

MERP Assessment Breakdown

Bristol Library - 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)

\$22,575	Weatherization Projects: includes foundation, wall, door and general air sealing
\$1,200	Programmable Thermostats
\$1,200	Integrated Heating Controls
<u>\$1,850</u>	Lighting retrofit
\$25,625	Total Energy Conservation Measures

- Included in this section was a high-efficiency propane fired boiler at a cost of \$10000. This measure was separated from the others since it is an energy conservation and fuel switching measure. It is marginally cost effective and recommended when accounting for the additional benefits of reduced cost volatility and reduced environmental impact. It is very cost effective when the existing boiler requires replacement due to the relatively low incremental cost. This measure is not recommended if a heat pump system is pursued.

Renewable and Resilient Energy Measures (section 1.4)

\$23,000* Battery Electric Storage

- This is included for info purposes only. We need to consider if worth the investment

\$160* Electric Vehicle Chargers are not applicable here because of lack of location.

\$19,550 Air-to-Air Heat Pumps

- A heat pump system is not cost-effective from a financial payback alone. Accounting for the additional benefits of reduced energy cost volatility, positive impact on the local economy, reduced environmental impact and cooling capability may make this a worthwhile investment. An air-to-water heat pump system is more easily integrated with the existing hot water heating system, but is not as easily able to provide

cooling versus an air-to-air heat pump system. Only one of these options is recommended, and only if a high efficiency gas-fired boiler is not pursued.

Occupant health & Comfort Measures (section 5)

??? Replace existing Thermostat with Programmable One

??? Add Mechanical Ventilation System to improve air quality

Upgraded Electrical Service (section 3.3)

??? The existing electrical service does not appear to have the capacity to support the addition of electric vehicle chargers and electric heat pumps and would need to be upgraded from 200 to 300A (detailed later in report). A licensed electrical engineer should be consulted to verify if any modifications are required.

Sub-total

\$45,175 Items in black

\$23,160 Items in blue

Total

\$68,335

Note: The cost of items identified with ??? will need to be evaluated and estimated by contractors for inclusion in total.

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