



LORING COMMERCE CENTRE

Loring Development Authority of Maine
Board Meeting Minutes
April 13, 2011
154 Development Drive, Suite F
Loring Commerce Centre
Limestone, Maine

1. Call to Order

The meeting was called to order by Kay Rand at 9:32 a.m.

LDA Board Members present were: Kay Rand, Maynard St. Peter, David King, Frank Bemis, Patrick Paradis, Richard Ezzy.

Participating by conference call: Patrick St. Peter, George Ezzy, Thomas Clowes, Phil Congdon.

LDA Board Members absent: Terrence Harrigan, Edmund Therrien.

LDA Staff present: Carl Flora, Frank Goade, Donna Sturzl, Neal Haines and Diane Martin.

Others present: Charles Stevens, LPS, Chris Durepo, LFD, Jesse Bell, LFD, Art Thompson, Walt Elish, APP, Hayes Gahagan, LBE, Edward Cherien, Iberdrola Renewables, Phil Bosse, Senator Collin's office.

2. Introduction of Board Members, Staff and Guests

All those present introduced him/herself

3. Minutes of Meeting of March 9, 2011

Frank Bemis noted that as Phil Parent's term on the board has ended that his name should be removed from the absent list.

MOTION:

Motion was made by Frank Bemis and seconded by David King to amend the minutes of the March 9, 2010 meeting to reflect that Phil Parent's name be removed from the absent list.

VOTE:

Motion was voted on and passed unanimously.

MOTION:

Motion was made by Frank Bemis and seconded by David King to adopt the minutes of the March 9, 2010 meeting as amended.

VOTE:

Motion was voted on and passed unanimously.

4. Treasurer's Report for February 2011

Richard Ezzy noted that the 1.5 M has been moved to the capital assets line in the February treasurer's report for sewer line project. He said that in general revenues and expenses are tracking about where expected.

MOTION:

Motion was made by Frank Bemis and seconded by Maynard St. Peter to accept the December 2010 and January 2011 Treasurer's Reports as presented.

VOTE:

Motion was voted on and passed unanimously.

5. Presentation by Edward Cherian, Iberdrola Renewables

Mr. Flora introduced Edward Cherian of Iberdrola Renewables who provided a conceptual overview and potential benefits of a large wind farm facility at Loring. Mr. Cherian noted that Loring's infrastructure, buildings, roads and wind resources is a 'dream site'. He said that ideally the company would want to utilize all 3,800 acres of Loring. The wind turbines are getting bigger and higher. A typical turbine would have a 78 to 100 meter "hub height". The nacelle is generally the size of a large Winnebago. Blade technology has progressed recently. Hollow blades, composite structures are much stronger and lighter than before. Why Loring? We appear to have good wind resources (based on information kept by the Air Force). We have a lot of land. Downside is this is a remote area, away from the demand for electricity. Transmission to southern Maine or beyond would be required. IR has built its own transmission lines, but it's still a challenge. Demand is soft now because of the recession. Natural gas prices are low making it difficult for wind to compete right now. But the fuel cost always remains the same with wind. Typical wind lease runs 40 -45 years after which the wind farm is decommissioned and removed. Even a few wind towers would preclude aviation. Setbacks are established for each type of building and land use (setbacks for residential uses would be larger). A viable project would have to be at least 100 towers. A met tower would be needed to get reliable wind data for at least one year. A 200 MW project would require 500 employees during construction, less than 50 for on-going operations and maintenance, not counting suppliers and vendors who might be in the area. The capital investment for a project like this would be \$400-500 Million. Mr. Flora noted that a project of this magnitude would require extensive reviews and approvals by the FAA as well as under the State's site law and Loring's own landuse and zoning ordinances including site design review.

6. Presentation by Dr. Charles Stevens, Laser Power Systems & Red Hawk Metals, LLC

Mr. Flora introduced Dr. Charles Stevens of Laser Power Systems (LPS) & Red Hawk Metals (RHM) who is here to explain a new energy generation technology involving thorium. Mr. Flora cautioned that there are several scientific, technical and business questions the LDA is probably not equipped to evaluate in the context of the project which seeks to commercialize the new technology. To properly evaluate the opportunity, the LDA would need to rely on outside expertise. Dr. Stevens explained the technology was initially developed as part of the Strategic Defense Initiative in the 1980's. It uses thorium which is related to uranium, but uranium has a much different decay cycle than thorium. The decay cycle of thorium 232 is based on the decay isotope 229 which constitutes only .007% of thorium with a half life of 1.5 years. In a spent laser, the thorium is burned down to lead. The accelerated decay of the thorium gives off heat which creates steam in a closed-loop turbine system driving any type of generator. The system would use turbine/generators that are 24" by 24" by 36" for 250 kw output; a 2.5 megawatt unit is the size of a large refrigerator. The systems are decentralized and will reduce the need for transmission and distribution infrastructure. A car could be pre-fueled with 300,000 miles worth of thorium lasers. A gram of thorium costs \$1.00 and displaces 7,500 gallons of gasoline. The systems can't melt down since thorium is not fissionable. If you dropped a laser on the floor, you would sweep it up and put it in the trash.

Dr. Stevens described the design of the turbines and explained various features that make it efficient, compact and very reliable. It is a zero emissions, green technology. Red Hawk Metals is charged with securing the supply of the thorium fuel. Red Hawk was created as a Seneca Indian business with Super 8A status. Dr. Stevens was looking for a suitable storage site and heard the Micmacs owned the weapons bunkers at Loring. Eventually, the B-52 Alert area compound and building were identified as key facilities. LPS wants a secure site to manufacture lasers (Building #8260). Also, the transportation infrastructure useful because of air cargo transportation of thorium and technicians. The technician would install the lasers at the user's site. Other attractive factors include rail, and potential opportunities with Shaw if a transmission system to Boston is built.

Thorium is not radioactive per se; the 229 isotope is, but that is a tiny fraction of thorium in its natural form. Thorium is used in tungsten filament for light bulbs, also welding. There are no known instances of thorium causing cancer. Scott McFarlane is the business development Vice President for Boeing and is on the LPS/RHM board. Boeing, NASA and an Israeli group are interested. Rail would be needed to bring large quantities of glass.

Handling over 100 Kg of thorium requires a license from the Nuclear Regulatory Commission, but that's in the process and is not a big deal. The generators would be manufactured in Savannah, GA which is a port. The turbines are made of plate stainless steel. Rail would be needed to bring raw steel here. There's a possibility that Loring could also house manufacturing of related electrical components, cooling systems, and air to water generators. The laser/thorium turbine is not a nuclear generator at all. It's subcritical, where the lasing application creates accelerated decay of thorium to lead 211. Occasionally random nuclear events can occur but other elements are used to absorb the neutrons. LPS will require that the lasers must be returned – the remaining thorium will not have much energy left in it, but can be used in the generator farm to "finish" it.

A prototype turbine is up and running and undergoing testing and further refinement. The project is at the “systems integration” stage. The thorium laser is already built, and these have been around since 1985. There are competing technologies (eg, lifter reactors) using thorium based reactors (fission). Pricing would be \$1000 per kilowatt, which is cheaper than the molten salt reactors (MSR) which would be \$2000 + per kilowatt. Refueling of MSR is much more expensive. Eventually, customers will be hospitals, schools, commercial buildings.

Carlos Rubbia is working on a parallel basis – he uses sonic cavitation to excite the thorium. LPS and its affiliates have \$9 MM in assets, 2 manufacturing facilities in CT; they are able to manufacture the systems on a limited basis. The jet engine shop is close to turnkey but the LDA can’t commit to renovating the Alert building, LDA does not have sufficient cash reserves.

The first step would be to occupy the jet engine building for manufacturing. The second step would be to rehabilitate and occupy the Alert building and compound. LPS will be ready to take step 1 in the first quarter of 2012. Red Hawk would store all rare earth metals at Loring, and would supply other companies, like Boeing and its 800 suppliers with rare earth metals. Eventually, LPS would construct a new storage bldg at the Micmacs’ tank farm if the weapons storage area is not available.

7. President’s Report

Update on Solar Project – The Power Company (TCP)

Mr. Flora said that an exclusive negotiation agreement has been signed with TPC and that TPC has initiated a study to confirm the technical and economic feasibility of the concept. He said TPC has indicated that the preliminary financial analysis is encouraging.

Loring BioEnergy

Mr. Flora said that the LBE and LH project continue to work on the market access issues and that they are working with various potential energy projects.

ICS Service by Katahdin Trust

Mr. Flora said that in order to protect deposits in excess of \$250,000 (the FDIC insurance limit per depositor) that a new system has been instituted by Katahdin Trust which places funds in a series of financial institutions. He noted that although it adds effort to track and reconcile deposits and account balances that the solution does offer the best possible protection for the LDA accounts.

Budget Update

Mr. Flora said that Donna Sturzl is compiling a draft budget for FY 2012. He noted that a finance committee meeting is scheduled in late May to finalize a recommended budget.

Water Plant Project/EDA Grant

Mr. Flora said he is concerned that if the water system project is started prior to receiving a potential award notice from the EDA grant that it could jeopardize match money as the dollars

spent prior to an award can't be counted toward the match. He noted that there is considerable pressure to restore the fishway and complete improvements needed to comply with drinking water standards and that there are insufficient funds on hand to do the entire project.

Sewer Line Project

Mr. Flora said that phase 3 "I & I" removal construction will commence as soon as the construction season begins. He noted that additional easement segments will be required from USF&W.

Graphic Utilities

Mr. Flora said that Graphic Utilities has begun their move into the LATC and hope to regain operational status and production activities very soon.

Board Appointments

Mr. Flora said that he has been in contact with the Director of Appointments for the Governor's Office and that he will continue to work closely with them to bring the Board membership up to date.

Maine Military Authority

Mr. Flora said that Maine's Education Commissioner visited the MMA to evaluate school buses that have been rebuilt at the facility. He said that the rebuild of a body, frame and ancillary equipment can extend the useful life of a school bus for up to 10 years and that the cost is about 35% of the a new bus. Mr. Flora said that as there are about 2700 buses in service in Maine and that this is a real opportunity for MMA to develop a new business line that will put many people to work.

8. Monthly Employment Strength Report

The included report was referenced.

9. Other

Frank Bemis noted that as Phil Parent is no longer a member of the finance committee that a new officer should be selected and Frank volunteered his services as a member. A committee for the selection of Officers for the Board consisting of Maynard St. Peter, Patrick S. Peter and Kay Rand was created with a meeting to be held prior to the Annual meeting in June.

10. Public Comment and Media Questions and Answer Period

None

11. Executive Session:

MOTION:

Motion was made by Richard Ezzy and seconded by David King to enter into executive session for confidential discussions concerning contractual negotiations under Title 1 M.R.S.A. Section 405 Subparagraph 6.C.

VOTE:

Motion was voted on and passed unanimously.

12. Adjourn

After returning from Executive Session, the meeting was adjourned at 12:45 p.m.

Respectfully submitted,

Frank Bemis
Secretary

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