

## **METF Community Meeting: MAV Expert Panel & Community Conversation**

**June 23, 2016**

**Present:** Approximately 62 people attended the meeting in person with another 4 people viewing via a Zoom link.

### **Welcome and Introduction:**

Laura Singer, a consultant facilitator hired by METF, gave an overview of the two purposes of the meeting and suggested guidelines.

#### **Purpose**

1. To provide a forum for community members to ask questions of various experts involved in the Maine Aqua Ventus offshore wind demonstration project.
2. To discuss the positive and negative aspects of the potential Community Benefits being discussed as options for Monhegan, including accepting no community benefits.

#### **Guidelines**

- All Voices Heard
- Assume Good Intentions
- Focus on Facts not Personalities
- Seek Clarification
- Accept Unknowns and Unknowable
- Speak for Yourself
- Take Responsibility for Your Own Learning
- Minimize Distractions
- Neutral Facilitator and Report Out

### **Update on Maine Aqua Ventus and Introduction of Experts:**

Damian Brady (University of Maine) provided a summary of the current status of Maine Aqua Ventus (MAV) demonstration project. On Friday, May 27<sup>th</sup>, the DOE announced that two of the original projects would not go forward and the two “alternates”, the University of Maine and LeedCo would be upgraded from alternate to Project Status. The Aqua Ventus Project is now eligible to receive the \$39.9 million construction grant from DOE, pending completion of milestones. MAV deployed a 1/8<sup>th</sup> scale prototype off of Castine from June 2013-Nov 2014. They are now working to be “shovel ready” by 2017 with two 6 MW floating wind turbines. The plan to have the turbines in the water by 2018 or 2019.

Damian introduced the team of experts at the meeting who were also available on Friday morning for an open house for further questions. (Biographies can be found here: [MAV Expert Panel Biographies.](#))

- Nate Johnson, Ocean Renewable Power Company (ORPC), Outreach
- Wing Goodale, Biodiversity Research Institute, Birds, Bats and Offshore wind
- Pam MacKinnon, Emera, Investor and Project Manager
- Anthony Viselli, University of Maine, Design Engineer
- Carolyn Noblet and Mario Teisl, University of Maine, Tourism study; economists
- Josh Plourde, University of Maine
- Habib Dagher, University of Maine, Director of Advanced Structures and Composites; 9 years on this project
- Dick Hall, SGC Engineering LLC, Electrical and Cable
- Scott Bodwell, Bodwell EnvironAcoustics LLC, Sound Engineer; inland different from offshore
- Chris Johnson, Monhegan's State Senator was also present.

### **Expert Panel Question and Answer Session:**

Q: What is the update from DOE?

Habib: MAV is working with DOE on the statement of project objectives and a timeline.

Q: Done deal or points where DOE says up or down?

Habib: DOE will have public meetings for the project

Q: Why?

Habib: Input and overview of the project

Q: Where will meetings be held? Here?

Habib: Doesn't know as it is up to DOE, but on Monhegan would make sense.

Q: Are all experts MAV contractors?

Carolyn: Tourism study was done as a National Science Foundation project and not funded by MAV; proposed to conduct work on Monhegan because knew of MAV project

Damian: Others hired after heard concerns about impacts or from the get go

Q: What costs to the community? What happens after 20 years?

Habib: Energy costs could project provide electricity at no generation cost; working with METF and others to figure this out; limited to when turbine is generating

- After 20 years – hull design 60 – 100years; every 20 years replace turbine; depends on what Monhegan wants

Dick: Cable has 25-year life, since project is 20-year project; depends on abrasion, heat, etc. Isle au Haut cable 33 years old and still working

Q: 20 year project; if island wants to continue, who replaces cable or pays for new turbine?

Pam: Unknown, all components considered

Tara: Constant negotiating; Monhegan included at every stage.

Q: If the turbine failed and the cable is still good, does island get power from the mainland?

Dick: Cable to mainland not removed

Q: What if it fails? Who pays? Where is the line of community pays or venture pays?

Damian: Depends on agreement; project needs to make sure power comes; turbine under warranty for first few years

Dick: Cable comes to shore at 30,000 volts, transformer 5,000 volts to MPPD

Q: Is there a legislative cap on the life of the test site?

Chris: No

Q: CMP will not sell power to Monhegan but to MAV

Dick: MPPD would assume cable responsibility

Q: Does MAV have a deal with Maine PUC to sell power?

Pam: MAV has a term sheet with MPUC; once financing is in place, the term sheet becomes a Power Purchase Agreement that ends in 20 years

Q: Is MAV subject to the same rules as the payback of solar?

Chris: Maine hasn't yet removed net metering; legislature should firm things up (not with current administration); energy independence important; legislature could bring this issue back up.

Q: I heard MAV will tap into a line to MA and the energy will not go to Maine

Dick: Not this project; that would be a large offshore project (500 MW) tapping into the Green line

Q: What are the restrictions around turbines – now to shovel ready?

Damian: Block Island has a mono structure; these turbines will float.

Habib: Fabricated on land and towed to site; will pre-set anchors; then hull attached to mooring lines; no requirement about fishing gear; distance not set yet – 15 meters; insurance company might set parameters

Q: Lighting?

Damian: 1 led light on top of tower; FAA regulations; no fog horn

Laura: Coast Guard may require fog horn even if FAA does not

Winnie: Downshield light on platform

Jes: Insurance company may have a say on lights

Q: Will there be meteorological towers? Legislation allows for three in addition to turbine  
Habib: MAV has installed a floating LiDAR buoy instead; no additional towers (would be 300' to bottom and 300' above water – too expensive)

Fred Faller: Radar on rig to turn lights on when something is near it  
\*\*\* Dane Loufore Technology

Q: Will someone live onboard the rig?  
Habib: No one will live, but people can come to service  
Pam: Emergency accommodation in base of tower

Q: The “Finding of No Significant Impact” (FONSI) was done on a 144' tower for 4 months deployment, will this be done over now that the scope of the project has changed?  
Damian: Permitting to get a FONSI is starting now; new studies for work that was limited to the previous scope, but not all research

Q: Will this work be done before the project starts?  
Habib: Yes.

Q: Are these the biggest wind turbines in the world?  
Dick: No  
Habib: These are the only 2 turbines with this technology; MAV will not license technology if the project is not at least 10 miles from Monhegan

Q: Why an inhabited island? Why not give us a say?  
Habib: In 2009, Maine (through Maine Coastal Program) identified 3 sites after a public process – from 10 sites to 3 based on community acceptance, fishermen's survey, water depth, interference with other activities in the proximity; size of turbines was not part of this initial process. MAV first tried 1/8<sup>th</sup> scale off of Castine instead of a 1/3 scale

Q: Why did legislature do this?  
Suzanne: Island Institute did alert folks to say they should pay attention to the legislation; public comment period had roughly 12 responses from the Monhegan community; 2-3 meetings were held on-island

Kathie: There was a disconnect at some point which has led to mistrust.

Q: What about investors?  
Pam: Emera is in the middle of due diligence process – looking at all aspects of the project before comfortable committing; thing this is a good opportunity for ME, for energy, for renewables; UMaine put together a world-class team; DCNS – marine project experience; Emera- big into renewables; Cianbro – construction in New England

Q: Is change in scale financially driven?

Damian: Yes and DOE request for projects.

Q: Why not move it 2 miles closer, 3 miles other side of Manana? Any attempt to get waiver from government?

Damian: No waiver

Q: 1 mile further?

Habib: Federal waters = 5 year permitting process; all data collected would need to be recollected; "extremely difficult if not impossible to move the project at this point"

Unknown: Term sheet 230 MW hour inflates 2.25% per year [CMP will buy this power for \$0.23]

Q: Can we see how they got from 10 sites to 3 sites?

Damian: Work done by Maine Coastal Program, Kathleen Leyden is head

Q: Lifestyle choices keep electricity costs down in home. How much will cable to Monhegan will cost?

Dick: No price now; just sent out RFP to get bids; Will get answer back to you; currently adds 1 mile of cable to total length to come to Monhegan

Q: Will you need a permit from LUPC?

Dick: No, DEP and LUPC have an MOU on who is lead and DEP will be lead for this permitting process

Q: Can cable be laid by eminent domain?

Dick: Eminent domain not usable for utilities if within 300 feet of an inhabited domicile

Pam: Negotiate with MPPD tow

Q: Free electricity to our houses or transmission?

Billy: On-going costs for MPPD

Dick: Will be cost of getting from transformer to the plant; pay cost of cable to the plant

Winnie: MAV is CMP customer; free electricity to us

Q: If free when the wind blows, what happens when the wind doesn't blow?

Habib: Turbine moving, then electricity from turbine; if wind not blowing, from CMP

Dick: Electricity is always reliable

Suzanne: Term sheet likely specifies how power purchases from CMP will work --- Monhegan looking for reliability from shore power – MAV may need separate agreement to purchase CMP power for Monhegan

- Q: What will our rate be when this is all said and done? Does this include fiber optics? Are there wireless options?
- Dick: Fiber optics – could still be Fairpoint or could be broadband; options up to island
- Q: Who provides service to the island over the fiber?
- Dick: High speed in Port Clyde; not sure how much
- Q: What's the cost?
- Dick: Fiber optics replaces phone towers; less expensive for Fairpoint to use fiber optics
- Q: MPPD see with cable
- Chris: Micro-turbines, some solar, potential for more; the National Renewable Energy Lab is coming to Monhegan to do some work on options.
- Q: Where does CMP get their power?
- Pam: Hydro, natural gas, wind (Pam thinks not her company, Emera)
- Q: Heard from start “free power” now hearing only free when the wind blows;
- Habib: Jake can clarify this for us.
- Q: CMP will not want Monhegan as a customer?
- Chris: Legislature may be able to address this hurdle if there is one.
- Q: How much wind is needed to produce 5 meter per second electricity, 10 mph
- Q: Can you camouflage the towers? Why yellow? Can't this be part of the research?
- Habib: Will ask Coast Guard
- Q: When will you decide gear drive or direct drive?
- Habib: Gearless mechanism with permanent magnets
- Q: What's the plan when it sinks?
- Habib: It won't sink. Sensors on 1/8<sup>th</sup> scale model showed stability in very high seas and winds.
- Q: When the power is down, how does this affect the turbines? What kind of control?
- Anthony: 1 to 2-week battery back-up

### Overview of Decision Process:

Winnie provided a brief review of the process to decide what Monhegan will negotiate for with MAV in a Community Benefits Agreement

- Expert Meeting and Discussion (tonight)
- Survey of broad Community to gather input on options (June 27)
- METF meets to discuss results of Survey and other Outreach to forward to Monhegan Assessors (July 11)
- Assessors determine article language and issue a town meeting warrant (July 12)
- Special Town Meeting is held and residents vote (July 26)
- Tentative --- "Negotiation Team" meets with MAV to finalize details of Community Benefits Agreement (TBD if needed)
- Final Community Benefits Agreement with Specific Terms of contract voted on at Special Town Meeting of Monhegan Residents (TBD if needed)

Laura noted that the \$200,000 figure is a starting point not set in stone and explained the two options – cable with fiber optics resulting in free energy for 20 years or some payment in lieu of a cable.

Q: What's the number? The term sheet says cable – what's the alternative benefit?

Kathie: The survey gives direction, then Monhegan negotiates. What happens if MAV and Monhegan can't agree?

Q: Is there a cost?

Dick: Yes. Where cable lands to the power system

Habib: MAV pays the cost to the plant

Q: Thought we were told \$4M to Monhegan; \$200K x 20 years = \$4M

Laura: \$200K not agreed to by all parties (within MAV partners)

Q: Who's in charge of the decision?

Laura: The term sheet stipulates a cable with fiber optics for Monhegan, then it was suggested that money be provided in lieu of the cable if the community would like.

Pam: MAV partners have heard "this or that" – community makes decision.

Q: Only Monhegan residents vote, what about ratepayers?

Laura: METF has tried to include the opinions of all community members, but ultimately the decision comes down to an agreement between the Monhegan Plantation and MAV

Winnie: Registered voters have listened to others

Kathie: Money not reduce electricity but rather look to the future

Fred: MAV put in cable for free electricity; costs savings free electricity

Tara: How money would be used is a different town meeting --- the special town meeting is about a direction [cable or money]

George: Benefits to the island – who uses electricity; those who have no interest, how do we benefit?

Chris: 75% of Monhegan residents are rate payers; all benefit from lights at the dock, library, school house, etc.

Kole: Income? Taxes

Tara: No

Billy: Could be cable and money; lots of negotiating to happen

Tara: How disruptive is setting the cable on land?

Dick: Choose landing points (i.e. Arnie’s beach), push rock aside, bury cable, put rocks back – up road to MPPD

Chris: Connection MUST be at MPPD plant; this has already been made clear to MAV.

Tara: How deep will the cable be?

Dick: Will have to be code.

Tara: Could need to blast?

Dick: Yes

Michelle: Money set; what about power?

Chris: Cap; with power would use our power

Danny: Would turbines take our power in a storm?

Dick: Too expensive; better to let turbines go dark.

Tara: Tourism study

Carolyn: 5% said they would come more often, and 5% said they would come less often.

Pam: How many were surveyed?

Carolyn: 180

Ed Deci: Probability of moving this project somewhere else?

Laura: Would require a legislative change. Chris?

Chris: Extremely slim; UMaine has made a big investment; “let’s trash another contract”

David:

Winnie: Own personal responsibility

Pam: Not what was represented in the beginning

Laura: All feel differently about how we got here, where do you want to go from here?



Michael: How long is the window for negotiations?

Laura: All parts of MAV are moving forward.

Habib: Should know cable or not by August.

Tara: Will MAV be paying for lawyers, technical help with negotiations?

Laura: That is a question for Jake.

Bob Smith: MPPD's turbine; combine payment; \$200,000 changes each year

Kathie: Answer survey with your heart; not what you think is the best deal but what you think is best.

Fred: Who gets the survey?

Marian: MPPD rate payers, Monhegan tax records and other interested folks

Penny: Summon courage of honesty and ethics; benefit our community and the world

Bob: Long range acoustics on tower?

Wing: Bird deterrent not well understood; birds quickly assimilate and get used to sound; no proof it works; results change with species

Suzanne: Remote participation via Zoom is light and no additional questions; "Community Voices" section of the METF website now available to host blogs, links to other websites, etc; Island Institute has background on Community Benefits Agreements; Tilson study of broadband on islands also available on METF website.

Sue H: We don't want to impact wildlife; how are we to be reassured that the "I don't know" will be addressed?

Wing: Do know things that we can apply; MAV has to write an environmental plan

Damian: Put environmental monitoring out to bid; videoed trial at Castine site to see impacts.

Travis: Not just birds that live here, what about migrating birds?

Wing: Resident vs. migrant; fall vs. spring; song vs. raptor; studies show flashing lights ignored by birds; birds follow coast.

Tara: But what do you think about the potential impacts of this project?

Wing: Deals in risk; 2 turbines = low risk; herring gull most likely to interact with turbine

Danik: What's the plan to prevent detrimental affect to wildlife?

Damian: US Fish and Wildlife will review plan

Pam: MAV will "behave responsibly"; If there is a problem there will be no permit issues or if it arises later it will mean curtailment of the project.

Habib: We could install radar to watch for migration.

Habib: Thank you for your time. Come to UMaine to see our work. Want to be a good partner.

***Questions Recorded on the Charts:***

1. Will CMP sell power to MPPD directly? What's the future relationship between Monhegan and CMP?
2. Who pays the cost of electricity if the wind turbines are not generating power to supply power to Monhegan?
3. What is needed for fiber optics infrastructure on the island and who will pay for this?
4. Why yellow? Considering that this is a research project, MAV should ask the FAA and Coast Guard for an exemption to test both the lighting and color of the turbines.
5. After Monhegan has voted to decide on the general direction of cable vs. payment benefit, what happens if the detailed negotiations with MAV go south and there isn't an agreement on community benefits?
6. What are the costs of infrastructure on land and who pays?
7. If Monhegan needs to hire a lawyer or other experts to negotiate an agreement with MAV, who pays these costs?