

Cape Elizabeth Alternative Energy Committee
Minutes: February 3, 2011

Present: Wyman Briggs, Alan Lishness, David Whitten, Ernie McVane, Brian Denison, Bill Slack

Guests: Greg Marles (facilities director), Mike Kelly (Current Newspaper)

Absent: Frank Governali, Kate Williams Hewitt

1. Introductions and Welcome:

The AEC welcomed Mike Kelly as a guest at the meeting. He is writing an article on Cape Elizabeth Alternative Energy programs for the *Current*. The minutes for the previous meeting were unanimously approved as written.

2. Boiler Replacement Update – Greg Marles

Greg Marles provided an update on the boiler replacement project for the high school. The design phase is completed and the project timeline calls for beginning the Request for Proposals process this month and project completion by September 2011. The 20 year Life Cycle Cost Analysis that was completed as part of the project proposal projects an estimated \$39K of energy savings the first year and a positive net present value of \$458K over 20 years in comparison with the existing boilers.

The adequacy of the proposed 3 new 1.9 M BTU boilers to meet the schools heating demands under a worse case scenario was discussed. Harriman, the project engineers, has provided documentation to the Cape Elizabeth Facility Manager outlining how the proposed boilers will provide adequate capacity to heat the high school even on a zero degree heating day even with one of the three proposed boilers off-line.

3. Solar Thermal Project

Greg provided a brief update on the proposal from ReVision Energy to develop a solar hot water system to pre-heat domestic hot water at the high school using 3 evacuated tube solar hot water collectors mounted on the flat roof above the boiler room and a 160 gallon solar storage tank, as outlined in the last meeting's minutes. The proposal to provide new gas boilers to heat water in the Richardson pool was also briefly discussed.

4. High efficiency street lights

Alan Lishness and Ernie McVane presented the results of their analysis of LED Street Lighting alternatives. This included a review of LED Street Lighting case studies recently completed for projects in San Francisco and Pittsburgh and cost proposals submitted by GraybaR.

Central Maine Power (CMP) currently owns the poles that support street lights in Cape Elizabeth. Therefore, CMP would be a central player in any decision to replace the current streetlights. CMP is considering three factors in their on-going assessment of LED lighting:

- (1) Do LED lights provide sufficient lighting?
- (2) Can LED lights withstand zero degree temperatures?
- (3) What is the payback from replacing existing lights with current LED technology?

CMP is currently doing testing of LED streetlights in Cumberland in pursuit of answers to the above questions. Based on CMP's assessment and other research, prices of LED lighting is still too high to justify replacement of existing streetlights. However, prices are dropping and will likely get a lot lower than current levels.

Recommendations:

Based on the analysis completed by Alan and Ernie and discussions at the meeting, the AEC outlined the following general recommendations/observations:

- CMP has the lead for any future replacement of existing street lights in Cape Elizabeth
- The LED lights recently installed around the perimeter of the fire station appear to provide very adequate lighting and substantial ongoing savings.
- Some LED lighting was recently installed at the pool
- AEC endorses the town's plans to change soffit lighting at Pond Cove and Middle School to LED provided there is a reasonable payback.
- Continue installation of LED lighting at the fire station.
- Consider replacing perimeter lighting at the police station with LED – develop proposal
- Consider replacing parking lot lights with LED – develop proposal
- Conduct a limited test involving replacement of parking lot lights with LED to assess adequacy of several types of LED lights.

5. Future Meetings

- a. Bill and Greg offered to serve as discussion leaders for the upcoming March 9th meeting on Biomass Boilers. They plan to take a field trip to a nearby biomass boiler to provide some first-hand observations and make a recommendation for Cape Elizabeth identifying some of the positive and negative attributes of this alternative.
- b. Greg reiterated his offer to contact Kelly Fowler, Regional Marketing Director for Unitil and see if she can attend the meeting scheduled for April 7, 2011 to discuss options for piping natural gas to Cape Elizabeth town center and the costs and barriers that would need to be overcome to make this happen. Please provide any specific questions for Kelly to Greg over the next several weeks so she can be prepared to address them during the April meeting.
- c. David offered to lead a discussion on the "Long term energy vision for Cape Elizabeth" at the meeting scheduled for May 5, 2011.
- d. Hopefully, Rick Fontana can serve as the discussion leader for a June meeting on the viability of wastewater ground source heat pumps. Hopefully, we can also develop a specific proposal if this appears to be an option worth pursuing

6. Next Meeting date: March 9 at 6:30pm in the Jordan Conference Room, Cape Elizabeth Town Hall. (Wyman will confirm room availability). Note date change.