



## Energy Efficiency Projects Guide

For Facilities & Maintenance Staff

**nationalgrid**

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## Money-Saving Projects for Municipal Buildings

In addition to implementing See The Light's behavior-based Energy Tips, you can also Save Energy Everyday with O&M, procurement, and other efficiency upgrades.

Save Energy Every Day considers your entire building, from the basement to the roof and every area in between. We cover Lighting, HVAC, Water, Kitchen, and Office Equipment. The projects for each of these areas are then divided into four investment levels:

- **No-Cost** changes are immediate, free actions you can take to cut waste.
- **Low-Cost** improvements may be either new purchases or simple maintenance, some of which can be done entirely in-house.
- **Capital Investments** represent more thorough, long-range changes that require an up-front investment but result in the most pronounced savings over time.
- **Design Prototype** considerations are overarching changes that can be implemented in the design phase of new locations or renovations.

We provide approximate costs for low-cost efficiency projects but not for Capital Investments or Design Prototype considerations, since many of these improvements depend on the size of your buildings, your specification standards, and the availability of utility rebates.

For information on  
capital investment and  
design prototype  
opportunities contact  
National Grid  
800 787 1706



## I. HEATING & COOLING PROJECTS

Location	Opportunity	Solution	Responsible Party	Approx. Cost
<b>No-Cost Opportunities</b>				
Throughout (thermostat)	A/C is set at < 72°F during operating hours, or < 78°F when unoccupied. Energy use increases by 1.5%–3% for every degree you lower your cooling or raise your heating thermostat set point.	Maintain A/C set points at: <ul style="list-style-type: none"> <li>No less than 72°F during operating hours</li> <li>No less than 78°F when unoccupied</li> </ul>	Facilities Manager, Maintenance	None
Throughout (thermostat)	Heating is set > 70°F during operating hours or > 64°F when unoccupied.	Maintain heating set points at <ul style="list-style-type: none"> <li>No more than 70°F during operating hours</li> <li>No more than 64°F during closed and cleaning hours</li> </ul>	Facilities Manager, Maintenance	None
Maintenance Areas	Heating in storage/shipping areas is set > 65°F when occupied, or > 55°F when unoccupied.	Maintain heating set points at: <ul style="list-style-type: none"> <li>No more than 65°F in storage/shipping- receiving, and indoor vehicle parking areas</li> <li>55°F when unoccupied</li> </ul>	Maintenance	None
External (roof)	Pollen, leaves, dust/dirt, or other organic material block air-cooled condenser coils, cutting airflow efficiency.	Check all air-cooled condensers for blockage on the heat transfer surfaces. Power-spray and vacuum clean when required.	Facilities Manager, Maintenance	None
External (roof)	Dirty coils and filters on HVAC units can increase consumption by 7%, adding up to \$120/year in costs.	Inspect, clean, and maintain condenser coils on schedule.	Facilities Manager, Maintenance	None
External (roof)	Air leakage around windows, doors, pipe and wire penetrations, or in HVAC unit ductwork adds to heating and cooling costs. Even a minor leak can cost \$100/year in wasted energy.	Stay vigilant about checking around your building for air leaks. Contact National Grid for potential air sealing incentives for doors, windows, pipe/wire penetrations, or for leaks in HVAC unit ductwork.	Facilities Manager, Maintenance	None
Throughout	Building is constantly over-heated, forcing occupants to open windows or use fans to keep cool.	Repair/recalibrate malfunctioning controls equipment or rebalance HVAC distribution ductwork.	Facilities Manager, Maintenance	None
<b>Low-Cost Opportunities</b>				
Throughout	HVAC filters are clogged, dirty, or missing, draining energy and reducing air quality.	Install new HVAC unit filters approximately every 3 months to boost performance and reduce energy use. Inspect monthly.	Maintenance	\$150 per unit


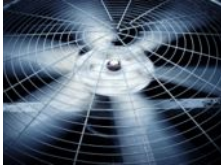


Heating & Cooling, continued

Location	Opportunity	Solution	Responsible Party	Approx. Cost
<b>Low-Cost Opportunities</b>				
Throughout	Thermostats or temperature sensors are improperly placed too close to heat-producing equipment (e.g. coffee pots, ice makers), exterior doors, or HVAC supply registers.	Reposition thermostats to properly sample air temperatures, maintain comfort conditions, and keep energy costs low.	Inside or Outside HVAC Technician	\$100–\$200 per temperature sensor or thermostat
Maintenance Areas	Compressed air systems hoses for air tools, tire inflation and even HVAC controls often leak, leading to higher operational costs and excessive compressor/air-dryer operation	Check all hoses, fittings, and junctions for leaks. Check pneumatic thermostats, control line hoses and junctions too. A 1/32-inch leak can cost you \$144 per year, per leak.	Facilities Manager, Maintenance	\$100 per leak
Throughout	Thermostat settings are often adjusted by staff and employees, negatively affecting HVAC costs. Thermostats are subject to tampering and are in a state of disrepair.	Install password-protected, programmable 7-day, lockable thermostats. <ul style="list-style-type: none"> <li>• Setting back/up temperatures nights, weekends, and holidays can save several hundred dollars per year.</li> <li>• Consider units with additional “slave” sensors for better temperature control in comfort-imbalanced areas</li> </ul>	Inside or Outside HVAC Technician	\$300- \$450 per thermostat
External/Mechanical Rooms	The rooftop HVAC unit economizer cycle is not drawing outside air adequately, measuring humidity accurately, or is not working at all.	<ul style="list-style-type: none"> <li>• Check the calibration of your building’s economizer cycle to use outside air for free cooling whenever possible.</li> <li>• Check the outside air dampers, actuators, and linkages.</li> <li>• Check the controls system to evaluate/correct the schedule/program for system sequence of operation.</li> </ul>	Inside or Outside HVAC Technician, Controls Technician	\$1,000–\$3,000 per unit
External/Mechanical Rooms	Loose or worn belts within air-handler systems are dragging down performance or motor drive components.	<ul style="list-style-type: none"> <li>• Consider installing properly tensioned V-Groove Belts within air-handler systems.</li> <li>• Make sure you are using high-efficiency motors.</li> <li>• Evaluate pulley and shiv sizing to ensure highest efficiency drive system components.</li> </ul>	Inside or Outside HVAC Technician	\$300–\$500 per unit
Mechanical Rooms	Boilers and chillers are short-cycling, causing inefficient operations and adding wear and tear to equipment.	<ul style="list-style-type: none"> <li>• Check all control set points temperature for sufficient dead band.</li> </ul>	Inside or Outside HVAC Technician	@\$2,500




Heating & Cooling, continued

Location	Opportunity	Solution	Responsible Party
<b>Capital Investment Strategies</b>			
Throughout (heating season)	High-ceiling rooms (maintenance areas, shipping/receiving, gyms, garages) often require more energy to meet space comfort conditions due to size and heat stratification.	For any areas of your operation with ceilings over 15ft., consider installing destratification fans—which push hot air back to occupant level—to reduce heating costs and HVAC system operation.	Facilities Manager, Outside Installer
Throughout (windows)	Significant heat gain and loss is a byproduct of solar factors and poor insulation at windows.	Install window blinds, solar screens, and thermal window films to reduce solar heat gain in the summer and to help contain heat loss in the winter, reducing the strain on HVAC equipment.  Window film incentives may be provided by utilities through the custom measures portion of the program. Please consult a program representative for more details.	National Grid, Outside Installer
Throughout 	Thermostat settings are often adjusted by staff and employees, negatively affecting HVAC costs. Thermostats are subject to tampering and are in a state of disrepair.	Install password-protected, programmable, lockable thermostats or a small energy management system. Setting back/up temperatures at night and on weekends and holidays can save several hundred dollars per year.	Manager/Facilities Manager, Maintenance
Throughout	HVAC equipment runs constantly during the workday, providing maximum quantities of conditioned air regardless of actual building occupancy. Over-ventilating wastes a significant amount of energy, especially in large spaces like conference rooms, classrooms, auditoriums and gymnasiums.	Ask about custom incentives for installing Demand Ventilation Controls on air handler units. These controls sense occupancy through CO <sub>2</sub> sensors and change outdoor air intake accordingly. You can reduce your system's energy usage by 15–30%.	Facilities Manager 





**II. LIGHTING & PLUG LOAD PROJECTS**

Location	Opportunity	Solution	Responsible Party	Approx. Cost
<b>No-Cost Opportunities</b>				
Throughout	Lighting is fully on at all times, even during hours when the buildings are closed.	Implement a lighting operation schedule for all buildings. Use half lighting or less during weekends and closed hours.	Manager/ Facilities Manager, Maintenance	None
External	Outdoor parking and safety lighting is operating outside scheduled times.	Inspect time clock and photocell lighting controllers to ensure that they are set properly and battery backup is fully charged and operating correctly.	Maintenance	None
<b>Low-Cost Opportunities</b>				
Refrigerated Boxes	Inefficient lighting wastes energy and produces excessive heat, further taxing refrigeration equipment.	Replace incandescent lights and high-output fluorescent lights with LEDs or induction lighting. LEDs & induction systems last up to 50,000 hours and have reduced heat loads, cutting refrigeration energy use.	Manager/ Facilities Manager, Maintenance	\$500 - \$750 per cooler
Offices/Classrooms	Office equipment plugged into various outlets remains left on overnight or when not in use.	Install “smart” power strips with occupancy sensors in offices and backrooms to automatically shut off all equipment connected to the strip after a pre-selected duration of inactivity.	Manager/ Facilities Manager, Maintenance	\$200–\$300 per device
Offices/Classrooms	Lighting is often left on in unoccupied classrooms, refrigerated boxes, and offices, especially when switches are not easily accessible or visible.	Install occupancy sensors in offices, supply/storage rooms, and refrigerated boxes to prevent wasteful energy usage. Install switches and motion sensors to control less frequently used areas.	Manager/ Facilities Manager, Maintenance 	\$125–\$300 per room
Throughout	Vending machines continue to run (lighting and refrigeration components) and draw energy when not vending product.	Install a program such as Vend Miser, which uses occupancy sensors to power down the machines when demand is low.	Manager, Maintenance, Vending Machine Suppliers	\$250–\$500 per machine





Lighting & Plug Load, continued

Location	Opportunity	Solution	Responsible Party
<b>Capital Investment Strategies</b>			
Throughout	Your municipal building burns halogen or even incandescent lights for upwards of 12 hours per day.	By replacing older bulbs with more energy efficient sources (LEDs and CFLs), you'll realize a quick, simple payback. 	Manager/ Facilities Manager, Maintenance
Throughout	Your facilities' fluorescent lighting fixtures use pre-1990's technology. They may even be dim, flickering, or burned out. Even burned-out T12 fluorescent fixtures use energy (ballasts).	Replace T-12 and first generation T-8 fluorescents with newer, high-efficiency T-8, T-5, or LED models to improve energy consumption at your facility. 	Facilities Manager
Throughout (gyms, auditoriums, public works facilities)	Lighting in areas with high ceilings is dated and inefficient. You may be using inefficient mercury vapor, early generation metal halide fixtures or even high output T12 fluorescent fixtures	In rooms with ceilings higher than 15 feet, replace high-intensity discharge lamps with high-efficiency fluorescent or LED high bay fixtures.	Manager, Maintenance, Outside Installer
Offices/Classrooms	Your computer systems still use older Cathode Ray Tube (CRT) technology in their monitors.	Upgrade workstations and computer labs to newer flat screen models, which use approximately 50% less energy than CRTs.	Manager, Maintenance
Throughout	Laser printers, vending machines, and copiers are left on and idling during unoccupied periods, wasting energy.	Install occupancy-time-based plug-load power strips.	Manager, Maintenance, Outside Installer
<b>Design Prototype Considerations</b>			
Throughout	Consult National Grid regarding new and retrofit incentives for lighting control systems and daylight harvesting equipment.		Facilities Manager, National Grid
External	Where possible, replace or retrofit outdoor signs with new LED signs and save up to 80% in electricity costs and lower maintenance costs. Ask National Grid about incentive details.		Facilities Manager, National Grid
Throughout	For new locations or renovations, source high-efficiency lighting fixtures to lower electricity use and provide the appropriate amount of light.		Facilities Manager, Outside Installer





**III. WATER & SEWER PROJECTS**

Location	Opportunity	Solution	Responsible Party	Approx. Cost
<b>No-Cost Opportunities</b>				
External	Outdoor irrigation systems fall out of calibration, adding cost and wasting water.	Make sure that rain sensors and timers are properly calibrated. Report any systems operating when not required.	Maintenance, Employees	None
External	Your watering is done mid-afternoon, when water evaporates more quickly and when demand is higher.	Irrigate during off-peak times, before 7 AM or after sunset, to minimize evaporation and improve absorption.	Manager, Maintenance	None
External	Irrigation heads are leaking, broken, or missing.	Find and repair any damaged sprinkler heads.	Manager, Maintenance	None
<b>Low-Cost Opportunities</b>				
Cafeteria/Washroom	Dishwashers constantly waste heat when steam escapes to your air-conditioned kitchen. Your kitchen HVAC equipment has to run harder to compensate.	Add and/or maintain wash strip curtains, which improve efficiency by trapping heat and steam inside the dishwasher instead of adding heat and humidity to your kitchens.	Manager/ Facilities Manager, Maintenance	\$350–\$600
Cafeteria/Washroom	Rinse sinks and dishwasher pre-spray valves are major consumers of water in your establishment.	Install low-flow rinse sink & dishwasher spray valves (<1.6 gallons/minute) to save you time and <b>more than \$1,000 every year</b> . You'll reduce water consumption, wastewater disposal, and energy costs. 	Manager/ Facilities Manager, Maintenance	\$75 each, with rebate
Restrooms, Cafeteria, Lounges	Hand wash sinks without aerators waste water through their high flow rate.	Install low-flow aerators at hand sink faucets and in-line flow restrictors at pot sinks (below the sinks) to slash water and heating costs. 	Manager/ Facilities Manager, Maintenance	\$10–\$300 per sink
Cafeteria	Dipper wells use water constantly to rinse utensils.	Install low-flow dipper wells to alleviate the cost associated with constant water usage. Shut down when not in use.	Manager/ Facilities Manager, Maintenance	\$300–\$750
Restrooms	Older water closet and urinal flushometers use excess water when manually operated, and allow more than 1.6 gallons per flush.	Install motion-activated low-flow flushometers to cut excessive water use and cut costs.	Manager, Facilities Manager, Outside Installer or In-House Plumber	\$500–\$700 per fixture



Water & Sewer, continued

Location	Opportunity	Solution	Responsible Party	Approx. Cost
<b>Low-Cost Opportunities</b>				
Restrooms	Water is left running by end-users, wasting water and energy (hot water).	Install motion-activated hand wash faucets.	Facilities Manager, Maintenance, Outside Plumbing Vendor	\$600–\$700 per sink
Locker Rooms	<ul style="list-style-type: none"> <li>Older showerheads waste water.</li> <li>Employees take extended showers.</li> </ul>	<ul style="list-style-type: none"> <li>Install new highly aerated showerheads to reduce flow by 1/3 to 1/2 of original.</li> <li>Use a timer like Shower Coach to remind staff of appropriate length of shower.</li> </ul>	Manager, Facilities Manager, Maintenance, Outside Installer or In-House Plumber	\$30 per shower (aerated head and Shower Coach)
<b>Capital Investment Strategies</b>				
Throughout	Much of the energy that goes into heating your domestic hot water during unoccupied periods can be lost to the environment while in the storage tank and water lines.	You can significantly reduce hot water expenses by adding insulation to the domestic hot water lines and storage tank system.	Facilities Manager, Maintenance, Outside Installer	
Throughout	Continuous domestic hot water circulation during closed hours can cost your building an immense sum of energy and money.	<p>If your domestic hot water system has a recirculation pump, you can install a simple digital timer with battery backup that turns off when the building is closed.</p> <p>You'll save hundreds of dollars by reducing heat loss from the hot water pipes.</p>	Facilities Manager, Maintenance	
Throughout	Fluctuating demand on your domestic hot water system over the course of the day diminishes system efficiency, wasting energy and adding cost.	Install an adaptive learning controller to optimize your domestic hot water heater and pump operation.	Facilities Manager, Outside Installer	
<b>Design Prototype Considerations</b>				
External	Consider xeriscaping. This landscaping technique utilizes exclusively native plants that are pre-conditioned to the regional climate and require no additional irrigation.		Facilities Manager, Landscape Contractor, Maintenance	
Restroom	Restroom toilets use thousands of gallons of water per year.	If planning a significant renovation, consider upgrading toilets to low-flow or dual-flush models, which make a good impression while cutting costs and water usage.	Facilities Manager, Outside Installer	



**IV. CAFETERIA EQUIPMENT PROJECTS**

Location	Opportunity	Solution	Responsible Party	Approx. Cost
<b>No-Cost Opportunities</b>				
Cafeteria	Oven temperatures are out of calibration. They can vary by as much as +/-25%, resulting in higher food cost (over-cooked/burned food) and wasted energy consumption.	Check oven calibration frequently with the oven/grill thermometer that comes with the See The Light Toolkit.	Manager, In-House Service Technician, Employees/Cafeteria Contractors	None
Cafeteria	Refrigerated workstations and ice chests are positioned near heat-producing appliances (ovens, fryers, cooktops), forcing them to work harder to maintain temperatures.	Reposition refrigerated workstations for maximum air circulation (especially ice machines, which require a minimum of 12" of isolation/ventilation on all sides).	Manager, Maintenance	None
Cafeteria, Maintenance Areas	Dust clings to condenser coils and compressor heads. 1/32 of an inch of dust drags down efficiency by as much as 7%.	Clean condenser and evaporator coils and compressor components monthly.	Manager, Maintenance	None
Cafeteria/Dishwasher	The booster heater for the dishwasher increases the hot water temperature in your wash/rinse cycle to sanitize each load. When dishwasher is not in use evenings, weekends, and holidays, the booster heater is often left on wasting hundreds of dollars in electricity cost.	Shut off the booster heater during unoccupied periods (just remember to turn it on every morning before running the dishwasher).	Manager, Employees	None
<b>Low-Cost Opportunities</b>				
Cafeteria 	Old refrigerated box door hardware, seals, and gaskets are cracked or loose, allowing refrigerated air to escape, wasting energy.	Replace all old or worn gaskets; tighten and adjust all door hardware (hinges and latches) for a tight seal.	Manager, Maintenance	\$150-\$500 per door
Cafeteria	Refrigerated box doors are habitually left open and ajar. Keeping refrigerated boxes closed keeps product fresh and reduces food/energy waste	<ul style="list-style-type: none"> <li>• Install strobe door alarms, which activate when doors are open for extended periods or when temperatures rise.</li> </ul> or <ul style="list-style-type: none"> <li>• Install reliable self-closing/sealing hardware (hinges and closers).</li> </ul>	Manager/ Facilities Manager, Maintenance	\$700-\$1,500 per door



**Cafeteria Equipment, continued**

Location	Opportunity	Solution	Responsible Party	Approx. Cost
<b>Low-Cost Opportunities</b>				
Cafeteria	Refrigerated boxes are subject to excessive outside air infiltration.	Install strip curtains in refrigerated boxes to cut energy losses.	Manager/ Facilities Manager, Maintenance	\$500–\$750 per door
Cafeteria	Refrigerated equipment is running low on refrigerant, putting an extra strain on the compressor, driving up energy costs, and adding to the probability of catastrophic compressor failure and loss of product.	Recharge low refrigerant.	Manager, Outside A/C Technician	\$350–\$500 per system

Location	Opportunity	Solution	Responsible Party
<b>Capital Investment Strategies</b>			
Cafeteria	Analog defrost cycle controls in refrigerated boxes can waste energy by running too often and beyond actual requirements.	Install automatic digital defrost cycle controls and high-efficiency (ECM) condenser-evaporator motors. Check with National Grid for incentives.	Facilities Manager, Outside Installer, National Grid
Cafeteria	Refrigerated box door anti-sweat heaters often run continuously, regardless of actual humidity conditions, driving up electricity costs.	Ask National Grid about incentive details for automatic anti-sweat door heater controls.	Facilities Manager, Maintenance, Outside Installer
Cafeteria	Manually controlled ventilation exhaust hoods often run at full speed when unnecessary and even during unoccupied hours.	Smart vent hood systems provide variable-speed control to dramatically reduce energy costs. Photoelectric smoke and heat detectors determine when and how much ventilation is required and activate the exhaust fan at the proper speed. Internal digital clocks start/stop hoods on schedule to limit wasteful operation hours.	Facilities Manager, Outside Installer, National Grid
Cafeteria	Older deep fryers can be one of a kitchen's biggest users of natural gas.	High-efficiency fryers can save up to 30% on natural gas consumption. Check with National Grid for possible rebates on this and other high-efficiency cooking equipment.	Manager, Facilities Manager, Outside Installer, National Grid
Cafeteria	More than 5% of the propane/natural gas used in equipment is due to standing pilot operation.	Evaluate using spark ignition in place of standing pilot lights in natural gas/propane-fired equipment.	Manager, Facilities Manager, Outside Installer



## VI. GETTING MORE FOR YOUR ENERGY DOLLARS

National Grid and other energy service providers offer a wide range of free and low-cost energy efficiency programs and products. In states with deregulated energy markets, you may be able to purchase electricity or natural gas at lower prices.

Getting more for your energy dollars takes a little bit of time and some education about what opportunities to ask for and how to ask for them.

Before you make the call or write the email, follow these few steps:

- Research tax credits and rebate opportunities online at two comprehensive sites:
  - [energy.gov/savings](http://energy.gov/savings)
  - [www.dsireusa.org](http://www.dsireusa.org)
- Research available rebates from National Grid and other utility providers on their respective web sites
- Read the suggested scripts on the following pages so you know what kinds of offers to ask for, and what language to use to ask for them



## Script: Energy Procurement Opportunities

**Objective** To see if you can buy energy at a lower price than your current arrangement

- Get the Data** Collect all pertinent information
- Determine that your state has deregulated the purchase of electricity and/or natural gas
  - Create a 12-month spreadsheet with each month's energy usage:
    - kw (demand)
    - kWh (usage)
    - Therms or CCF
  - Have the most recent utility invoice(s) available for reference or submission with the account numbers and meter numbers clearly visible
  - Write down the price you are currently paying per kWh for generation or supply and the same for natural gas

**Identify Contacts** Go to the National Grid web site (for Massachusetts the URL is [www.nationalgridus.com/masselectric/energy\\_supplier/index.asp](http://www.nationalgridus.com/masselectric/energy_supplier/index.asp)) and look under the "Energy Choice" section to find viable energy suppliers and brokers.

Call 3-4 of the listed suppliers or brokers to see if they are interested in supplying you with a price for electricity or natural gas. Ideally, find someone who supplies both electricity and natural gas.

**What to Say** I am with [municipality name] and we have [#] of buildings in [state]. We are interested in buying [electricity, natural gas] at a price that beats the current utility supplier pricing. I am also interested in locking in so I have price stability. I am currently a customer of the local utility company. What simple, fixed-price solutions with 100% full requirements (no minimums, no maximums; whatever I use I pay) can you offer me? I have all my information together; who should I send it to?

[If the Broker or Supplier says you DO have options for lower priced energy, ask the following questions]

- How do you bill for your services?
  - Say you want pricing quoted with all fees inclusive in the price per kWh, therm, or CCF
- What are the minimum and contract periods?
- Will you provide us with a monthly savings analysis?
- Have you handled energy procurement for other municipalities of our like size and consumption profile?

[If you are satisfied with the answers to your questions, ask for references and proceed as you would with any new vendor]



## Script: Efficiency Audits > Rebates

<b>Objective</b>	To see if your building(s) qualifies for a free or nominally-priced energy audit and would benefit from one or more of the efficiency projects the audit might identify
<b>Who to Contact</b>	Your National Grid representative
<b>Get the Facts</b>	<ul style="list-style-type: none"> <li>• Visit National Grid’s web site for details about municipal energy efficiency programs</li> <li>• Make a list of potential efficiency projects (e.g. refrigeration upgrades, controls) you want to take advantage of</li> </ul>
<b>What to Say</b>	<p>I am with [municipality name] and we have [#] of buildings in [state]. We are interested in having [utility name] conduct a free energy assessment at our facility(s). I read the program descriptions on your web site, and I think we meet the criteria for this assessment, including [details, per web site]. Furthermore, I know we would benefit from energy saving measures, including [your project list]. Please tell me more about the audit process and how it would benefit our [city/town].</p>

[If you are satisfied with the process description, ask the following questions]

- Am I obligated to proceed with any energy savings measures uncovered in the assessment?
  - If yes, what are the minimum requirements for the number of projects so the audit is still free?
- Can I specify the maximum simple payback I can invest in?

### What Do I Need for the Audit?

- How many months of energy bills do you need me to have on-hand?
- Do you need my water and sewer bills also?
  - If yes, does that mean you’ll be looking for water conservation opportunities?
- Will you need a floor plan of the building(s)?
- Who from my staff needs to be on-premise?
- How long will the on-site audit take?

### What’s the Follow-Up Process?

- When can I expect to receive your report?
- Will there be a follow-up call or in-person meeting with the auditor?
- Once I receive the report, how long do I have to make a decision about whether to move forward with any/all energy efficiency measures?
- Can offer me any low-interest, on-bill financing options?
- Do I have to “reserve” the energy rebate with the utility ahead of time?
 

[Note: There’s a limited pot of money available for rebates]
- What company will be implementing the energy conservation measures?
- Do I have any control over vendor selection?



## Deregulated Energy Markets

Updated April 2012

STATE	ELECTRICITY	NATURAL GAS	STATE	ELECTRICITY	NATURAL GAS
Alabama	NO	NO	Nebraska	NO	NO
Alaska	NO	NO	Nevada	YES	YES
Arizona	YES	NO	New Hampshire	YES	YES
Arkansas	NO	NO	New Jersey	YES	YES
California	YES *	YES	New Mexico	YES	YES
Colorado	NO	No	New York	YES	YES
Connecticut	YES	YES	North Carolina	NO	NO
Delaware	YES	YES	North Dakota	NO	NO
Florida	NO	YES	Ohio	YES	YES
Georgia	NO	YES	Oklahoma	YES	NO
Hawaii	NO	No	Oregon	YES	NO
Idaho	NO	NO	Pennsylvania	YES	YES
Illinois	YES	YES	Rhode Island	YES	YES
Indiana	NO	YES	South Carolina	NO	NO
Kansas	NO	NO	South Dakota	NO	NO
Kentucky	NO	NO	Tennessee	NO	NO
Louisiana	NO	NO	Texas	YES	YES
Maine	YES	YES	Utah	NO	NO
Massachusetts	YES	YES	Vermont	NO	NO
Michigan	YES	YES	Virginia	YES	YES
Minnesota	NO	NO	Washington, DC	YES	YES
Mississippi	NO	NO	Washington	NO	NO
Missouri	NO	YES*	West Virginia	NO	YES
Montana	YES	YES	Wisconsin	NO	YES
			Wyoming	NO	YES

\*Conditional





# Municipal Maintenance Energy Checklist

Add this quick checklist to your weekly or bi-weekly maintenance audit.

1. Temperature Controls			
1A. Are there programmable thermostats in the building? (If not, please go to 1.D)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
1B. Has the back-up battery been changed? (If not, please change and reprogram unit)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
1C. Are all thermostats set correctly?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
1D. Are there locking covers on the thermostats? Are the covers locked? (If not, please set units correctly and lock covers)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
1E. Are temperatures set to 70°F Heat and 72°F Cool? (If not, please reprogram units)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
1F. Is the thermostat fan switch set to "AUTO"?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
1G. Is the thermostat set to "Heat, Cool, or Off"?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A

2. The Whole Building			
2A. Is the restroom hot water temperature correct (between 105 and 110°F)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
2B. Is the make-up air fan running in the kitchen?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
2C. Is the building using the prescribed energy-efficient lighting program?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
2D. Is water leaking at any of the sinks or in the bathrooms? Check for leaking toilets	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

3. Doors/Coolers			
3A. Are the refrigerated box doors closed? (Please describe problem & estimate materials & time to repair)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
3B. Is the cooler door weatherstripping/seal in good condition? (Leaky seals are "No") (Please estimate time & materials needed to repair)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
3C. Is the refrigerated box weatherstripping/seal in good condition? (Leaky seals are "No") (Please check all reach-in refrigerated units)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
3D. Is the front and back door hardware loose?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
3E. Is the weatherstripping and/or sweep worn or missing on any of the exit/entry doors?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
3F. Is hardware or weatherstripping damaged on maintenance or overhead doors?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Additional Comments/Observations



# Seasonal Maintenance Checklist

	SPRING				FALL							
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>HVAC</b>												
Change filters <b>MONTHLY</b>												
<b>CHECK ONCE IN SPRING &amp; ONCE IN FALL</b>												
Clean evaporator coils												
Clean condenser coils												
Clean evaporator condensate drain line and pan												
Check refrigerant line insulation												
Ensure refrigerant lines are not frozen												
Check activators and dampers												
Remove obstructions												
Check belts for tightness												
Ensure duct insulation / connections are tight												
Ensure outside air dampers/ air intakes operate properly and are open to design settings												
<b>Refrigeration</b>												
Check refrigerant charge												
Clean coils												



Jot down initials or dates when task is completed



## NOTES

