



9.13.2018

Meeting with Efficiency Vermont  
9.12.2018

## NOTES

- Heat pumps are not an efficient or cost effective option for heating the entire building.
  - However, heat pumps can be an effective way to heat certain zones of the library in which the boiler is not efficient.
  - A renovation could also be designed specifically to be heated by heat pumps.
  - Combination AC/heat pumps cost about \$7000 (10% higher equipment cost than AC only) so replacing the AC only units with AC/heat pumps as they fail is a viable option.
- Steam boilers can last 30-40 years depending on their upkeep and condition.
  - An inspection and report is necessary from Plouffes.
  - An inspection should include a combustion analysis.
- We want to move away from steam to a hydronic system.
  - The plan outlined by Engineering Services of VT is on the right track for our needs.
  - This move should happen sooner rather than later, as the new high efficiency boilers that would be installed could be incorporated into the new building/scaled to accommodate additional square footage added during the renovation.
- We want to move from oil to either gas or wood pellets. Efficiency Vermont recommends we do this sooner rather than later citing boiler efficiency and the aging underground fuel storage, which has the potential to leak.
  - Vermont Gas should be brought into the conversation to see what the process would be like for switching to gas on the current system and/or for a future system.
  - Vermont Gas might have subsidies available.
  - Wood pellets are sustainable and local, but come with a higher upfront cost and the need for bulk storage.

## ACTION PLAN

- 1. Obtain inspection and report from Plouffes.**
  - a. Make any recommended repairs that can buy another few years.**
- 2. Reach out to Vermont Gas to learn about the process for switching to natural gas with existing system or with new system and enquire about possible subsidies.**
- 3. Work with Engineering Services of Vermont to write a design narrative.**
  - a. Run design narrative by Rachel Mascolino at Efficiency VT for input.**
- 4. Put design narrative out to bid.**
  - a. Request separate bids for the installation of energy delivery system and the ongoing costs of fuel (natural gas v. wood pellets).**
- 5. Install AC/heat pumps individually as existing AC only units fail.**