Energy Committee Minutes

3/15/17

Present: Buddy Berendt, Bill Dunkel, Michael Simonds, Kord Scott, Cathy Stover

The meeting opened at 4:00 PM at the Town Office.

Our first order of business was to discuss what must be done if we want to apply for a WCREP grant for a feasibility study on the construction of a new Town Garage and Fire House.

Kord volunteered to ask at the next Select Board meeting whether the Select Board would be willing to match a $10K WCREP grant if we were to receive it.

Two potential sites for a new facility are the field to the east of the Windham town cemetery and a piece of land directly across the street from the cemetery. There may be other potential sites in town. Michael looked up the name of the person who owns the land across from the cemetery and gave that information to Kord for the edification of the Select Board. It has been rumored that the owner may wish to sell or donate this property to the town.

We discussed what we would want a feasibility study to include. One suggestion was that we need an evaluation for each potential site which would assess its solar generating (and perhaps geothermal) potential, the cost of developing the site, access roads, access to public utilities, etc. While we might not expect a feasibility study to generate architectural drawings of the design of the overall building(s), we would want it to include a detailed design of the systems that would generate renewable energy to power the facility.

Bill volunteered to talk with Ralph Meima, from the Green Lantern Group, about the components of a feasibility study and local companies that provide such services. He also will talk with Drew Hazleton, the head of Rescue, Inc., which just build a new facility in West Townshend, to see if they had a feasibility study done prior to construction.

Our second order of business was a discussion of how the energy efficiency of the elementary school might be improved. Kord offered the following comments about the school’s heating system:

“The system needs a more detailed evaluation.  As I mentioned on the phone, I have a referral and will be in touch with him.  So far, my observations are;

* They need a separate domestic hot water source, like a heat pump water heater, point of use electric heaters, an on-demand central water heater, or a plain tank-style electric water heater.  Currently the domestic hot water is generated in the boiler.  While we should consider their operating habits more closely, I’m sure that there are times during the moderate weather where they are either doing without hot water, or running the boiler to generate domestic hot water only.
* Regarding the heating system, it is a hot water system that includes a Weil-McLain boiler, (2) main circulation pumps - (1) primary and (1) backup, (4) air handlers, a number of radiators, and the loop piping.  There is an obsolete control system that in non-functional and disabled.  The boiler, while old, is a heavy-duty Weil McLain work horse and is currently functioning well.  It needs a new expansion tank and some related piping.  They only need one circulation pump to operate at any given time, but it runs continuously and only (1) of the (2) is functional.  The piping is set up so that the circulation pump sends hot water to the various air handlers and radiators continuously in a loop.  There are no effective temperature controls - other than turning the fans in units that have them on or off.  Thus, the temperature control is very difficult and affects both comfort and efficiency.  We need to finish a detailed piping schematic and come up with a more effective piping, control valve, control system, and pumping arrangement.  Efficiency Vermont offers a rebate on variable speed circulation pump(s) that, in conjunction with the proper loop piping, control valve arrangements, and controls would offer a huge improvement in efficiency and comfort control.  Another option to be researched is an outdoor air reset control for the boiler, which changes the operating temperature set point of the boiler to coincide with the outdoor air temperature - which can theoretically can be lower when the outdoor air temperature is higher - which means the boiler would run even less - especially in conjunction with removing the domestic hot water generation load.”

Kord volunteered to do additional research and report back to the Energy Committee when he has more information.

The next meeting of the Energy Committee will be on Wednesday, March 22, at 3:00 PM in the Town Office.

The meeting adjourned at 3:55 PM.

Respectfully submitted,

Bill Dunkel