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**DURHAM ENERGY COMMITTEE**  
**Council Chambers**  
**Tuesday, February 5, 2020**  
**7:00 – 8:30 PM**

**— MINUTES —**

**1. Call meeting to order**

Present: Mary, Martin, Nat, Barbara, Bianca, Coleen, Jim, Wayne

Absent: Jack

Guest(s): Durham Middle School, Asst Superintendent Todd Allen, Ron Lamarre with the Architecture firm

Minute Taker: Mary / Nat

Chairing:

**2. Minutes**

**3. Presentation on Oyster River Middle School building**

Experience in the area of sustainability was selling point for Lavalle Brensinger Architects. Didn't make sense to renovate the existing building but to build new. 13 different options considered for how to combine facilities, move off site, etc. Arrived at an onsite construction.

Four pillars: Safety, Sustainability, Academics and Wellness.

Architects started last October with the design of the building. Window to wall ratio of 25% with maximizing of daylighting per New Building Institute, which has been tracking high performing buildings for 30 years. District pursuing LEED certification. Net zero *ready* building. Natural gas hot water boiler and solar hot water on roof. Affordable heat pumps and batteries are not where they need to be yet.

No 100% net zero public school buildings in New England yet, just one private. Two about to be certified in Cambridge, MA.

EUI of 53 for Dept of Energy for new school construction; the EUI in climate zones 1-4 (not 5 and 6 as we are) target EUI of 22. New Building Institute has benchmark of 35. LBA went for an EUI of 25 at the beginning. US Green Building Council has a 'Well Building' certification.

136,600 square feet and original design was 30 EUI and worked to get it down to 25 using solar. Considered covering the parking lot as a place to put solar panels to also serve as protection for the school buses to keep from having to shovel them out. Partnering with Eversource and Unifit to obtain energy efficiency rebates for electric and natural gas equipment.

Closed loop geothermal system down 45-50 heat to be 100% of cooling load and 85% of the heating load (hot water is heated with solar and gas). Old school will be deconstructed after the new school is built.

Most efficient shape of a school building is a square. One way in, four ways out of the building. Safe Havens International provide data on school safety and research on all school incidents, hire by federal governments of USA and UK.

Working with DMI (Mickey Bush).

Ended up with a planned EUI of 17.1 versus 50.22 (w/out AC). A little bigger than originally planned of 143k square feet (existing building is 106k sq ft).

Incremental cost of geothermal versus trad boiler/chiller is \$615k upfront cost, but an additional savings of \$54k /year based on the current rate for natural gas (so saving 38c/square foot/year with the geothermal).

Guaranteed maximum price not to exceed \$50m. 59c on \$1000 tax increase for bond and entire school budget and teacher contract.

March 2022 is the projected completion date, with school opening that fall.

The meeting adjourned at 9 pm before the complete agenda could be finished.

#### *4. Report on Progress since prior meeting*

- a. Solar Ordinance*
- b. EV Charging Stations*
- c. Educational Outreach*
- d. Micro-Grid update*
- g. Municipal Aggregation*
- h. Global Covenant of Mayors - Setting up a sub-committee*

#### *5. New Energy Committee business*

#### *6. Updates from Other Committees*

#### *7. Next meeting date(s)*

#### *8. Adjournment*