The New Hampshire Municipal Energy Assistance Program

Decision Grade Audit Report

Peterborough Town Hall
1 Grove Street - Peterborough, NH 03458

Prepared for:

Town of Peterborough, NH

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CLEAN AIR COOL PLANET

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The following report was generated as part of the Municipal Energy Assistance Program (MEAP). MEAP is made possible through the New Hampshire Public Utilities Commission and the Greenhouse Gas Emissions Reductions Fund. The program is a collaborative effort to carry out a sequence of greenhouse gas emissions inventories and energy audits for between 24 and 48 geographically diverse communities in New Hampshire, setting the stage for these communities to perform renovations to selected buildings that would reduce energy consumption and greenhouse gas emissions. This report has been generated as a result of the Town of Peterborough being selected to participate in this program.

To follow MEAP updates and activities please visit www.nhenergy.org.

Additionally, this report would not be possible without the assistance and input provided by municipal employees. We are grateful for the time provided to us by many of the Town of Peterborough staff members, without which this report would not be as thorough as it is.

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Introduction:

MEAP partners are pleased to provide this Decision-Grade Audit Report for the Town of Peterborough and the Town Hall building (hereinafter "the building"). This report discusses the findings and subsequent recommendations for energy efficiency improvements at the building. Included within this report are details regarding the walk-through and exploration conducted in the facility and examples that illustrate recommended building alterations and improvements that can reduce energy costs and the building's natural resource footprint. In this report we will provide a set of options that can help achieve real energy savings and carbon dioxide reductions. These recommendations should be viewed as initial avenues to participating in several State level funding opportunities for municipal energy projects. These funds distributed under the aegis of the ARRA (American Recovery and Reinvestment Act) are targeted specifically to towns and cities.

Prior to the audit process beginning, each selected municipality must carry out the MEAP energy inventory process. The inventory process is required in order to receive an energy audit. This report relied on those initial findings to help determine the most appropriate building to conduct an energy audit for, with the intent of maximizing the potential energy savings. Furthermore, we would be remiss if we did not acknowledge the assistance provided by Rodney Bartlett , Nicole MacStay, and Judy Blake for their time and assistance with information gathering and support for our work has greatly assisted in the generation of our recommendations.

The Audit

The first stage of any audit process is understanding the nature of the system and the objectives of the audit. The use of the building and the Town's goals and objectives are the foundation of a solid audit. In most cases, these objectives combine environmental and economic goals. In the case of public buildings and facilities, comfort and safety are also primary concerns that help guide our analysis and recommendations.

A decision grade audit involves an inventory of heating systems, quantification of energy usage (electrical and heating fuel), and the process of coordinating this information with the goals and objectives of the Town into a decision tool. Under MEAP we look to provide recommendations that will, if carried out, help the Town achieve at least a 30% reduction in energy consumption. The level of detail provided herein is meant to create the basis upon which investment grade audits and decisions can be made. The decision grade audit is meant to filter options and expectations so that the Town can understand the fundamental building system, how changes to the system can result in economic and environmental benefits and how those changes can interact with other policy and philosophical objectives.

The following information will describe the characteristics witnessed during the walk-through and those areas of the building complex where improvements may be made. The objective of these recommendations is to create a series of options the Town can further explore.
On November 17th, 2009 Tobias Marquette of SDES Group, toured the Town Library and Town Hall to determine which of the two buildings would receive a decision grade audit under the NH

MEAP program. With respect to energy used per square foot, the two buildings perform similarly. Although the library has significant potential for efficiency upgrades, the Town Hall is a larger building and uses a greater quantity of energy. In addition, the library has recently reduced its carbon emissions by installing a pellet boiler. Given these factors, it was decided to audit the Town Hall.

Building Description:

The Peterborough Town Hall was built in 1918 and was added to the National Registry of Historic Places in 1996. The building is a central focal point for the community and houses a wide range of offices and services. Each floor has a unique layout and multiple uses. There is a basement level with mechanical and file rooms, as well as office space. Because much of this space is occupied, it is often referred to as the 1st floor in this report. The 2nd floor has the main entrance, office and meeting space, and split levels on the east and west sides. The 3rd floor is a large open space with public lavatories, a large balcony and stage.

Exterior Walls:

The basement walls of the Town Hall were constructed using two different materials. The above-grade walls are brick, and the below-grade walls are granite. There are finished exterior walls around the office space, but none of the examined walls are insulated. See Figure 1. Uninsulated heat distribution pipes were identified in several locations. See Figure 1.

Figure 1

Other areas of the basement, such as the file room, are exposed granite while the exterior walls of the mechanical rooms are only brick.

Even in unconditioned basements, a large amount of heat-loss occurs through foundation walls and basement floors. These lower sections of a building, where the most amount of air infiltration occurs, contribute to the stack effect. As a result of the stack effect, a building acts like a chimney. Illustrated in Figure 2, the stack effect results from when wind passes along the building and along the roof, and draws air from the interior. For every one cubic foot of air that leaves the building, one cubic foot of air will infiltrate at different points as illustrated in Figure 2 through the blue arrows at the bottom of the figure. Gaining control of the air movement through a building not only has a positive effect on efficiency, but contributes to increased comfort and indoor air quality. In most cases, the stack effect pulls air from less than desirable areas that are not maintained, like mechanical rooms, and introduces it to the main occupied sections of the building.

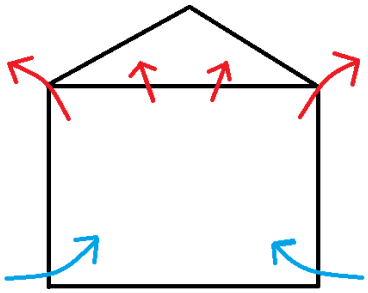

Figure 2

A similar situation in the Town Hall was found on the second and third stories. In these areas, there are brick walls, original wood studs, and empty cavities. New walls were built against these original exterior walls, but no insulation was observed in the examined sections. Similar to the way the air currents in the main building are under the influence of the stack effect, the empty wall cavities are serving like small individual chimneys themselves.
Figure 3 describes how the heat-loss is occurring through these exterior walls.

Heat conducts through the finish materials of the wall. Once on the other side of the lath and plaster, or drywall, the heat radiates across the empty space and hits the brick wall where it again conducts, rather quickly, through the brick to the exterior. The convection currents in the wall take a good portion of the heat and direct it vertically towards the top of the building.

A tremendous amount of heat-loss is occurring through the exterior walls. It may be possible to blow insulation into these empty wall cavities, but some areas would only have an insulation thickness of 2.5 inches. Though this would

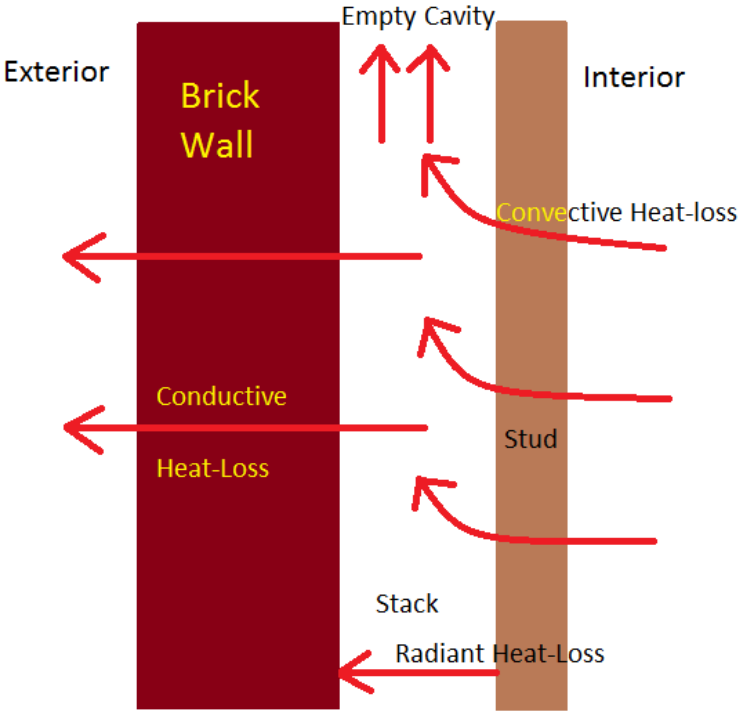

Figure 3

result in an improvement, a more significant benefit would result from rebuilding these walls. It would be difficult to rebuild the walls in the third floor as they are the most historically sensitive exterior walls in the building. Depending on the goals of the community, with respect to the integrity of the building, it may be sufficient to fill these cavities and not disturb the current wall structure.

There are two areas of crawl space in the basement (1st floor) with no exterior wall insulation, no insulation between the floor joists (under the second floor), and no pipe insulation – see Figures 4 and 5. Not only is the heat from the conditioned basement leaving via these crawls spaces, but also the heat radiating from the second floor office space. Special consideration to these areas will provide the most appropriate insulation strategy.

Figure 4

Figure 5

Figure 6 shows a rough space layout of the 1st floor, and one potential scenario for thermal boundary placement. The yellow line represents a potential building envelope around the conditioned spaces and mechanical rooms. The green sections represent the crawl spaces which may be best to spray foam underneath the second floor. Though a great deal of heat-loss occurs through the slab, short of rebuilding the slab, or insulating over it, not much can be done about this inefficiency. A more in depth heat-loss study will reveal the best case scenario for optimizing savings while maintaining building health.

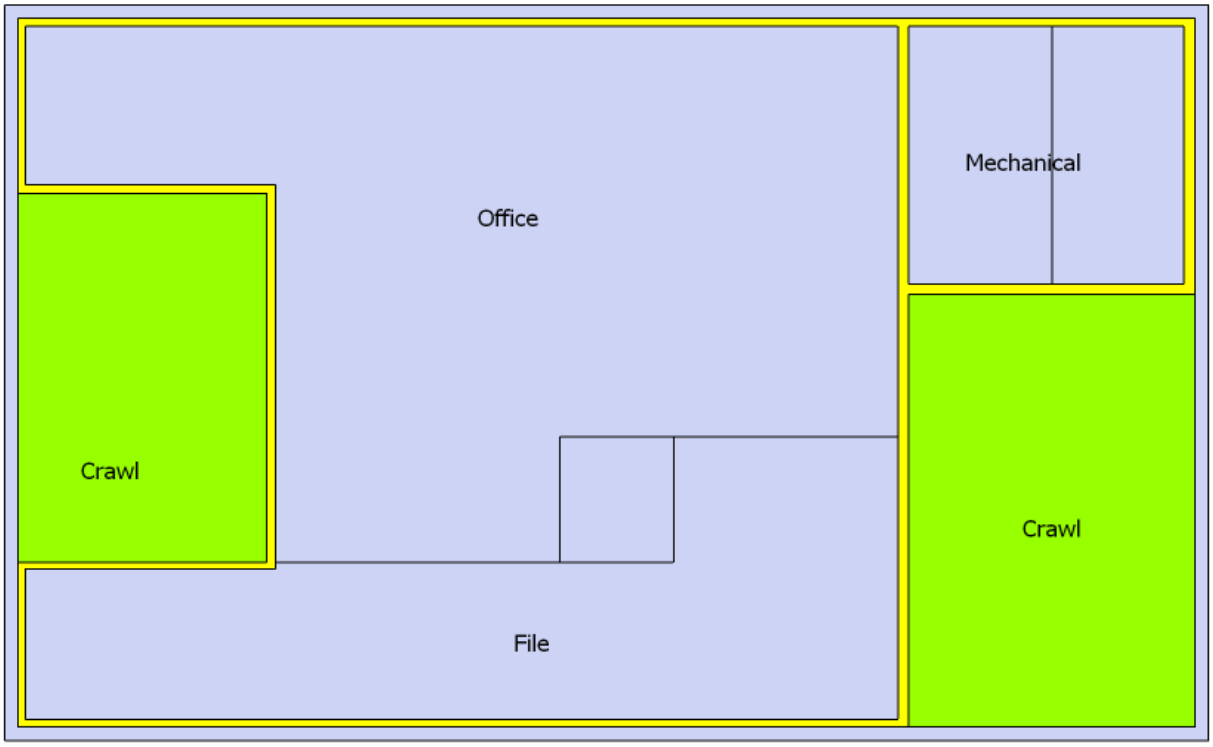

Figure 6

Ceiling Insulation:

The ceilings above the 2nd and 3rd floor are insulated. The ceiling above the 2nd floor office space is insulated with R-11 to R-13 fiberglass batts. This is quite beneficial considering that the space above is rarely used during office hours. Both heat-loss and heat-gain are reduced as result since the space above can be kept at a lower temperature in the winter and higher temperature in the summer.
The insulation above the 3rd floor is loose fill fiberglass. It ranges in

Figure 7

thickness from about 6 to 8 inches (see Figure 7). The overall weighted R-value of this ceiling is approximately R-20-25 at best. The cathedral ceiling above the stage also has loose fill fiberglass. One of the bays in this ceiling was found to have no insulation. It is difficult to know insulation thickness in this ceiling; therefore, we cannot assume the weighted R-value to be greater than 20.

We were unable to safely view the top of the third floor walls in the attic space. It is possible, given the period when this building was constructed, that the wall cavities are open to the attic. This major chase-way along-side the chimney (Figure 8) is discharging large amounts of conditioned air directly into the attic. Sealing this, and any other penetrations into the attic, would be very beneficial. A more-thorough heat-loss study, as part of an Investment Grade Audit would reveal rough energy savings which could be realized from improving the R-value in the attic space.

Figure 8

Doors and Windows:

Many of the doors in the Town Hall are very inefficient. Not only do they transmit a significant amount of heat through the core of the door, but some do not seal very well following use. Without these seals, they are directly leaking air. Installing more efficient doors is an important recommendation that must also respect the historic importance of the individual doors. At a minimum, we recommend devising non-intrusive ways to air-seal the doors.

We have similar recommendations for the windows. Although more efficient windows could be matched to look like the originals, and would improve the overall efficiency of the building, the historic impacts must be considered up front. The existing windows are double pane, and appear to be doing a fair job of air sealing. As with all older windows, it is important to make sure that they are maintained with caulking and paint to ensure that they are performing to the best of their ability. For windows that are operable, it is usually a good idea to seal with rope caulking that can be removed in the warmer months. Replacing the windows of the Town Hall would be a costly project, and would not likely have the level of efficiency gain that other projects would produce. This option should be analyzed specifically in an Investment Grade Audit.

Mechanical Systems:

The Town Hall is heated with a hydronic system with hot water supplied by two Smith boilers running at about 468,000 BTU's (input) and are noted to be at about 80% efficient. See Figure 9. This measurement appears to be unrealistic due to the age of the units. It is likely that this measurement is combustion efficiency only. These boilers appear to be 45 years old and should be replaced. No oil fired system will perform as efficiently as a system running on liquid propane gas (LP). How the current boilers function is simple; they are either on or they are off. Even adding a modulating aquastat to the existing system (outdoor reset), the efficiency of a high efficiency, condensing propone boiler far exceeds that of the current boilers.
A modulating/condensing boiler has the ability to ramp-down its output to accommodate the shoulder months when lower temperatures are needed to heat the building. With a non-modulating boiler you are unable to reduce the BTU output and therefore are operating less efficiently during those slightly warmer months.

Figure 9

We are unsure whether or not these boilers are shut down in the summer months, or if they are maintaining a core temperature. Meeting with the maintenance company would answer this question, and help find other potential inefficiencies associated with the current operation, which would be useful when examining the potential savings from installing more efficient systems.

Switching to LP gas may not reduce the cost per unit of fuel to heat the building at the current New Hampshire price for a gallon of propane. Nevertheless, the price of heating oil is predicted to increase over the next decade. Furthermore, since oil boilers are unable to modulate like a propane boiler the amount of heat needed to maintain temperature in the building is increased. The fuel cost comparison is difficult to predict, but switching to a high-efficiency propane system, would dramatically reduce the environmental impact of heating the building and allow for a more flexible integration of future heating options and technologies. By using a high-efficiency LP system, it is possible to reduce annual CO^2 emissions by as much as twenty tons or more per year, as LP gas burns cleaner than oil and has less particulate matter in the exhaust.

We would also recommend investigating the cost benefit of installing a biomass system, or even a small combined heat and power (CHP) system to run in conjunction with a main heating plant. Both of these options could be viable in the case of the Town Hall, and would not only reduce the annual heating cost, but lower the environmental impact of heating the building as well.

Building Comfort:

Figure 10

As part of our occupant interviews, we discovered that there are some comfort issues amongst employees at the Town Hall. There are very few zones in the offices on the second floor. This translates to very limited control of the distribution of heat and cool air. This is a typical situation found in many old buildings where some are warm in one section of the building and others either have electric space heaters or windows open to compensate for excess heat, as seen in Figure 10. It was about 45°F outside when this picture was taken and is completely understandable in these scenarios.
If any major work is going to be performed on the heating/cooling system, we highly recommend correcting these zone issues either before or during the process to provide a more evenly distributed temperature throughout the building and lower costs.

When making improvements to the heating/cooling and distributions systems, other efficiency improvements should be brought to the table for discussion. For example, there are fan coils in the 3rd floor which supply heat to the space. It appears as though hot water is continuously cycled to these units during the heating season. When the temperature falls below a certain point, the fans turn on blowing air across the heated pipes, distributing hot air to the space. A more efficient way of performing this task may be for these loops to have a shut off valve (associated with a thermostat on the 3rd floor) in the mechanical room. When there is a call for heat, the valve(s) would open and circulate for a short period before the fans turns on. One of the fan coil units is located in the heated entry way to the 3rd floor hall. Again, hot water is continuously supplied to the coil. The exterior door to this entry is extremely leaky, and the insulated value of this space is minimal. This unit should not have hot water running to it, nor should the fan be running unless there is an event being held in the room, and/or the door traffic is frequent.

Air Conditioning and Ventilation:

There are two air handlers in a separate mechanical room next to the boiler room. One supplies the 1st and 2nd floor, and the other appears to supply the 3rd floor. The 1st and 2nd floor air handlers appear to be a balanced system that draws a portion of fresh air directly from the outdoors before it is conditioned and sent back through the building. There is both an AC coil for the cooling months, and a hot water coil for the heating months on both air handlers.

It was unclear during our site visits how exactly fresh/AC air is being introduced to the 3rd floor. Our current suspicion is that the air is being introduced to the space through a series of empty chase ways. If in fact the system is making use of these empty chase ways for air delivery, this means the air being supplied is running through less than desirable sections of the building en route. It also appears as though the system is "supply-only." Systems that are not balanced tend to pressurize the space, pushing conditioned air out of the building envelope instead of cycling the conditioned air back through the system. This also means that the supply air comes

directly/entirely from the outdoors. The system has to work twice as hard in the hot months to cool and remove humidity from the air, and twice as hard in the cold months to heat the air. Further investigation, as well as discussions with the engineer and/or HVAC contractor who installed the system would eliminate any questions about this theory, and provide enlightening information about how the system functions as a whole. This element should be examined during an Investment Grade Audit to test potential solutions for cost-effective performance.

Energy recovery ventilation systems are the most efficient way of supplying fresh air to a building. These function by removing a percentage of the stale air from the return plenum, and then introducing charged, fresh air to the return plenum right before the air-handler. In the winter, warm/stale air being removed from the building will charge the incoming fresh air with a heat exchanger located inside the ERV. Conversely, in the summer months the exhausted cool/stale air from the interior will cool down the hot/humid air from the exterior before entering the air-handler. An ERV has a desiccant wheel as well. This allows for the transfer of moisture. In the winter months, moisture in the exhaust air will be transferred to the incoming dry air to help maintain occupancy comfort. In the summer, dry/conditioned air from the interior will remove, at least a portion of, the moisture from the humid incoming air - see Figure 11.

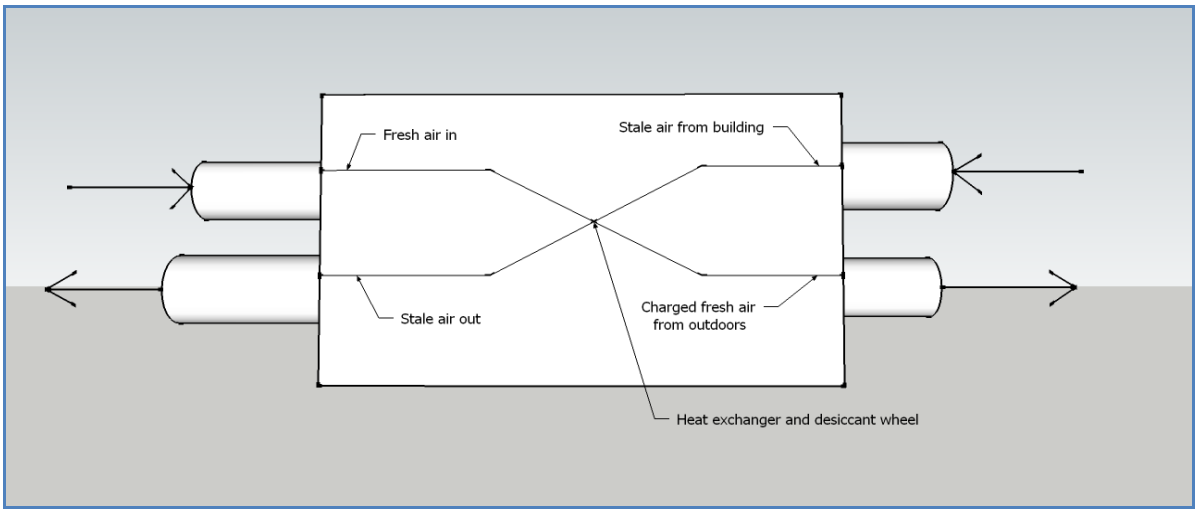

Figure 11

Envelope Efficiency:

The single largest area for improvement in building efficiency involves the building envelope. The best ways to increase an envelope's performance is to complete air-sealing and insulation work. In this building, the only area where insulation was found is in the ceiling above the main offices and the ceiling above the 3rd floor Hall. There is no insulation in the rest of the entire building. Although it would be a major undertaking to air-seal and insulate the building, the resulting benefit would be equally significant.

From a building efficiency standpoint, air-sealing and insulating can be thought of as a different species of project and investment when compared to items like heat systems, appliances, and alternative energy systems. In the case of the latter, these types of energy investments have a

shelf life. A boiler and a PV system may only last 30 years before it is time to replace them, even with careful maintenance and care. This is an important consideration when factoring in the true life cycle cost of the implemented solution.

Insulation and other building envelope projects are investments that are permanent, require little or no active maintenance, and will stand with the building during its lifetime. These investments secure baseline improvements that in turn provide a foundation for other investments. Lowering the amount of heat needed for a building is the best way to insure that a new and efficient heating plant provides the most savings.

For illustration purposes, consider the following:

- The Town Hall uses about 7244 gallons of oil per year for heat. That's about $20,000 a year at $2.75 a gallon.
- Reasonable and identifiable upgrades to the building envelope would save 30% in energy and could cost around $200,000.00 to complete.
- This amounts to $6,000.00 and 48,644 lbs of CO2.

Results:

- If the price of oil rose in a linear way from $2.75 per gallon, it would take 20 years to pay off this investment through savings.

This may seem like a long time, but the insulation will continue to save/earn money well beyond this savings period. If we considered that the building remained in use for the next fifty years, it would mean that the town will save over $500,000.00, after having paid off the $200,000 investment.

Summary of Recommendations:

1. Develop an air seal and insulation strategy for the entire building, and a plan for implementing this strategy. This should include making existing doors and windows as efficient as possible.

2. Investigate ways to improve the HVAC distribution system. Adding more zones, insulating pipes, air seal and insulate all duct work, keep all radiators clear of dust and debris, etc. Distributing heat efficiently is as important as producing heat efficiently.

3. Investigate the best options for replacing the boilers with more efficient systems.

4. Investigate the best option for introducing fresh air to the building more efficiently, perhaps with the use of energy recovery ventilators.

5. Continually monitor electric use within the building, making sure that lights and equipment are shut down when not needed. There are many electronic devices on the stage of the 3rd floor. Make sure that power is cut to these devices when they are not in use.

6. Install on-demand electric hot water heaters in the lavatories on the 3rd floor. These faucets could not be further away from the electric hot water heater, which is in the basement on the opposite side of the building. It was brought to our attention that it takes several minutes for the water to get warm at the 3rd floor faucets. Not only is this wasting energy, but water as well.

7. Consider installing systems which will generate electricity onsite. This could be a photovoltaic (PV) system, or possibly a combined heat and power (CHP) system. Investment in distributive generation can provide a long-lasting reduction in energy consumption from traditional sources, is more efficient, and will act as a stabilizing force for the Town's energy bills; especially within a highly volatile energy market that we currently find ourselves in. A potential location for a PV system would be the south facing roof of the Town Hall. Other locations around the building could be possible for a ground mount application.

Financial Considerations and Options:

A common occurrence across many communities within New Hampshire is the challenge of obtaining the necessary capital funds to carry out the recommended retrofits found within the audit. The following information is an attempt to provide some assistance with understanding some concepts and pathways to acquiring public or private funds to carry out an energy efficiency or generation project. Also, portions of the following information has been taken from the New Hampshire Handbook on Energy Efficiency and Climate Change – Volume II.

Life Cycle Costing –

The National Institute of Standards and Technology (NIST) Handbook 135, 1995 edition, defines Life Cycle Cost as "the total discounted dollar cost of owning, operating, maintaining, and disposing of a building or a building system" over a period of time. Life Cycle Cost Analysis is an economic evaluation technique that determines the total cost of owning and operating a facility over period of time.

Since municipal buildings are funded in their initial year through bonds and/or capital outlays, they generally fall victim to an inordinate focus on the bottom line cost of construction instead of the lifetime cost to operate the building. This is a critical misstep in particular with energy concerns for municipal buildings because they are placed in service for a significant period and are subject to extended energy pricing. A more efficient building could save the costs of initial investments several times over during its lifespan.

Energy Price Stability –

The second most important concern about energy costs is the volatility. Municipalities budget on a yearly cycle and must predict energy costs over the year – sometimes over pricing the cost in the case of high lock in prices or subjecting the municipality to risk where a cost (+ some percentage) contract is used for the year. When prices go up budgets go up, when the go down,

budgets tend to go down. Changes result is wide variation in predictability and thus lead to fund shortages or balances, and general frustration on all sides of the discussion.

The concept of stability in the context of energy prices is achieved through on-site distributed generation with effective predictive modeling and most importantly, efficiency. The cheapest energy available is the energy you don't need. The less you buy the less amount of appropriations are subject to the price swings.

"Green" Building Cost Myths –

A perception that all energy-efficient construction costs more than conventional construction persists. We have been unable to find valid research that supports this conclusion - especially where choices made about efficiency are evaluated in a realistic context considering the life cycle cost to operate the facility. To the contrary, we have found several sources, from government facility agencies, that show not only that in most cases costs are in fact lower but that any increased cost is almost immediately realized through lower operating expenses.

State Grant Program Under American Recovery and Reinvestment Act (ARRA)

A significant opportunity that the town should consider looking into that is coming up very shortly is opportunities to acquire funding through the New Hampshire Office of Energy and Planning (OEP) The following information can be found on the OEP's website at the following link - http://www.nh.gov/oep/recovery/news/122309.htm#sa1. The site discusses the announcement of available funding to municipalities under the Energy Efficiency and Conservation Block Grant program.

> The New Hampshire Office of Energy and Planning (OEP) announces the availability of $6.6 million through the Energy Efficiency and Conservation Block Grant (EECBG) program. This grant program will fund projects that reduce energy use and fossil fuel emissions, and improve energy efficiency. OEP is currently targeting the following timetable:
>
> - **Grant Application Released: January 8, 2010**
> - **Intent to Bid Letter Due: January 15, 2010**
> - **Applications Due: February 15, 2010**
> - **Grants Awarded: March 10, 2010**
>
> In conjunction with the January 8, 2010 release of the EECBG Subgrant Application, OEP will also release a program guidance document and guidelines for the format of the "Intent to Bid" submission. EECBG will entail a competitive application process and funds will be awarded based on the value of the project and the benefit to the public. Selection criteria include, but are not limited to, projected energy savings, greenhouse gas emission reductions, and the ability to implement projects expeditiously. Eligible applicants are local governments and local government partnerships.

> Eligible uses of this funding include projects such as: energy efficiency retrofits; energy audits; transportation efficiency measures; solid waste/wastewater treatment; energy distribution technologies; financial incentive programs; and renewable energy technologies for local government buildings. Each community will be eligible to receive funding up to 100% of the project cost with a limit of $400,000 per applicant.
>
> For more information please contact Dari Sassan, (603) 271-1765, or visit the EECBG Web site.

Additionally, a terrific resource to understand what type of incentives are available for both energy efficiency and generation is the "Database of State Incentives for Renewables & Efficiency", or DSIRE. This site, funded by the US Department of Energy, provides a list of the potential financial incentives found within New Hampshire and the Federal Government. To see what is available within New Hampshire go to www.dsireusa.org and click on New Hampshire.

Utility Programs:

Many utilities provide rebates for various types of efficiency measures that can be carried out at a municipal facility. PSNH offers the Municipal Smart Start Program. This program offers the opportunity for municipalities to go forward with the installation of approved measures at no up front cost to the municipality. A town simply pays for the energy improvements with the savings from reduced energy usage until the project is paid off.

For more information please contact Sue Blothenburg, (603) 357-7309 ext. 5115, or visit http://www.psnh.com/Business/Efficiency/Paysave.asp

Third-Party Financing Options

The most important part to understanding the potential in third-party is the ability to address up front capital costs and access tax benefits. Additional benefits are potential operations and maintenance savings where the implementation is owned by a third-party. In the three-party model, new businesses create an income stream and take over the insurance, performance assurance, and maintenance of the renewable energy system. New jobs and local investment follow. The business secures stable and long-term funding enabling expansion to other facilities for similar projects.

There are several benefits that appear for the municipality that is considering a third-party financing strategy.

Ability to Monetize Federal Tax Incentives. Federal tax incentives for some projects can equal 30% of the installed capital cost. Under the current law, this 30% is payable in the form of a grant from the Department of Treasury. In addition, businesses can accelerate the depreciation of the cost of a some systems and installations using a five-year schedule. Together, these two incentives can have a tremendous impact on both the cost of and the financial returns on a project. Local governments, however, cannot directly benefit from these incentives. The third-

party ownership model introduces a taxable entity into the structure that can benefit from the federal tax incentives, lowering the overall cost to the non-taxable entity.

*Low/No Up-front Cost*s. Even with programs to provide support to municipalities, such as rebates and grants, the need to reduce this amount, the up-front cost is significant. Given the current economy and budget constraints, a large initial investment is difficult to achieve regardless of the return on the investment. A third-party structure places the responsibility of the increased initial cost on to the investor/developer of the project.

Predetermined Energy Pricing. In a project that involves efficiency or distributed generation, the portion of conservation or generation that is met by the project can be considered "fixed" at a particular price in the terms of the contract. This can be in the form of a fixed-priced power purchase agreement (with a predetermined escalation rate).
This predictability offers stable pricing for the portion of the entity's load served by the project. In most cases, the price of electricity in power purchase agreement is usually set at or below the customer's current retail rate for the first year, and then escalates annually for term of the contract (in a solar PPA, these terms are usually 20 – 25 years). For solar projects, an annual price escalator of 3-3.5% is common.

Operations and Maintenance. Another attractive feature of the third-party ownership structure is the fact that new equipment can result in lower operation and maintenance expenses and in the case of some systems, the entire cost and responsibility can shift to the project developer.

Eventual Ownership. As a final issue, third-party structures can be pre-crafted to permit and even encourage local government buyout provisions. This allows the municipality to consider advanced purchase options if circumstances change in a way that makes this pathway more beneficial. If for instance a grant program becomes available, such funds can be used to accelerate the ownership path and provide for a more immediate "vesting" of full savings opportunities.

Otherwise, these arrangements usually provide for a number of options at the end of the term, the three likely scenarios for the host would be to: 1) extend the arrangement, 2) purchase the facility, or 3) ask that the improvements be removed.

Conclusion:

As a result of this audit the Town has several options available to increase the efficiency of the Town Hall. We highly encourage the that the Town pursue these recommendations described in this report and to utilize the further assistance provided under this program to identify contractors who will provide the services needed to carry out the recommendations. SDES Group will provide the Town an additional twenty-five hours of Community Energy Advocate service to assist with any needed service under this audit to continue to bring the recommendations outlined in the report to fruition. A further explanation of these additional services will be provided during the audit presentation.