

Timberlane Regional School Board Energy Committee

Nov 18, 2020- 7 PM

Members Attending: Maria Watkins, Kim Farah, Barbara Kiszka, Gary Paradis, Steve Paradis

Absent: Brian Boyle

Link to meeting [Zoom recording](#), Passcode: 6g&AS\$9w

1. After a half-hour delay, started the meeting at 7:30pm to allow more committee members to attend. Mrs. Kiszka will take the minutes for this meeting.
2. Minutes Approval
 - a. Sept 22– Dr. Farah motions to Approve, Mr. G. Paradis seconds, Approved 5-0-0
3. Energy related cost savings projects – Freedom Energy and CPower
 - a. Maria, Gary, and Steve were looking at ways to reduce utility costs and found Freedom Energy, who works in conjunction with CPower to provide cash incentives to large utility users to reduce their electricity usage when the electric grid is stressed, usually during peak periods in the summer plus two one-hour test periods per year. So far program participants have only been asked twice in 6 years to curtail their use.
 - b. Philip Ciulla from curtailment service provider [CPower](#) and Sean Delea from utility broker [Freedom Energy](#) gave a brief presentation on what their companies do and how it benefits Timberlane. Mr. Ciulla and Mr. Delea had previously given a one-hour presentation on Demand Response (DR) programs to Ms. Watkins and the Paradis brothers. Ms. Watkins provided utility bills and they confirmed we were qualified for the programs presented tonight.

Freedom Energy looks at accounts that have large energy consumption, such as the Timberlane High School and the Middle School, and then negotiate an agreement that the schools will curtail their electricity use within 30 minutes on demand. This prevents a grid blackout and reduces the need for the utility companies to increase their infrastructure to handle excessive demand only a few hours a year. They have two NH school accounts, Dartmouth College and Pinkerton Academy.

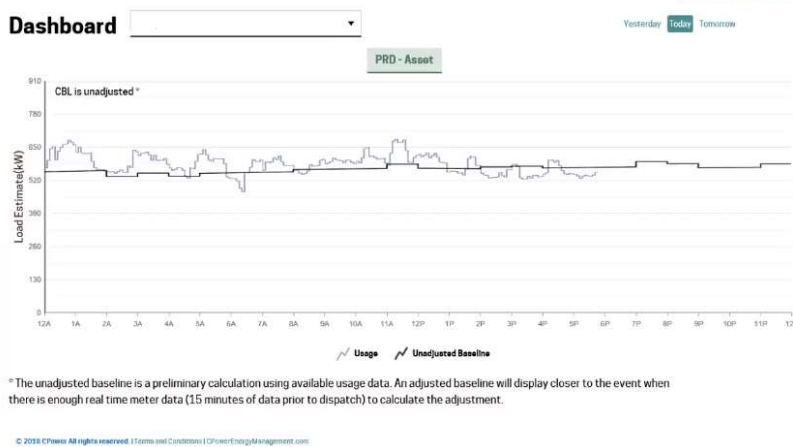
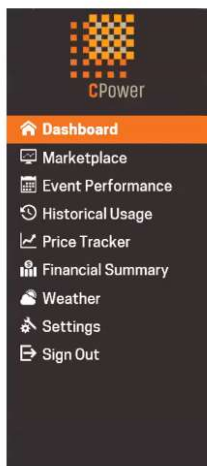
TRHS and TRMS are good candidates because their building management control systems support raising temperature set points and going to unoccupied or weekend mode to reduce usage. None of our elementary schools use enough energy to be considered for this program. It is not clear if the Performing Arts Center (PAC) could be included.

During the summer the most likely time to ask for a curtailment of power is in the afternoon. Currently TRHS and TRMS summer programs only run 8-11 am in the morning, so there are no students in the buildings on summer afternoons when the curtailment request is most likely to occur.

The program provides a website that would show the real-time usage for the schools. The website depends on a real-time meter being installed at a cost of roughly \$7,500, however CPower / Freedom Energy take that amount out of the first few payment checks, so there is no upfront cost. It is not clear if we will need one meter or two.

This is separate from our Energy contract with Constellation Energy. It has no impact on our electricity costs.

REAL-TIME USAGE

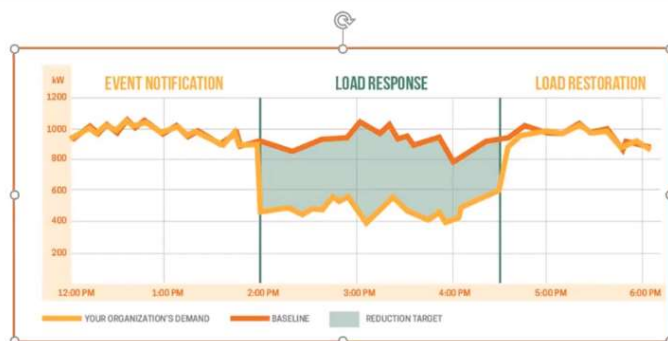


WHAT IS DEMAND RESPONSE?



Programs that pay organizations to reduce energy load during times of grid stress or high energy prices.

Provides energy users the ability to earn revenue and lower net energy costs.



c.

STACKING BENEFITS

City of Melrose MA – High School and
 ISO-NE + Utility Program earnings over




June 2021-May 2026:

ADCR (ISO) –

- Year 1 - \$3,726
- Year 2 - \$3,500
- Year 3 - \$2,133
- Year 4 - \$3,518
- Year 5 - \$3,518

Connected Solutions (Utility) –

- Year 1 - \$3,754
- Year 2 - \$3,754
- Year 3 - \$3,754
- Year 4 - \$3,754
- Year 5 - \$3,754

Peak Demand Management (Cap tag) –

- Year 2 savings - \$11,503
- Year 3 savings - \$5,849
- Year 4 savings - \$9,645
- Year 5 savings - \$9,645

\$35,164 (No including Captag savings)



Offset Revenues [\$35,164] + Capacity Savings [\$36,642] =

Year 5 Total Energy Benefit = \$71,806

- d.
- e. This is a shared revenue model. Freedom Energy + CPower get 40% of the revenue from the utility and the schools get 60%. CPower is incentivized to ensure Timberlane meets its commitment to reducing power at the required times. If the aggregated clients do not deliver the demand reduction when requested, then CPower is heavily penalized. CPower protects its clients from that penalty.
- f. Estimated 5 years earnings + savings for Timberlane share of \$71,806. There are no penalties for non-performance, other than not getting paid.
- g. We would need an agreement. Generally, schools choose a 5 year contract. Timberlane usually does 3 + 1+ 1 year.
- h. There other Demand Response (DR) providers, but they also sell power. CPower is the largest DR supplier and has been in New England since 2006. They are an approved vendor for DCAM Division of Capital Asset Management contracts in Massachusetts.
- i. **Next steps**
 - i. Maria will get Timberlane consultant Marc Fournier involved. He will be invited to the next Energy Committee meeting.
 - ii. Kim will run this by legal to make sure this agreement does not violate any policies. It is not expected to be a big expense to run it by legal. It is not clear if we need an RFP to enter into a long-term contract, however this is savings approach rather than paying out money.
 - iii. Sean will include the PAC in the analysis. It is not an interval metered account; it is too small for these projects. We need 15 minute interval data to participate in the program.

- iv. Phil will send over the agreements. We will need to provide contacts for who to contact during the demand curtailment and testing.
 - v. Ideally agree by February so equipment can be installed before the summer demand season.
 - vi. CPower / Freedom Energy will install the real-time meters, which are outside the building. They just need permission to do so.
 - vii. Potential science project to monitor the energy consumption via the web account. We would get an admin account and could dump data into an Excel file for students.
 - j. We still have 2 years with Constellation. The alternative is almost the same cost as the current contract, so there is no rush to change at this point.
4. LED Light project (45 minutes in)
- a. Mr. Steve Paradis is currently gathering the number of existing fixtures to convert. There are over 1,000 fixtures in the high school alone. In a few weeks he will have an excel spreadsheet with the inventory of fixtures and expected savings as he did with the first round. He will create a separate sheet for each building. We can send out RFPs by building.
 - b. Outdoor parking lights – we don't pay by electricity used; we are paying a fixed rent per month for each light in the parking lot. There is no meter for those lights. Until said it would get tricky to convert to LEDs, and we would not see a financial benefit because the rent would be the same. The only way we save is by disabling the parking lot lights and putting up our own. Any light that is on a power company pole that is servicing our building or parking areas we are getting charged rent. We have already changed over the 2 parking lot lights at the high school that we own. We need to do more research to determine alternatives that will allow us to disable the power company lights. This is on the back burner and will be picked up after the classroom lights.
5. HVAC Energy after reducing the hours of operation (50 minutes in)
- a. Moved from 10pm shutdown to 7pm shutdown time
 - b. Moved from 4:30 am startup to 6am
 - c. We still meet the CDC 10 cubic ft (cf) per person guideline in the classrooms, however not the 3-5 air exchanges per hour. We are able to meet the 10 cf because there are currently a reduced number of students in the classrooms. If more students are added, then we may not meet even the 10cf criteria
 - d. After meeting with Mark Fournier facilities stopped all testing.
 - e. The HVAC RFP went out Friday last week and is closing this Friday Nov 20 at 9am. Currently there are no bidders. Mr. Fournier asked if we could extend the deadline until Wednesday. However, there is concern an extension leaves fewer days to do the work. Who can authorize extending the deadline? Dr. Farah says the board should have no problem with the extension. We need to get something

to the budget committee with our requests very soon. What is critical is getting our HVAC systems figured out so we can come up with a replacement schedule.

- f. Mr. Gary Paradis will call each vendor to verify they received the RFPs.
6. More money saving ideas
 - a. Currently focused on lighting and HVAC, no need to add yet more projects at this time.
 - b. We have \$1M of capital to put in the budget next year. Dr. Farah asked Ms. Watkins to ask Mr. Fournier if he has ideas that could help us.
 7. Solar project (approximately 1 hour in)

Should we try to get a solar project for Sandown North on the ballot for this March?

 - a. Next steps – add a warrant to open the door to allow us to go to the companies to lease our roof space.
 - b. Run the warrant article by legal, Attorney Jim O’Shaughnessy and Mrs. Cathy Belcher. Mrs. Kiszka will look at pro-forma articles and try to find additional samples by Thursday of next week. It appears we have time to get a warrant included this year.
 - c. Look for a standard warrant article, perhaps used by Sanborn, that allows us to lease the space for solar panels.
 8. Facilities Strategic Capital Improvement Plan (CIP)
 - a. We need to look at projects where we can save money with energy projects, like HVAC and windows. Anything with 2-3 year payback should be a high priority.
 - b. No action at present.
 9. Next Meeting Date Wednesday January 6 at 7pm, which should allow us time to finalize the proposed warrant wording. The committee prefers Wednesday nights other than 3rd Wed.
 10. Meeting adjourned at 8:45 PM