Town of Harvard Energy Advisory Committee

Meeting Minutes 12/9/2020

Attendees: B. Smith, D. Fay, F. Hodgkins, P. Green, E. Sachs-Leicher, Peter Kelly-Joseph
Jeff Hayes Town Facility Manager (PT)
Bromfield Green Team – Joshua Clarke (advisor), Lena Aloise, Claire Stoddard, Annabelle Purcell (PT)

Location: **This Meeting was held virtually in accordance with the Governor's Executive Order Suspending Certain Provisions of the Open Meeting Law, G.L.c.30A. S.20.; Zoom Meeting ID: 871 1963 3701**

	Meeting Discussion/Status
Admin	**1. The minutes of 10/14/20 and 11/19/20 were approved 5-0 without comment.**
Schools	1. HES Existing Solar Panels ~6kW – Need a site that is feasible to accept the panels. – **Deadline is May 2021. The Green team is working on a way to save the panels from demolition. The panels are Town-owned property and will need to comply with the standard process for disposition.** 2. Charging Station – The HES Building project scope includes the infrastructure but not the dual charging station. Brian is working with Horizon Solutions. Brian received a list of questions from Horizon for the HES project team. a. The Green team volunteered to prepare a survey about demand for an electric car charging station at Bromfield. 3. HES Solar ~245 kW Behind the Meter project earliest June 2021– a. Interconnect Application – denied by National Grid to Solect Energy. The Ayer substation requires upgrade in 4-5 years. b. **David set up a call for 12/15 with NGRID and Rep Dan Sena to review the details of the rejected Interconnect Application and evaluate options for a path forward.** c. **Brian requested guidance from DOER about how to overcome the obstacle to project approval to install renewable energy and meet a goal of the Green Community program. They suggested to contact NGRID directly which is what David had set up.**
Town Energy Project Updates	1. Green Community Program a. Reporting – **Final 2019 grant report - Brian submitted 11/29 on time.** b. Need ideas for GC2020 application – TBS Economizer, battery storage, sewer plant and DPW opportunities were mentioned. School Insulation – Brian discussed with RISE Eng and was referred to NGRID. Police Station lighting (5 lights)- **Brian contacted Energy Conservation Inc. to help identify opportunities and prepare proposals for the Spring Competitive round.** 2. **Library – Forrest reviewed what data is available from the energy sensors – the latest record of recording was from Oct 2018. Forrest and David are meeting with Pete Jackson to review opportunities at the Library.**
Subcommittees/ Initiatives	**1.** Community Resiliency Working group CRWG (Chair Peter Kelly-Joseph) a. Consultant KLA issued a framework for a Climate Action Plan b. MVP Phase 3 – Planning phase for Energy Module – this may involve a battery storage system CRWG would apply for a grant for an Energy Module effort. An Energy strategy or goal would be part of this effort. **Ellen to provide the CAP report for discussion at a future meeting.** **2.** Energy Policy Subcommittee (Chair Paul Green)– Plan to integrate this into the Climate Action Plan effort.

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	3. Master Plan Status - Residential Energy Conservation Forum – to be considered in the FY21 plans. – On Hold **4.** **Athol Solar Net Metering Credit PPA – David reported that we received notice that the ownership has changed but there should be no change to the credit received.** **5.** **Town Facility Management – Jeff Hayes** a. **David present slides about the energy use of Town Buildings (no schools). The New Library has the highest energy use and highest energy per square foot. Electricity use has been stable and gas usage has been increasing in recent years for the New Library.** b. **Facility Manager role – This is a new role for the Town. HEAC has advocated that a responsibility for the position be to identify/implement repairs or upgrades and monitor building use and equipment to reduce energy use. Jeff is willing to help out in this area as much as possible. An example is to integrate energy considerations into building upgrades such as adding insulation when replacing a roof such as the Old Library.** c. **Jeff is not responsible for the DPW buildings.** **6.** **Net Zero Stretch Code – HEAC discussed sending a letter of support for this new code to the BBRS along with other communities. Ellen will customize a draft from the template draft provided for HEAC approval and we can send to the Select Board to determine their support.**
	Meeting adjourned 9:30 pm
Future Meetings	2021 Jan 13 Feb 10 Mar 10 HEAC Meeting Location/Time: 8 pm. – Virtual until further notice

Energy Review

Non-School Town Buildings

9 December 2020

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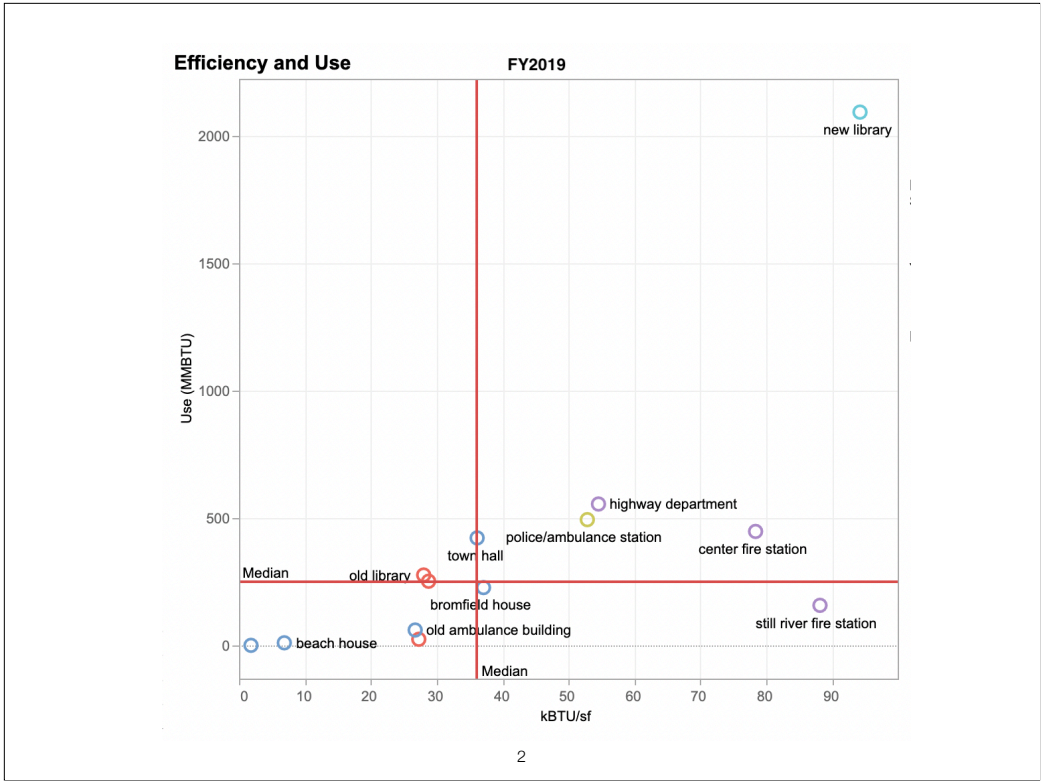
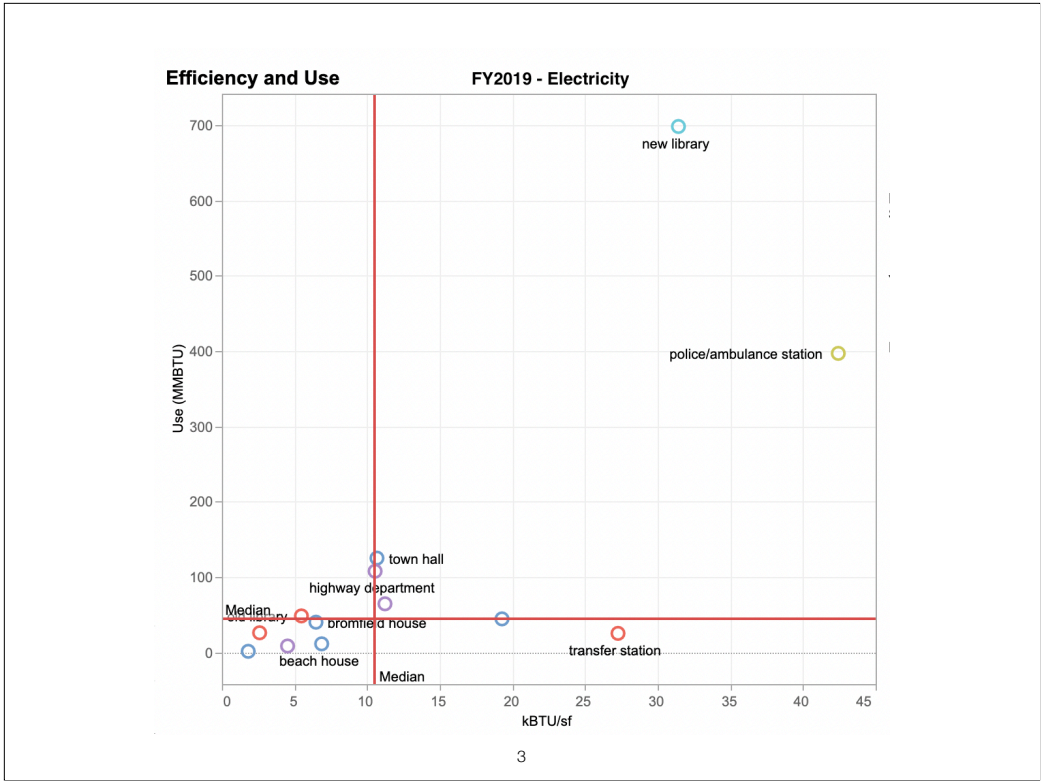
The most recent data we are using in this review is from FY2019 rather than FY2020, since FY2020 includes the unique event of the pandemic shutdown.



This chart compares the total energy usage (both heat and electricity) of all non-school town buildings.

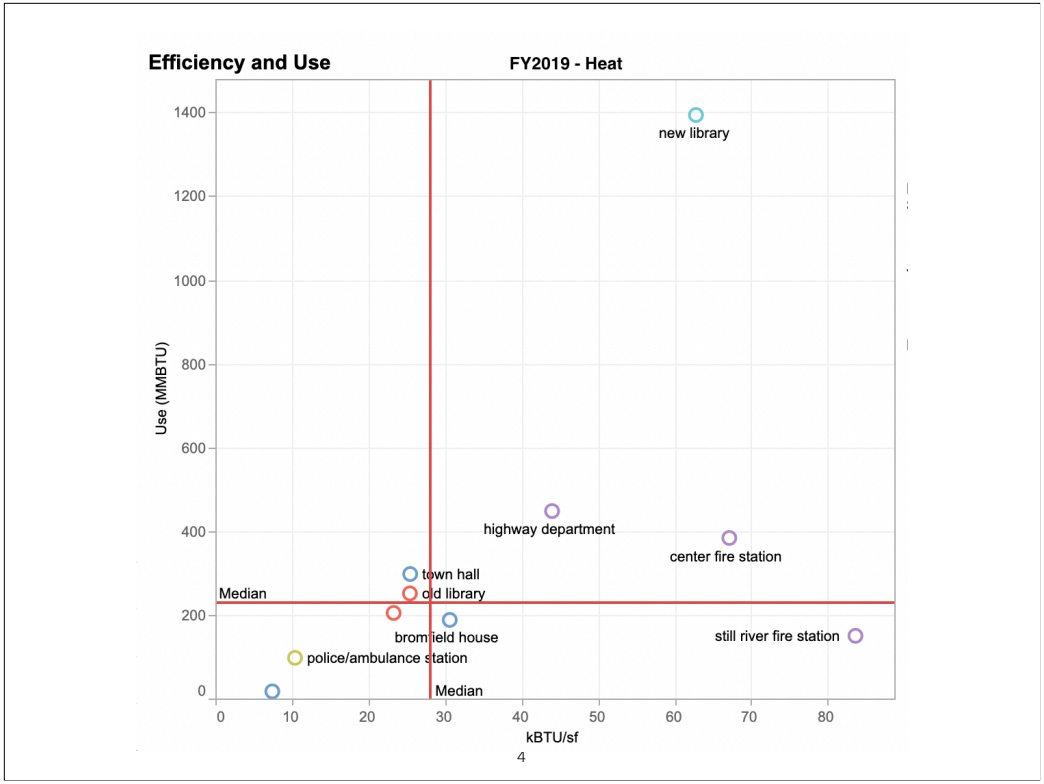
The building that stands out in this chart is the New Library (upper right corner). The New Library not only uses more energy than any other building (as measured on the y-axis), it also uses more energy per square foot (as measured on the x-axis). So it is both the most costly of the buildings and also the least efficient in its use of energy.



This chart compares just the electricity usage of the New Library to other non-school town buildings.

The New Library uses more electricity than other buildings and uses it less efficiently than any building other than the Police/Ambulance Station. It should be noted that the Police/Ambulance Station includes a communications center packed with electronic equipment so it's no surprise that it uses the most electricity per square foot.

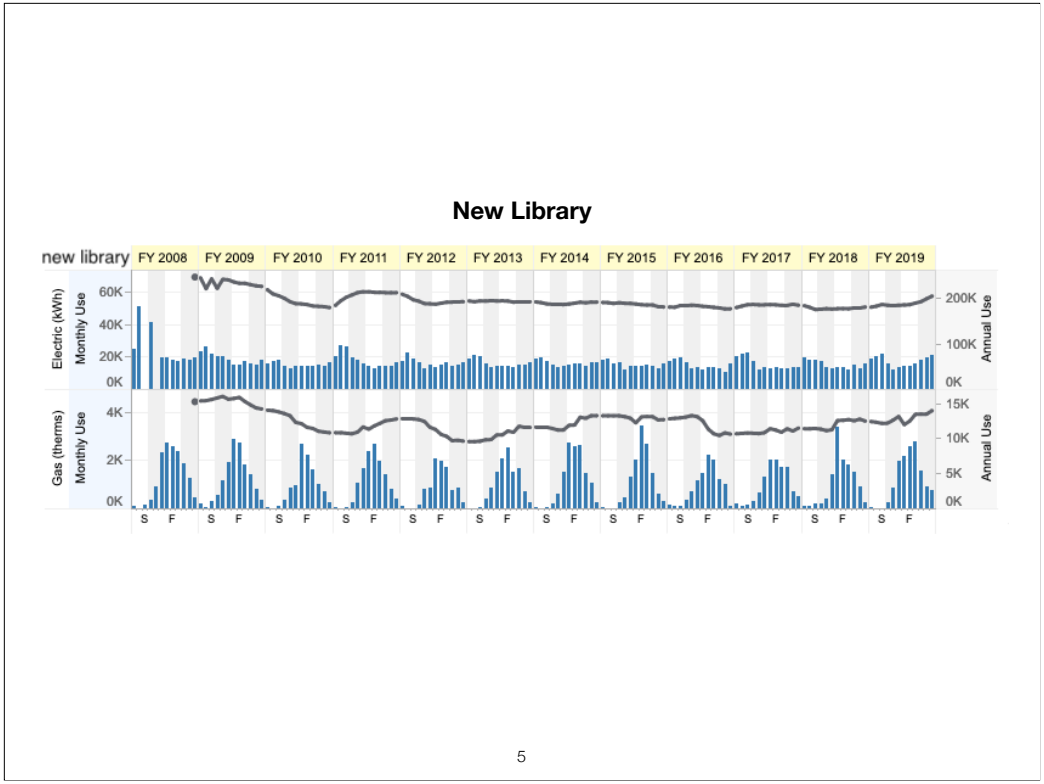
The next most electricity-intensive building is the Transfer Station, presumably because of the high electricity usage of industrial compacters combined with a tiny building (control building). Even with this extreme combination of high electricity use in a small footprint, the New Library uses electricity more intensively.



This chart compares just the heating usage of the New Library with other non-school town buildings.

The New Library is unusually energy intensive in its heating (reference the x-axis), being exceeded only by the two fire stations, which have cinder block walls and are barely insulated.

In this graph, disregard the Police/Ambulance Station because its gas meter was reading incorrectly during part of this year.



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This chart shows the electricity (top) and gas (bottom) usage for the New Library over the last 12 years.

The electricity usage peaks at the beginning in the first quarter of each fiscal year (July, August, September bills). Since these are warm months, this peak presumably reflects HVAC cooling of the building. Otherwise, the electricity usage has been remarkably stable over this period (see moving average). Note, however, the rise in usage in the second half of FY2019. This needs to be investigated.

Gas usage (mostly for heating) fell from its high point in FY2008-09 to a low around FY2012, but has been creeping up since (see moving average). Is this due to weather or a change in building controls?