

**Town of La Pointe
Alternative Energy Committee
August 8, 2016**

Members present: Larry Bean, Chair; Glenn Carlson, Zach Montagne and Marty Curry
Members absent: Carl Frederickson
Town Staff present: Lisa Potswald, Town Administrator
Public present:
Guest present: Megan Levy, Office of Energy Innovation

1. Call to order.

The Alternative Energy Committee (AEC) called to order by Larry Bean, Chair on Monday, August 8, 2016 at 10:05 am. A quorum of the committee is present as shown by members listed above.

2. Public Comment.

No public present.

Lisa Potswald requests that agenda item #9 La Pointe Resiliency Project Logo be moved up on the agenda as she has to leave at 10:45am. Larry would like to talk about #6. Impact of recent storms and power outage on Municipal Operations and the Madeline Sanitary District.

Motion by Marty to move agenda items #6 and #9 up on the agenda. Second, Glenn. No discussion. All in favor, all aye, motion carried.

Minutes will be addressed first then move on to agenda items #6 & #9.

3. Minutes of the following meetings to be considered for approval:

A. June 21, 2016.

Motion by Glenn to approve the June 21, 2016 AEC minutes as presented. Second, Zach. No discussion. All in favor, motion carried.

9. La Pointe Resiliency project logo discussion

The Town would like to replace the present “Madeline Island Recycles Duck” logo with the “La Pointe Resiliency Project” logo as adopted by the AEC with the following changes: Replace the words “La Pointe Resiliency Project” with “Town of La Pointe”. Enthusiastic agreement by AEC members

Motion by Glenn that we graciously offer the Town Board the use of the logo the AEC Committee designed. Second by Marty contingent upon the retirement of the duck with proper fanfare and celebration. Discussion. Larry would add that the committee encourages the use of this logo. All in favor, all aye, motion carried.

Lisa will discuss the changes with Emma, the designer.

Larry would like to talk to Lisa and Zach, for Megan’s benefit, about future projects.

The School and the Madeline Sanitary District (MSD) are part of the future energy plan.

To be noted, the La Pointe School building is designated as the emergency shelter but the building is not owned by the Town. La Pointe is part of the School District of Bayfield.

The Madeline Sanitary District (MSD) is not part of the Town. The MSD is a government entity and its own taxing unit. The Town Board appoints the MSD Board of Commissioners. Zach said the Town owns a lot of the property the sanitary collection system is on. Megan asked what the gallon amount of wastewater per day is. Zach said that varies: in winter about 28,000 gallons; summer is in the upper 80’s to 100,000 gallons per day.

6. Impact of recent storms and power outage on Municipal Operations and the Madeline Sanitary District.

Lisa held a debriefing with Fire, Roads and Police Tuesday after the July 21st storm.

Considering the intensity of the storm no one was hurt and there was very little structural damage. A porta-potty was damaged, but was usable and will be replaced and used as a backup. The electricity was off downtown La Pointe for about 14 hours; some areas of the Island were out of power for three days. Duluth, MN had areas with no power for 8 days. 22 power lines were down on the Island. To be noted, we are on a separate power connection from Bayfield so Bayfield could be out of power while the Island has power. Amazing job by Xcel Energy. The Town staff did a great job. The road crew starting cutting trees on the north end of the Island so people with medical issues could get out. The most critical item was no cooling station as the days were very hot and humid. A sign was put out on the road to let people know the Town Hall had water and bathrooms available. Several people came in to use the facilities. People on oxygen came to the Emergency Medical Services (EMS) building to recharge batteries. Another critical issue is that the school is designated as an emergency shelter with no generator.

The 17kW generator at the Town Hall had just been installed a few days before the storm. There are two 25kW generators for the Emergency Services Building (EMS) and the Winter Transportation buildings. The Airport has a generator owned by the Bureau of Aeronautics and the Medical Clinic has a 17kW generator. The solar arrays that provide energy to the Clinic and Library shut down once the grid went down. Question if the propane generators could kick in and feed the circuitry for the solar array? Megan said no, there can be no back feed. A microgrid would solve this problem. Zach said the Sanitary District has a 3 phase 50kW portable generator.

Marty suggested the Chamber notify people of places to go. Lisa said the Emergency Plan is on the top of her list. An inventory of buildings is needed, especially if the buildings will be used for health issues. Lisa would like to apply for a grant to do tabletop exercises.

Megan said part of what the Energy Office does is write the State's Energy Assurance plan and is responsible for long term energy outages as well as work with Military Affairs to establish tabletop exercises. The Energy Office will be launching a generator readiness initiative this fall for convenience stores but would like to get more money to open the initiative to municipalities who need a generator. Generator Readiness is not a grant for a generator but for tap-outs which is to wire in a switch that does not allow a generator to backfeed into the grid. Besides the tap-outs there will be a database of where generators and the underground and aboveground fueling stations are located. Lisa said we have a list of all tanks, both private and public on the island as the State is requiring the Town to sign off on allowing their vendors to inspect the tanks. Megan said that could be because PECFA (Petroleum Environmental Cleanup Fund Award) money which funds the clean-up of leaking tanks is going away. If the inspections are done now you can apply for grants to get the tanks cleaned up before funding is gone. Lisa will contact Megan in regard to this.

Zach said the MSD's portable generator can run all three of the original lift stations – at the plant, at the marina and at O'Brien's. The plant was out of power for just under 46 hours. Because it is an aerated lagoon Zach can close the effluent - the last valve - and stockpile for about a month. This is done in the summer months to increase the retention time for treatment because of all the tourist traffic. However, when the power was out there was no aeration, no mixing and no aeration for the bugs so the lagoons are covered which decreases the treatment but

not enough to violate permit regulations. [At the 8/30/2016 Energy Committee meeting discussion: To clarify the above sentence: if the lagoons are covered that increases the treatment except in the case of a power failure – then treatment will be decreased].

Megan asked if the District collects biogas. Zach said no. There about 2 acres of covered lagoons but it is not an activated sludge plant where you have a concentrated area that can be harvested. Megan said on the next form you fill out for the DNR there are 5 energy questions to answer in order to benchmark every wastewater treatment plant in the state. There are so many small plants and those are the ones having problems because of the uneven tourist traffic as well as trying to save energy and money. Megan said they are trying to get the Public Service Commission to sign on to the Better Buildings challenge – Wastewater Treatment Plant Accelerated because she thinks we have some of the best wastewater operators in the country in WI. Example – Sheboygan has been energy independent since 2001. Total net zero. Would like to get the smallest to the largest plants on board, reduce energy by 20% and get free technical advice from the EPA and the DOA to find bubble aeration equipment and set us up for grants. Larry said the energy bill for the Sanitary District is as much as the bill is for all the municipal buildings. Zach said the MSD pumps from two miles away to the airport. There are privately owned grinder pumps and that number is not factored into the bill. Lisa said the DNR is tightening down on both privately owned sanitary systems and wells and that by 2019 privately owned systems might not be acceptable. Larry would like to discuss items #7 and #8 before Lisa leaves.

8. Permanent Sign for the Solar Array.

Lisa said the committee will need to think of a permanent sign for the solar array. Lisa has all the logos.

7. List of Draft Sub-Projects.

Larry has listed in priority the projects he thinks is important. There is about \$12,000-13,000 left from the solar project and he would like to know if the committee could get funding from the Town for Capital Improvements. Lisa said she and Kristian, Town Foreman are putting together the Capital Improvement Plan. With the success of the solar array the Town Board would be interested in another project. Larry said the first project would be to get the Town Hall connected to a solar array. There is enough money left over to seed that project and he will talk to Megan about other funding for that as well.

The other project is the wood gasifier for the hydronic system in the EMS and Winter Transportation buildings. About \$8,000/year is spent on propane to heat the buildings. North Wind is going to work up some numbers for us. The payback appears to be higher and quicker than solar. Larry said the Town Board is concerned about the work in collecting the wood and firing the gasifier. Marty asked if the Sanitary District ends up with a solid waste product that is burnable or could be used as fertilizer. Zach said the solid waste would have to be heated, sterilized, pasteurized and all pathogens removed before this would be a useable product which is costly, but not out of the question. Larry does not think it is feasible to burn this. Megan said in Germany the concern is about the pharmaceuticals in the waste product. To be noted, some small communities are using a digester and mixing the waste with lime and doing a soil amendment process with their aerated lagoons. Megan will look into this. In regards to gasification units, there is a grant with the US Forest Service looking for feasibility studies for biomass burning. The second half of the grant is to actually fund the studies and implement the project. Larry asked if the feasibility study would include the assessment of Town land for

harvesting wood. Megan will ask. The DNR, UW Extension, are all on board. Larry thinks there is enough waste wood on the Island but even so, buying wood from the mainland would still be cost effective. Marty said there is a standing contract with the Madeline Island Wilderness Preserve for their wood as part of managed forest program. Marty is concerned about bringing invasives across from the mainland.

Larry asks how the committee goes about interacting with the Town Board in regards to Capital costs. Lisa said this could be put on the agenda for the next AEC meeting.

Lisa will email Megan in regards to a follow-up on gasification. To be noted Max, Chamber Director mentioned that people in Michigan are starting a Great Lakes Island Association. This association would be similar to the Island Institute in Maine which is very supportive of island communities. Lisa will have a telephone conference with the Michigan people as they would like Madeline Island to be a part of the group. There could be several energy related opportunities.

Lisa leaves the meeting at approximately 10:40am.

4. Review of Dedication Event.

Larry was very pleased with the event. What was most impressive is the support of the community. People stop to tell him how much they like the solar arrays.

5. Feedback from Megan Levy, Office of Energy Innovation.

Megan is interested in microgrids and the idea of turning the Town of La Pointe, and the entire Island into a microgrid. If a microgrid had been set up with batteries and a couple of energy sources the power outage of 3-4 days would not happen. She is working with the Mid West Energy Research Consortium (M-WERC). This consortium has a couple of microgrid experts on board who are putting together a 20 block microgrid in Century City in Milwaukee, WI. She will meet with them next week and let the committee know how that meeting goes.

Megan has not heard back from the Community Resiliency Demonstrations Initiatives so will continue to work on that as well as working on the wastewater accelerator. Larry said he looked on the NREL (National Renewable Energy Laboratory website and found very little information. Megan has the Island's wind study from seven years ago. Larry said the wind turbine project did not happen because of three main points: 1. The one site that would have worked is on the north end of the Island and the cost to run the additional transmission lines was around 1-2 million dollars in addition to the capital costs of the wind system.

2. The equipment could not come over on the ferry or be transported on our roads so the only way to would be to offload the equipment from a barge. This would mean a very large dock would have to be built at the end of Schoolhouse Road. The dock would have to be permanent and not temporary as any maintenance would require big cranes.

3. Noise on neighboring properties even at a distance was a concern. The cost to do a noise study was \$6,000-\$8,000. Most important, people come to the Island for peace and solitude and do not want noise.

Marty said the tribes are taking a big interest in off-shore wind farms, especially in Michigan. Larry said off shore will happen in Michigan first, but the problem is ice. However, there is a plateau in Lake Michigan where the turbines could be st up.

Larry said Xcel Energy did give the AEC a \$3000 grant for the wind study, and used the data from our study to show the Public Service Commission and others about their interest in creating off-shore wind energy in the Great Lakes.

Megan has a list of all the places you can get grants for wastewater. There is a free energy audit, free advice. Larry said there was a suggestion that the MSD do a solar installation by the treatment plant.

Discussion of third party ownership which is not legal, but not illegal if there is some ownership by a municipal entity. This way you can get a little cheaper rate because the private folks want the tax credit and the accelerated depreciation over the first six years. Megan thinks the best deal is to buy the installation yourself because the tax incentives are out there. Megan will send Larry the contact information for municipal and school buildings to look for funding for a microgrid. The committee needs Megan as a contact with the engineers at UW-Madison as the engineers are difficult to talk to. Megan said they are super busy. Larry said committee members can come to Madison to meet with people.

Discussion of a solar garden at the airport. This came about when Xcel Energy solicited for community solar gardens. Due to how Xcel was set up the solar garden the AEC did not recommend submitting a proposal. However, Larry did the groundwork and contacted the Bureau of Aeronautics who gave a preliminary ok to the project. The project is still on the table. Megan said her office works with the DOT in regards to alternative fuel vehicles, waysides and tourist routes. Larry said there is a shuttle bus that is 100% electric which could be used on the Island.

6. Impact of recent storms and power outage on Municipal Operations and the Madeline Sanitary District. Already discussed.

7. List of Draft Sub-Projects. Already discussed.

8. Permanent Sign for the Solar Array. Already discussed.

9. La Pointe Resiliency project logo discussion. Already discussed.

10. Membership and By-laws of the Alternative Energy Committee.

Lisa has made a few minor changes to the by-laws.

Motion by Glenn to approve the by-laws for the Energy Committee. Discussion. The name would change from the Alternative Energy Committee to the Energy Committee. Second to the motion on the floor by Zach. Discussion. Question if terms are staggered? Terms would be staggered by circumstance. All in favor to the motion on the floor, all aye. Motion carried. Question if the Town Board approves the by-laws would this concern be retroactive for those members who have been absent for more than three consecutive meetings? Agreement the committee will make this retroactive.

Alan Hardie is interested in serving and his boss is fine with him leaving work to attend meetings. Motion by Larry to recommend to the Town Board to approve Alan Hardie as a new member of the Energy Committee. Second, Glenn. All in favor, all aye, motion carried.

11. Other Business.

Marty suggested that people might be interested in leaving a legacy on the Island by sponsoring a solar panel in someone's name and suggested to buy panels in bulk. Larry will look into the cost of a panel. Larry said people could purchase these panels if we did the solar garden project. Zach asked if the 30% tax incentive could be passed on to the donator. Megan said that was a very interesting idea. She will find out from a Solar Legacy Collective and see what they do. Glenn said they could get a tax credit and a tax donation for a charitable contribution. This would be a good initiative for the winter.

Larry said the committee is concerned about mixed messages regarding the 100kW limit utilities have on net metering. The utilities say this is per customer, the contractors say this is per meter. The committee had been looking at heat and power for biogas at the EMS and Winter Transportation buildings which would have put us over the 100kW limit but now we are looking only at heat so we could be under the limit. The MSD is a separate customer. Megan says this involves negotiation.

Larry said the committee wants to put a 55kW racking system on the closed landfill that would serve the Materials Recovery Facility (MRF), EMS and Winter Transportation buildings. A site assessment has been done but not a biogas study as we are just talking about electricity now. The DNR has given us the blessing and encouragement to do this project. Very little methane is involved. Megan said there is Brownfield money to help clean up polluted areas.

Zach asked if there are any changes coming with net metering. Megan said the grid is failing; there is too much solar that is not managed correctly and that is why microgrids are so important. Microgrids reinforce the grid. There is also a big concern with cyber-security as there is an 80% chance of terrorism occurring on the grid and utilities do not have the money for backup equipment. If the grid went down you could be without power for 18 months.

Marty asked about underground power lines. Larry said we have them on the Island. Megan said they are cost prohibitive. Need to look 50 years down the line.

Larry said our first choice is to get power to the Town Hall which means we will have to bore under the road, which the committee had been led to believe we could not do. Marty said the tribes prefer directional boring as there is less land disturbance. Zach said to be aware of DNR regulations in regards to wetlands.

12. Set next meeting and agenda.

Next meeting is scheduled for Tuesday, August 30, 2016 at 10am at Town Hall.

13. Adjourn

Motion by Glenn to adjourn, second, Marty. All in favor, all aye, motion carried.

Meeting adjourns at approximately 11:35am.

Minutes taken from recorder and respectfully submitted by Kathy Erickson, Clerical Assistant. Minutes approved as presented with a clarification note on page 3 at the 8/30/2016 Energy Committee meeting.