MERP Assessment Breakdown, 7/31 Revision

Holley Hall - Projects Recommended by the Bristol Energy Committee
* Note, projects with figures in blue are questioned by the committee but could be considered.

Energy Conservation Measures (section 1.3)

$63,650	Weatherization Projects: some projects have long payouts, but sealing the structure as much as possible is a long-term investment in efficiency and comfort.
$1,200	Programable Thermostats
$1,200	Integrated Heating Controls
$2,800	Lighting retrofit
$68,850	Total Energy Conservation Measures

Renewable and Resilient Energy Measures (section 1.4)

$44,000*	Battery Electric Storage Batteries could be useful for resiliency as a warming/cooling center. However there is a propane fueled generator in service that makes batteries redundant. Also question of where to install them?
$125*	Electric Vehicle Chargers are not applicable here because of lack of location.
$19,550	Air-to-Air Heat Pumps for the second floor Meeting space. This is a resiliency measure because the installation of heat pumps in this space will enable the building's use as an emergency heating and cooling center. They will also make summer use much more attractive because at present the space becomes very uncomfortable in hot weather. Payback should not be an issue in this case.

Heating System ECMs and RREMs (section 5)

$11,700*	Mid. Eff. Oil-fired Boiler The existing boiler is estimated to have 14 years remaining service life. If funds are available, replacing it would give the town 25 years of service life.

" The air-to-air heat pump/oil hybrid option is not cost-effective from financial payback alone, however the additional benefits of reduced energy cost volatility, positive local impact, and reduced environmental impact make it a worthwhile investment."

Hot Water Circulation Pumps, PSC-Type Motor, Single Speed

$??? Replace with more efficient EC-type motors.

Sub-total
$100,225 Items in black
$ 44,000* Batteries

Total
144,225

$2,000 Estimate cost of 6 EC-type circulators (FW Webb) Rebates may apply.

Total (Est)
$146,225

$??? The report notes that the exterior walls are good and that they could be insulated. However it suggests that the reason they are good is that there is air-flow between outside and inside layers and that insulation could disrupt this air-flow and result in deterioration over time. The report recommends hygrothermal computer modeling to evaluate insulation systems that pose the least risk.

$??? The committee asks whether heat exchange ventilation should be considered for the second floor theater space because of loading at events.

Note: with the MERP program there is no cost to the town - no match.