



Energy Action Plan

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This report describes the possible energy improvements that were identified during our recent site visit at your facility and it provides further information on how these measures can help to lower your energy bills, conserve valuable resources, and protect our environment.

The National Grid's Efficiency Experts™ program provides cash incentives for implementing many of the energy conservation measures identified in this report. In general, incentives are designed to help cover the incremental cost of implementing recommended energy conservation measures. Incentives are capped at 50% of the installed cost of each eligible measure and up to a maximum of \$100,000 per site and/or per project. Specific incentives associated with each measure are identified in the report.

The incentive offers in this report are valid for 90 days from the date listed above. If the installation will not be completed within 90 days, you must notify us in advance and provide your estimated project schedule. Completed application forms and proper invoicing must be submitted in order to receive payment. Other limits may apply, and Keyspan reserves the right to alter, close, or terminate the program at any time.

Recommendations made in this report are based on average conditions. The customer should obtain a proposal and firm price from a qualified contractor for recommended measures before making final decisions about a course of action. Utility provided incentives indicated in this report are valid for the equipment and/or measures recommended. Any change in the measure, equipment size or efficiency may change or eliminate the amount of the incentive. It is recommended that you contact the energy auditor who prepared your report to answer any of your questions.

You may arrange the installation of these improvements with a contractor of your own choice. For your convenience, we have attached the application forms that must be submitted for payment once the work has been completed.

If you have any questions or concerns, please contact the Efficiency Experts™ Program toll-free at 1-800-843-3636 or via email at save@keyspanbusiness.com. We look forward to hearing from you.

Auditor Comments

Your energy specialist has noted energy saving practices you can undertake at little or no cost.

- The potential energy improvements that warrant exploration can be summarized into the following key areas.

Shell or Building Envelope:

Although not incentivized under the National Grid gas efficiency program, I would suggest that the air sealing of the envelope is the most important improvement that could be made.

Specific areas include:

- " All exterior and stair well doors
- " Intersection of the church walls and its roof
- " All Access hatches to the roof and steeple
- " All skylights
- " Exhaust fan in the theater
- " Theater ceiling penetrations and clearstory windows
- " Repair of missing or removed interior storm windows

Insulation and air sealing priority should be given to the two roofs. The insulation incentive details are listed in

the body of this report.

Consider Kalwall as a replacement for the existing skylights and clearstory windows in the theater. This product allows day-lighting without the thermal losses of gazing.

Controls:

I recommend the replacement of the manual thermostats with setback models. (see incentive)

I would also recommend setback thermostat control on the fan coils through out the two buildings.

Equipment:

The three relatively new 1 million BTU, 85% efficient, boilers and zoned distribution system appear to function quite well but short cycling when empty. During my 20 minute visit in the boiler room, number 1 boiler cycled three times with duration of less than 5 minutes. We later found three fan coils operating in the theater which may explain the short cycling.

Investigate summer gas consumption, roughly 5% of the annual usage.

De-stratification fans in the church and theater can bring heat trapped at the ceiling to the floor.

- Gaps in attic insulation, walls, and around windows and doors, allow uncontrolled air movement through the building envelope, which is called air infiltration. Excessive air infiltration can increase the heating and cooling costs for the building and also impact occupant comfort. Sealing these air leakage paths is simple and inexpensive, with a typical payback of less than one year. Use silicone caulk to seal small leaks, such as those around fixed windows. Larger openings may require a foam sealant or weatherstripping.
- Energy Star[®] qualified appliances incorporate advanced technologies that use 10-50% less energy and water than standard models. Appliances that use less water, such as dishwashers, can lower both your electrical and water heating costs. Look for energy-efficient refrigerators, dishwashers, room air conditioners dehumidifiers, and clothes washers that have earned the Energy Star[®].
- According to the Energy Star[®] Program, office equipment constitutes the fastest growing portion of electrical loads in the business world. Typically, this equipment is not turned off at night or over the weekend. This constantly running equipment not only consumes energy, it also produces heat. That added heat results in higher cooling costs.

When it comes time to replace office equipment, look for the Energy Star[®] Label. The cost of this equipment is comparable to non-labeled equipment. However, products that meet the Energy Star[®] specifications use about half the electricity of conventional equipment by powering down and entering "sleep" mode or off mode when not in use. A wide range of products are available, including: copiers, printers, fax machines, scanners, monitors, etc.

- Switch from incandescent light bulbs to efficient compact fluorescent bulbs. Compact fluorescent bulbs come on instantly, use one third the electricity of incandescent bulbs, and can last 10 times longer than a standard incandescent bulb. Features such as three-way switching and dimming are also available.
- Clean and/or replace the air filters in your HVAC system regularly - at least once or twice per season depending on building operating conditions.

Improving the Building Envelope

ATTIC INSULATION

Your facility could reduce its energy usage with the installation of insulation in the areas noted during the walk-through analysis. KeySpan will help you offset the cost of this insulation by offering a prescriptive incentive of up to 20% for professionally installed wall, roof / attic, and floor

insulation up to a maximum incentive of \$10,000. If the anticipated installed cost of this insulation will exceed \$50,000, consult your Energy Engineer for assistance.

Improving Mechanical Systems

PROGRAMMABLE THERMOSTAT

Install 5 digital programmable thermostat(s) to automatically and efficiently control the area's heating and air conditioning system. EnergyStar labeled programmable thermostats typically are pre-programmed (but are adjustable to suit your business' needs) to maintain heating season temperatures between 65°F and 70°F . Moreover, they have a minimum of two (2) periods per day and allow different temperatures for weekdays and weekends.

Installed cost: \$675.00 National Grid incentive \$125.00 Net cost: \$550.00

You can save: \$344 per year Payback: 2.0 yrs.

Your Next Step

This report identifies ways that you can save energy, reduce bills, and increase comfort. The enclosed rebate applications provide further information on the available incentives and the application requirements. Now that you have identified opportunities for improvement, please take advantage of the incentives to start saving energy and becoming more comfortable, while helping to protect our environment.

If you have any questions about the incentives outlined in this report or the application process, please contact the National Grid Efficiency Experts program at 1-800-843-3636.

The following usage history and calculated apportionment was used to make this reports recommendations

	# Units: 1	# floor(s): 1	total sq ft: 37500	sqft/flr: 37500									
Total Usage (Therms/yr):	17191												
Heating Usage (Therms/yr):	16647	16,647 T/flr	16,647 T/unit	0.44 T/sqft									
DHW or other (Therms/yr):	544		544 T/unit										
				97% of total									
				3% of total									
Year	Jan	Feb	Mar	April	May	June	Jul	Aug	Sep	Oct	Nov	Dec	
2005	2931	2844	2715	2631	133	85			4	33	786	1934	14253
2006	2182	4458	3875	2489	1324	340	116	41	86	222	784	1852	17769
2007	4035	4241	3029	2732	1180	463	26	3	0	0	814	2509	20092
2008	2152	3338									819	2907	16649

Total usage is the sum of 1 years monthly totals starting from first month listed.
 DHW or other totals, are based on an average of July and August usage X 12 months.