

## Town Garage Energy Efficiency Improvements Recommendations for 2015

The Plainfield Energy Committee has been studying and evaluating *the Plainfield Highway Garage Energy Audit* conducted by Margaret Dillon in January 2012 and make the following recommendations.

Considering the results of the structural engineering tests recently performed by Engineering Ventures over the past two months, decisions first need to be made on the long term viability of the current building. The majority of the energy conservation improvements we considered have a payback period longer than 8 years, and only make economic sense if the current building will remain in its present condition for at least that long.

The renovation or replacement of the roof may be a priority item, but the extent of the repairs may be determined by other structural considerations. High quality insulation installation would only be recommended if extensive renovation of the roof (including truss and roofing material upgrades) will be done.

All windows in the garage will need to be replaced in the next 3 to 5 years - the thermal barrier of many have already failed. Replacement should be done if the walls of the building do not require modification in the near future.

There are a few inexpensive, fairly easy upgrades that should be made as normal maintenance - they are:

- Install filters on return registers
- Insulate ceiling hatch and gasket seal
- Insulate all water pipes with min R6 foam sleeves
- Install Stop Molding on both overhead doors

The estimated cost for materials for these improvements is estimated to be less than \$500. Should contracted labor be used, the cost for labor could be another \$500.

The next immediate items would be window replacement. The 6 large fixed glass windows on the south side have failed, and the 2 opening windows are single pane windows. The window in the office could be replaced immediately with a thermopane sliding unit for approximately \$500. The main benefit would be more comfort in the office. The other windows should be replaced this year if the building will not need wall renovation. The estimated cost, with labor, for replacing the remaining 7 windows would be around \$3500.

Other items that were evaluated, but not considered for 2015 were:

- Installation of waste oil furnace
- Installation of Solar wall with ventilation
- Air Vac Filtration for improved air quality
- Insulating the foundation wall
- Installing Solar Panels for self sufficient electricity production

Of these, the Energy Committee still favors installation of solar panels, but at this time does not recommend moving forward on this until a decision is made about the overall structural viability of the building.

Should the Select Board decide that major renovations or reconstruction of the building be warranted in the near future, members of the Energy Committee would welcome the opportunity to participate in planning decisions.

(The Energy Audit Report and the Structural Engineering Report are both available for download from the PECs website, under "Reports and Resources")

Respectfully, Steve Ladd on behalf of the Plainfield Energy Committee Jan 31, 2015