

## Conservation Commission Energy Committee Meeting

Thursday, May 24, 2018

Parks and Rec Conference Room, 2<sup>nd</sup> Floor, Town Hall

In attendance: Urling Searle, Steve Hall, Rusty Parker, Skip Parker, Robert Brady

Also in attendance: Patricia Sesto, Director; Sarah Nahabedian, Conservation Resource Manager; Al Monelli (Superintendent of Buildings)

1. **Call to order**- 9:02am by Patricia Sesto
2. **Welcome**- Committee members introduced themselves to Al Monelli
3. **Approval of Minutes**
  - a. April 26, 2018- approved
4. **Discussion of Town facilities**- Members welcomed Al Monelli, Superintendent of Buildings. The group conveyed their interest in understanding work already accomplished, constraints and opportunities, and future plans for the town facilities.
  - a. Town Hall building profile:
    - Age- built in 1925 as the old High School
    - # occupants- ~320
    - Previous renovations- 1980 from High school to Town Hall
    - Typical operating hours: Mon-Fri 8am-4pm but open to meetings Mon-Fri and can go late into night/early morning,
    - # computers- around # staff (~320)
    - # offices- Undetermined.

Mr. Monelli explained the building needed renovations around 1988, as it was compartmentalized and there was a need for a more open environment, especially to serve residents coming into the building. More recently, renovations reduced the number of walled offices, which helps spread lighting and A/C evenly. The Parks and Rec office space was cited as an example. This concept was implemented in the newly completed Human Services Department (3<sup>rd</sup> floor). Previously, it had double hallways, no check points (safety issue), and discreet offices. The renovations switched lighting to LEDs, used cubicles in lieu of defined offices, revised the flow of business, and addressed safety concerns.

About \$200,000/year is budgeted annually for office renovations. Mr. Monelli is able to put these funds primarily towards capital supplies/equipment and utilize his staff for labor.

### b. HVAC

Mr. Monelli was asked about the HVAC (heating, ventilation, and air conditioning) system, its temperature ranges for seasons, what happens during unoccupied building hours (weekday evenings, weekends, holidays), timers?

With regards to air conditioning, the building was quite energy efficient for the time in 1980. The boiler motor was replaced. The motor didn't provide much of a payback as the technology still is only marginally, ~1%, more efficient.

Building runs off water-cooled compressors and the glycol temperature is maintained at 85 degrees. System is glycol- electric based compressor (glycol is heated/cooled using electricity).

The individual A/C units in offices are automatically shut off three times a day to compensate for employees who fail to turn off their units when they leave. Town Hall is served by six main units for core cooling. The units draw in 25% fresh air and operate on auto on and off. A/C energy efficiency is achieved by managing the use of the system.

Mr. Monelli indicated maintaining the glycol is a big energy draw, but the consequences on shutting the pumps off can be substantial and not worth the risk.

c. Previous Upgraded

Mr. Monelli spoke about what previous upgrades and/or energy saving measures have been implemented and his knowledge regarding what savings were realized.

Lighting has been historically changed over, however, the technology keeps changing. LED have been installed in many parts of town hall, with the Assessor's office being the most recent. There is no payback on the investment, however there are fewer kWh being used. Mr. Monelli believes the building could reduce 20% of its energy use by changing over all the lights to LED.

Patricia Sesto asked if there is any cost preference granted to supplies or services that may not be the lowest price, but offer greater energy conservation. Mr. Monelli responded there is not because he can't determine the cost of projects until bids come in.

d. Repair vs upgrading

Mr. Monelli was asked, if a piece of equipment is found to be inefficient and in need of upgrading, is it repaired or upgraded? How is the decision made? Is there any additional weight given to energy efficiency over cost?

There was the intent to use solar panels on the dock on Strickland road, requesting net metering- *a system in which solar panels or other renewable energy generators are connected to a public-utility power grid and surplus power is transferred onto the grid, allowing customers to offset the cost of power drawn from the utility.* Tod's Point and the light house building on Great Captain's Island have panels.

The barrier of net metering is the service charge for each account. The cost of the service charge exceeds the value of the electricity being put into the grid.

Mr. Monelli continued, explaining the BET budget process does not account for long term payback in energy efficiency when evaluating the cost of an improvement. Each department's budget is judged for that year. Consequently, a budget increase over the recommended allowance for a given year is not assessed in terms of anticipated savings in subsequent years.

e. Recent upgrades

A map of the building to look at lighting and the Assessor's Office was upgraded. There was no payback, just a reduction in kWh

With respect to the CL&P grants, there is a significant drawback in that the grant only pays for the outside contracting, and would not pay to have town employees to do the work.

Mr. Monelli intends to include funds in the budget for changing all lighting to LEDs and in parking garages.

Rusty Parker asked about motion detectors. Motion detectors have their issues as they must be in line of sight. Custodians clean until 10pm and then shut lights as they lock areas of the building. Night light circuit- some lights are meant to stay on, also the battery back-up lights (if power goes out). New buildings must have motion detectors. Ceiling sensors are much better, but more expensive. For now, the actions of the custodians minimize the amount of savings which would otherwise occur with motion sensors

Outside lights are on timers.

When asked about the biggest concerns with moving towards upgrading to energy efficient equipment, Mr. Monelli stated Eversource's hesitancy to give incentives/rebates if the Town has its own workers do the work.

f. Capital Upgrades Planned

There are 117 buildings under the superintendent's jurisdiction. Many of these lacked insulation, modern convenience, handicap accessibility, and had only window A/C units.

To address this, major renovations are planned for the Eastern Greenwich Civic Center, Dorothy Hamill Skating Rink, Byram and Sound Beach fire stations, and possibly the green house at Pinetum.

Fourteen of the town's buildings are leased; garden education center, yacht clubs, etc. By contract, the tenants are responsible for the care and maintenance, and many don't have the finances to keep up maintenance, let alone make upgrades.

Town Hall realized energy savings when window A/C units were replaced and windows could no longer be opened.

Mr. Monelli reflected on the larger house sizes being built, noting these consume too much energy for efficiencies to compensate for. Additionally, as is the case with the Police Department, our equipment and electronics generate more heat, requiring A/C to be on more.

R. Parker asked if Mr. Monelli review at plans before their built. He does.

“Andover” systems are used so everyone knows the same system. *“Andover Continuum” is a full system of controllers and user interface software products (HVAC and security), which can be combined in many different ways to customize the system to site requirements. The site can be a single buildings or across multiple locations.* It’s applicable here in Greenwich so that there could be one system, controlling multiple buildings.

Town Hall maintenance staff consists of 23 people who are FT, another 10 PT. There used to have an assistant superintendent, but that position no longer is filled. However, the head project engineer, Luigi, has demonstrated great capabilities.

Some new buildings are being built without heat in the winter since they aren’t used in the winter.

As for future budgets, the facilities capital budget could use as much as \$40million, but around \$8million is more realistic. It is difficult to spend much more based on the current staffing capacity. There is a new line item for HVAC, principally to replace boilers in Town Hall.

Mr. Monelli conveyed the biggest savings come from building insulation, wall insulation, then windows, followed by other ways to reduce energy. It will take \$90-100k to replace all the lighting and this should yield a 20% reduction in energy consumption.

Currently, utilities for the town’s buildings runs around \$900k per year.

“ActiveAir Solutions”- *specializes in providing energy reducing air purification systems for indoor building environments* was suggested, with Greenwich Plaza cited as an example.

5. Strategic Energy Planning-  
Members chose to carry this discussion over to the next meeting.

When the Town Hall audit is delivered, it will be shared with Mr. Monelli. If the audit’s recommendations do not produce \$15k worth of savings, we will reconsider the EEMs and do the same with Dan Watson for BoE.

Ms. Sesto noted Andy Duus, BET representative, will be joining us at our next meeting.

Mr. Brady recommended Sandy Litvack be added to circulation emails.

Ms. Nahabedian will scan SWA proposal and send it to Mr. Hall.

6. Next meeting – June 14, 2018 @ 9:00 a.m.

Adjourn- 10:30am