**Energy Efficiency Meeting - June 28, 2018**

**(Parlor, 1:30-3:00p.m.)**

Present: Dave Ballantyne, George Banziger, Jim Grecni, Ryan Clinton (guest from EGI, wall insulation firm)

**Discussion of Insulation for the RE Building**

 -Since we have the funds, and both B&G Committee and Green Sanctuary Committee have approved moving ahead with energy-efficiency improvements in the RE Building, the group informed Ryan to move ahead to schedule the insulation on a Tuesday & Wednesday (the job takes two days) in mid- September. EGI's earlier estimate of $3,986 is still valid and will be through September. Full payment will be expected when the work is complete (no down payment is necessary).

 -Moisture build up is a possible issue, but EGI knows of no instance where this has occurred in their experience. Dan Harrison, in conferring with Joe Baker earlier, confirmed that this risk is very low.

 -Settling of the insulation over time is not a problem with fiberglass material (R15 insulation value), which will be the material used in our case.

 -Preparation of the space will involve moving furniture to the middle of all rooms with an outside wall and covering of furniture with tarps or sheets.

 -Rev Kat and Chris Keller should not be in the building on the two days of the insulation installation; Wednesday meditation will have to move to another location on the installation date.

 -With this inside method of installation of the insulation, there will have to be a hole in the wall every two feet or so; these holes will be filled with a styrofoam plug.

 -After the insulation is installed, a FUUSM team (from Men's Group) needs to work on spackling, sanding, painting (primer and color) over the hole plugs; for the purpose of uniformity and aesthetics, the whole room should be repainted--at least in the case of the parlor. Materials for this refinishing will be an added cost.

 -Dave will check with AEP to see if there is any rebate or incentive for this energy-efficiency improvement.

**Update on Usage Data for Sanctuary Building and for RE Building**

 **-**Electrical usage in the RE Building is still rather high; Dave's data show only minimal improvement from managing thermostats and closing doors.

 -The daily (day of the week) electrical usage in the RE Building varies, but at this point it is difficult to discern a pattern to the data; we should continue to monitor these data.

 -The daily electrical usage (by date) shows considerable variability, but there were significant peaks in early January 2018 (perhaps at the time of an ice storm).

 -This pattern of water use, i.e., almost the same water usage for both buildings is still a mystery. This group assumes that there must be a leak somewhere in the RE Building to produce this pattern of water usage. We need to pin down the time period when the surges of water use appear in order to indentify the problem.

**Estimate of Cost of Heat Pump in the RE Building**

-Dave has not yet obtained this information; "ball-park" estimate - $12,000.

 -Heat pump will only be used in the first floor

**Components of Energy Efficiency Plan**

a. Energy usage data gathering (re: items above and documents produced by Dave B.

 b. Methods for long-term tracking - same parameters as used by Dave B in his preliminary data gathering

 c. Projects in Both Buildings

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| RE Building |  |  |
| *Projects* | *Priority\**  | *Status*  | *Comments* | *Cost* | *Completion Date* |
| 1. Repair Windows |  | Completed | No evidence yet about savings from these improvements | $1,675 | June 20, 2018 |
| 2. Wall insulation  | ? | EGI proposal accepted | Fiberglass-R15, need assistance in arranging furniture and repairing installation holes | $3,986 | September 2018 |
| 3.Heat pump | ? | Dave B. will obtain cost estimates | Heat pump will operate only on first floor | ? | ? |
| 4.Monitoring thermostats, closing rooms | ? | Already initiated, ongoing | Minimal evidence yet that this is reducing usage/cost | Regular effort & attention to these tasks; no $$ | ? |
| 5. 67-gallon hot water heater | ? | Lowered thermostat | Should remove, relocate, cover with insulation; replace with localized hot water heater | ? | ? |
| 6. High use of water compared to Sanctuary Building | ? | Only overall usage data; no information on cause | Review water bills, monitor usage and pinpoint date of excess usage; investigate possible leak | ? | ? |
| Sanctuary Building |
| 1. Single-pane windows upstairs & down | ? | Need information on number of windows & exact locations | Acquire cost estimates for double-pane or storm windows | ? | ? |
| 2. Stoves in kitchen | ? | Ongoing B&G item to purchase two high-end residential electric stoves; no current action on this issue, however | Electric stoves might obviate the need for new ventilation (see below); will cut down on gas consumption (no constantly burning pilot lights) | ? | ? |
| 3. Cooling the sanctuary | ? | Long-term plan for air conditioning | Usage data show very high costs for air conditioning in the Fellowship Hall; would be even higher in the sanctuary for use once a week on the summer months; recommend alternative such as large ceiling fans, venting in windows | ? | ? |
| 4. Ventilation in kitchen | ? | ? | Even with electric stoves it will get hot in the kitchen; more fan and ventilation; local regulations indicate that "cooking with grease" requires special ventilation--need definition of the latter. | ? | ? |

*\*B&G & Green Sanctuary should agree on priority and rank-order these projects)*

George announced that he will not be involved in future meetings of this group. Jim can serve as liaison between B& G Committee and Green Sanctuary.

No time/date was set for a next meeting of this group. We'll assume that Joe Baker will judge whether to have another meeting of the group to fill in some of the gaps in the energy plan or to take the current information to B&G C0ommmittee and to Green Sanctuary for their review.

Recorded by

George Banziger