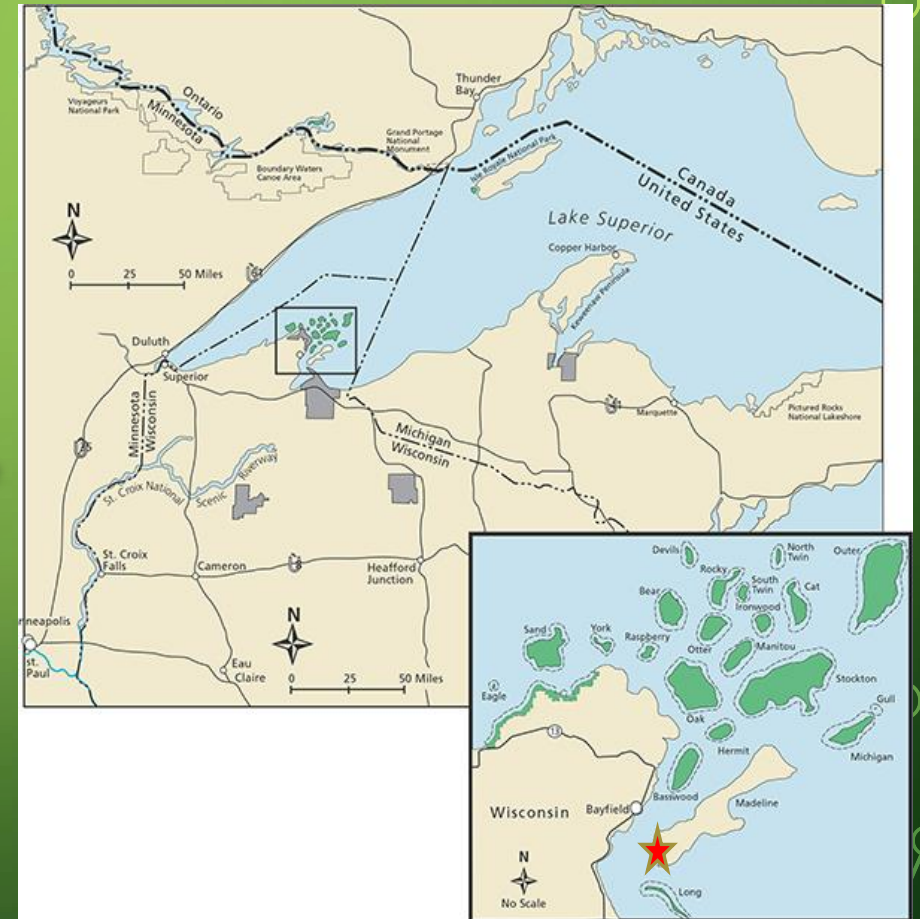
SOLAR AND PLANNED MICROGRID

Lisa Potswald
Town of La Pointe Administrator
Local Government Summit
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TOWN OF LA POINTE

- There are few communities in Wisconsin that can understand the importance of energy independence as well as a small island community, especially one as far north as Madeline Island.
- The Town of La Pointe encompasses all of Madeline Island, which is fourteen miles long and 3 miles wide, or 42 square miles.
- It is the only island of the Apostle Islands with permanent residents (265 in 2015 U.S. Census). In summer the Island grows to over 3,500 with tourists and summer residents. The Island has almost 1,000 structures.



ALTERNATIVE ENERGY SOLUTIONS

- Town Board appointed Energy Committee (EC) in 1998:
 - Members: former state energy office director, CPA, Island's waste water treatment facility director, marine technician, sustainable farmer/ businessman
 - Xcel Energy has participated and provided financial support
- Committee accomplishments:
 - Examined municipal operations, facilities and fleet and made recommendations for changes on an annual basis
 - Engaged Focus on Energy for full energy audit of Town facilities in 2009 – implemented recommendations
 - Conducted a 2-year study of utility scale wind energy to provide the Island's electricity
 - Result: utility scale wind energy on the Island not practical

ALTERNATIVE ENERGY SOLUTIONS (CONTINUED)

- EC
 - Conducted wind and solar energy assessments for individual property owners to provide guidance for homeowners interested in pursuing renewable energy
 - Made community presentations pursuing sustainability, particularly on the acquisition of renewable energy technologies
 - Encouraged the Town of La Pointe that passed a resolution pledging to reduce energy use to save taxpayer dollars and reduce emissions
- La Pointe is a Wisconsin Energy Independent Community
 - In 2015 the Town Board passed an additional resolution supporting the work of the EC and its plan for renewable energy to serve municipal operations

LA POINTE RESILIENCY PROJECT

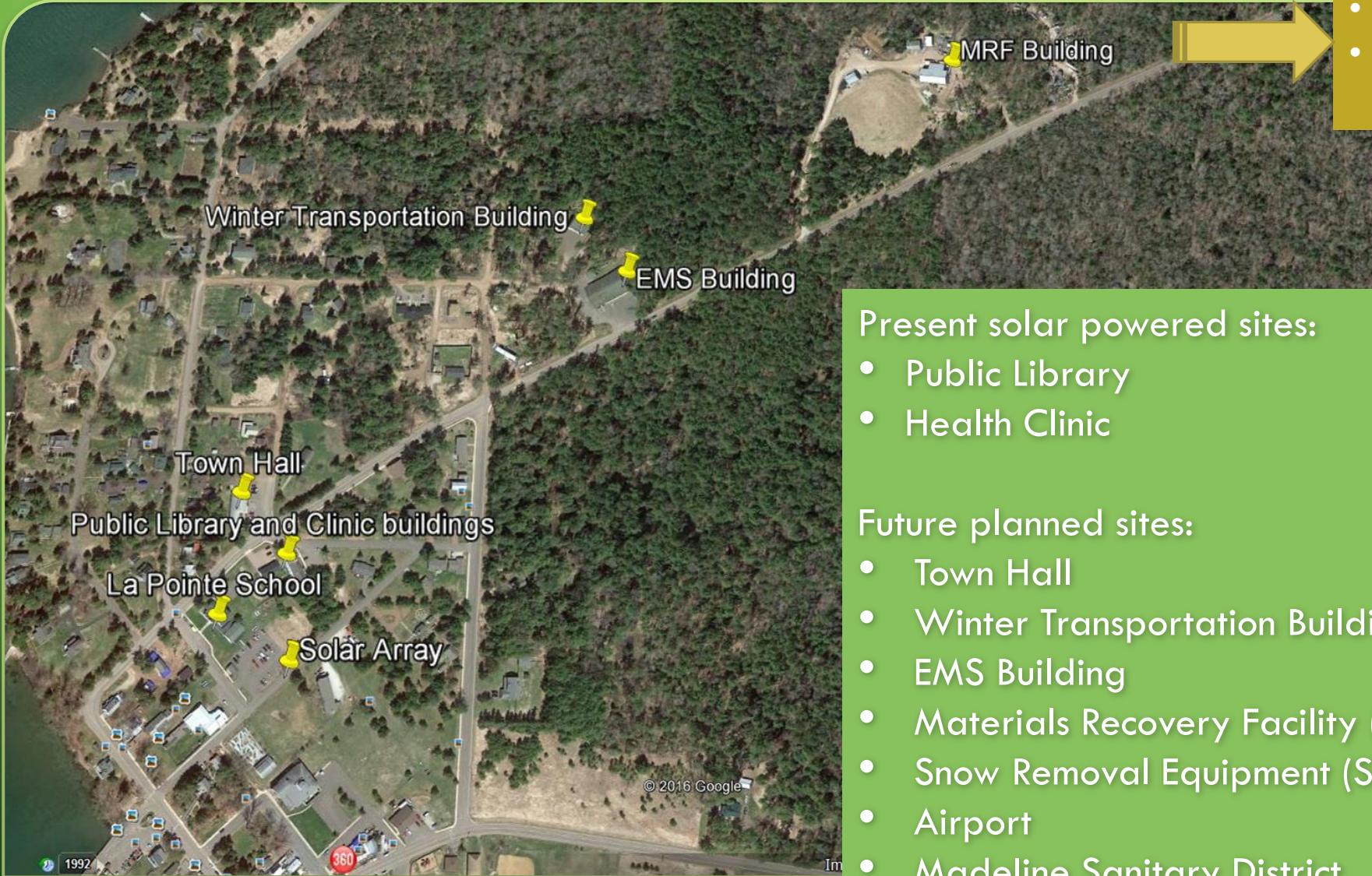
- In 2013 the EC contracted with Chippewa Valley Alternative Energy to compile all municipal utility data and design a system(s) to supplant **100%** utility supplied electricity with **renewable electric energy production**. This included solar and a combined heat and power wood gasification operation.
- The renewable energy development design: 262.26 kW at 13 locations, combining pole, roof and ground mounts.
- The project is broken into phases to be affordable
- **La Pointe Resiliency Project** - a Town Plan to develop more renewable, on-island, sustainable energy resources

LA POINTE RESILIENCY PROJECT

- Library and Clinic buildings array (installed in 2016) with option to add Madeline Island grade school
- Phase 2: 15 kW array to serve the Town Hall
- Phase 3: a total 55 kW array on the Town's closed landfill to provide electricity for the Materials Recovery Facility, Emergency Services Building and Winter Transportation Building
- Battery storage could be added at a later date and the option of a future micro grid arrangement



- SRE Building
- Airport
- Sanitary District (1 mile)



- Present solar powered sites:
- Public Library
 - Health Clinic
- Future planned sites:
- Town Hall
 - Winter Transportation Building
 - EMS Building
 - Materials Recovery Facility (MRF)
 - Snow Removal Equipment (SRE) Building
 - Airport
 - Madeline Sanitary District

TOWN OF LA POINTE FUNDING PLAN

- Awarded \$75,000 from the 2015 Wisconsin Office of Energy Innovation grant funding through the U.S. Department of Energy
- Received a donation of \$20,000 from the Madeline Island Library
- Received two incentives from Focus on Energy
- The Town Board included funding for the next phases in its 20-year Capital Improvement Plan.
- The Town is applying for a RECIP grant, two foundation grants, and a Wisconsin Office of Energy Innovation grant for continuation of the Resiliency Project.

TOWN OF LA POINTE RESILIENCY PROJECT

- Solar for the Town's library and medical clinic will save approximately
 - 22,750 kW per year
 - \$2,700-\$3,000 per year savings to taxpayers
- 12 to 16 year estimated payback for full initiative
- 16 tons of carbon dioxide per year avoided

This project is a critical first step by the community toward establishing on-island, sustainable, secure energy production

TOWN OF LA POINTE RESILIENCY PROJECT

- The Library and Clinic buildings' solar array commissioned May 26, 2016
- Community members, working with a garden designer, will plant a butterfly and pollinator garden under the array, summer of 2017
- The scale of the first phase provides experience and confidence with the solar technology
- The project is seen as you disembark from the ferry and has been surprisingly well received!



The background is a solid green color with a gradient. In the four corners, there are decorative white line-art elements resembling circuit traces or fiber optic paths, each ending in a small circle.

FOR MORE INFORMATION, CONTACT

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