

Cape Elizabeth Alternative Energy Committee  
Minutes: April 30, 2008

**Present:** Wyman Briggs, Ted Hawkes, Sara Lennon, Alan Lishness, Ernie MacVane, Bill Slack, David Whitten

**Absent:** Peter Ingram

**Guests:** Dave Clay, Rick Fontana, Anne Holland, Steve Linnell

Bill introduced Rick Fontana as a guest. Rick is involved in setting up the Cape Elizabeth Cool Cities program (Cool Cape). Cool Cape will have a kick-off meeting at the Cape Elizabeth Methodist Church on **June (?—or May?) 17** at 7:00 p.m.

There was discussion of whether or not the heating systems could be converted from oil to natural gas. Ernie indicated it was something he'd like to look into, but was advised he needed to be guided by the recommendations from the Alternative Energy Committee. Alan asked that Ernie supply an analysis for the conversion. Steve offered to provide some information because he has worked extensively with METRO on their natural gas infrastructure.

I. Approval of Meeting Minutes

Minutes for February 28 and March 25 meeting were unanimously approved

II. Champions Matrix

- Steve introduced the updated Champion's Matrix and asked people to make sure they were okay with where their names were.
- Vehicles
  - It was noted that vehicles do not have a Champion.
  - Wyman asked if there were regional recommendations
  - Steve noted that vehicles generally are not regional (snowplows, firetrucks, etc.,) so as far as he knows there are no regional recommendations
  - David suggests continuing to table vehicles and focus on the buildings
  - Bill prefers not to continue to table vehicles and would like to get Bob Malley to come in and speak to the group sooner than later (Steve will contact Bob for next meeting or the one after that)
- Heating System
  - Ernie estimates that Cape Elizabeth will be \$69,000 (not including diesel for vehicles) in the hole this year on oil spending. Currently, Cape is \$16,000 in the hole even though they burned 25,000 gallons less so far this year.
  - In addition to converting to natural gas, co-generation was also discussed as a possible heating system alternative

### III. Chris' Report

- Wyman gave some background on Chris and praised his work on the report. He was pleased that Chris understood their expectations and the three driving factors (save money, reduce greenhouse gas emissions and community education). He thought the methodology was good and liked that he looked at net present value.
- Conclusions of the Report
  - Solar PV and solar thermal are not economically feasible on a large scale
    - It was suggested that solar could be a small portion rather than the total solution
  - Wind turbine is feasible if interest free capital can be obtained
    - Wind could potentially help power the middle school
  - Woodchip combustion is economically feasible
    - Payback is relatively quick
    - The current lines and pumps could be used
    - Ernie could get estimates from other facilities throughout New England that use this system
    - Ted can come up with proposals on what the benefits would be
    - Cape Elizabeth may want to look at locating the system where it could serve both facilities.
    - Challenge: it is still combustion and may not ultimately be very “green”
  - Geothermal Heat Pump is economically feasible
    - The kind suggested is a closed loop. There was discussion about the higher cost of a closed loop system
    - Ernie feels that geothermal could work for the high school, but not the middle school because the boiler room is in the middle of the building.
    - Geothermal is very complex. There was discussion about required temperatures. It was also noted that any change in the temperature of water that is put back into ground water is considered pollution.
    - Overall, Ernie does not like the idea of geothermal because it would require completely changing the heating infrastructure.
- High Level Recommendations
  - Build community awareness with demonstration wind turbine
  - Support zoning for wind turbines
  - Raise money through fundraisers through demonstration turbine
  - Advocate for more funding support from lawmakers
  - Permanent status from the town for Alternative Energy Committee
  - Conduct a full cost appraisal for woodchip and geothermal

- Discussion
  - It was suggested that Chris' report be used as a roadmap to make concrete actions
  - Diversification would be good. Maybe use geothermal in one school and woodchips in the other.
  - Alan pointed out that if every school in Maine switches to woodchip boilers, then the cost of the woodchips will rise
  - Steve also pointed out that there may be a lot more competition for wood. In addition to traditional uses for wood, the state is looking into the production of cellulosic biofuels and developing a wood pellet industry. There are also plans to sequester carbon in standing forests.
  - Steve noted that the report did not mention conservation measures such as insulation. He suggests that an energy audit and conservation measures should be taken before technology is employed.
  - Sara suggested that at some point the committee may have to become political and advocate for money
  - Rick suggests that cogeneration may actually be the best approach. The process was discussed including stack temperatures, etc. Steve noted that current net metering rules are not favorable for larger producers but that a bill in the last legislature attempts to improve it. Net-metering would be required for cogeneration to be economically feasible. Steve will report back on the status of the legislation.
  - It was decided Chris' report is a great start but that the committee needs to look at other options including:
    - Insulation/weatherization
    - Cogeneration
    - Fuel Switching
  - The committee feels it can match Chris' analysis for the other options
  - Wyman suggested that the committee take Chris' recommendations and then compare it to the matrix

#### IV. Other

- Audit—it was decided that a comprehensive audit should be done of the schools
  - It was suggested that if the committee wants grant money, it would need to do an investment grade audit which is very expensive
  - It was concluded that a commercial audit would be sufficient.
  - The committee will put together an RFP to have the audit done
- Alan suggested we send Chris a Cape Elizabeth HS hooded sweatshirt
- The benefits of switching to LED lights were discussed. Other communities have done it and saved a lot of money.
- Ernie got a \$13,000 grant from Efficiency Maine for lighting
- It was concluded that Ernie's past successes and energy savings to date should be put in the preamble to the committee's report.

- Dave nominated Rick Fontana to the committee to replace Bridgitte. Rick accepted the nomination. It will have to be put before the council.
- There was unanimous approval for Ernie to start looking into switching from oil to natural gas.

V. Action Items/Topics/Agenda Schedule for next meeting

- Wyman will send around a very rough draft of the final report within the next two weeks to include
  - Top 20 recommendations
  - Preamble that gives context
  - Cogeneration, streetlights, energy conservation
- Ernie will get quotes for a comprehensive audit
- Ernie will explore converting the heating systems from oil to natural gas
- Ernie will put together a report of his past energy conserving measures and how much money those measures have saved Cape Elizabeth
- David will start looking into cogeneration and getting an anemometer
- Bill will investigate how to get Rick Fontana appointed to the committee
- Steve will send out a doodle to schedule a meeting for the week of May 21<sup>st</sup>
- Steve will contact Bob Malley to speak at the next meeting