Town of Shelburne

Energy Conservation Policy

Purpose

- Save taxpayer dollars by reducing town operating costs;
- Promote investments in long-term energy and dollar savings;
- Reduce pollution;
- Reduce greenhouse gas emissions.

Monitoring Energy Usage

Each Town department shall continually monitor and evaluate their energy usage in their respective buildings and vehicles and identify opportunities to reduce energy consumption. Utility and purchase records shall be used to track energy usage over time. Annually, department heads shall bring a summary of energy usage and conservation actions or recommendations during the budget development process. At the time of any considered modifications or renovations, department heads shall investigate and evaluate "best energy practices" and energy efficiency improvement and operating cost reduction options.

Development of a Comprehensive Energy Plan

Many efficiency measures are available that could save the Town energy and money. Such measures (i.e., lighting, retrofits) are often most cost-effective if undertaken across the municipality, rather than department-by-department or building-by-building. The Town should take stock of its energy usage, and the available cost-effective efficiency opportunities by which the Town can achieve the greatest benefit. Efficiency Vermont along with other organizations should be solicited to provide support for development of a comprehensive energy plan. Shelburne could consider investing in a portfolio of efficiency measures for which the energy savings would pay for the cost of financing the investment.

Within one year of adoption of this Energy Conservation Policy, department heads will develop and submit a 5-year plan, based on known measured lives of equipment and systems, for future energy saving improvements and cost effective investments regarding systems and equipment.

On-going Conservation Measures

Normal business hours shall be from 7:00 am to 5:30 pm, Monday through Friday. All non-essential lighting and other electrical loads shall be minimized during non-business hours. Departments are expected to make a reasonable determination as to what critical functions must continue outside these hours.

Building Heating and Cooling

- Interior office air shall not be heated above 68 degrees F unless such a temperature may expose employees to a particular health and safety risk unless a heating system cannot be fully balanced where thermostats control heating in more than one office.
- Interior office air shall not be cooled below 78 degrees F unless such a temperature may expose employees to a particular health and safety risk.
- Programmable thermostats (controls) shall be used in areas where heating and/or cooling temperatures can be predictably scheduled. Cooling should be turned off and heating set to 55 degrees when spaces are not utilized. Staff shall be trained in how to use these thermostats on a periodic basis.
- Interior air in other spaces such as garages and storage areas shall not be heated. In certain areas where freezing temperatures may cause damage to contents or sensitive equipment it is recommended that the air not be heated above 55 degrees F.
- On warm days, building occupants shall take advantage or natural ventilation for building cooling as much as possible, to avoid operating chillers and compressors.
- Staff will perform (or arrange to have) periodic maintenance on all mechanical systems to ensure peak efficiency.

- Portable electric heaters shall not be used in any buildings unless used for temporary heating in lieu of the central heating system. Portable heaters should be used with caution and kept 30 inches from all combustibles due to the potential fire hazard.

Domestic Hot Water

Aerators with a maximum flow rate of 1.5 gpm shall be used in all bathroom sink fixtures.

Lighting

- All lights shall be turned off in unoccupied rooms at all times. Install occupancy sensor controls where appropriate.
- Overhead lighting shall be reduced as much as possible without creating unsafe conditions or interfering with the performance of duties.
- Security and safety lighting shall be held to the lowest acceptable levels.
- Energy efficient lamps (bulbs) and fixtures shall be used in all locations if possible.
- The Town should standardize lamps and ballasts to simplify the replacement stock and maintenance.

Other Reductions

- All video monitors and personal computers shall be set for automatic power-down (sleep) mode after 5 minutes of non-operation. (All ENERGY STAR monitors should have this feature available and can be turned on using the "display" option of the desktop "control panel").
- All copiers, printers and other electronics that have an automatic power-down or "energy saver" feature shall have this enabled.
- All non-essential personal computers, printers, copiers, and other electric equipment shall be turned off outside of normal business hours when not in use, unless there is a specific essential need for after hours operation.
- Use of copiers and printers shall be consolidated. Where possible, redundant printers and copiers shall be turned off and work shall be directed to nearby machines.
- Unplug refrigerated water coolers and drinking fountains where feasible.
- Vending machines should be eliminated or "Vending Misers" or equivalent technology that shuts off unnecessary vending machine functions when buildings or rooms are unoccupied shall be installed on all vending machines.

New Equipment Purchases

- New equipment to be purchased must be specified to be ENERGY STAR labeled where available (www.energystar.gov), or, in the case of motors over 1 HP, "NEMA premium efficiency".
- If new equipment is a component of a system, review for possible optimization of the system that might allow reduction in energy needs of the system.
- When purchasing new Town vehicles, fuel efficiency will be a prominent consideration.

Recommended Upgrades to Equipment

- Consider installing additional insulation in older buildings.
- Retrofit incandescent light bulbs with high efficiency fluorescent fixtures or compact fluorescent lights.
- Install occupancy sensors to control lighting in frequently unoccupied areas.
- Replace incandescent light bulbs with ENERGY STAR-labeled compact fluorescent lights wherever possible.
- Upgrade linear fluorescent luminaries to "Super T8" technology whenever possible.
- Install set-back/programmable heating and cooling controls so that when interior spaces are not utilized for one or more days, cooling is turned off and heating is set to 55 degrees.
- Consider replacing older HVAC systems with new energy-efficient systems. Have a plan for what efficient equipment to install upon end of serviceable life.

Idling Reduction Program – Controls and Practices

Motor vehicles are the largest source of toxic, carcinogenic, and ozone-forming pollutants in Vermont. The benefits of reducing idling include:

1. an improvement in local air quality and, therefore, the health of our employees and citizens;
2. a reduction in fuel consumption;
3. a decrease in required maintenance and engine wear, and;
4. a reduction of greenhouse gas emissions.

These benefits also have positive financial impacts. In order to enjoy these benefits, the Town has adopted this Program. The Program has town components, one for the Town customers and one for employees.

Customer Component

Signs are posted at Town facilities that encourage customers to shut off their vehicles while conducting business at these sites, while visiting other public areas and at street intersections. The signs include information about the benefits of idling reduction.

Employee Component

Operators of Town vehicles shall abide by the following procedures:

The operator of a gasoline-powered motor vehicle shall not idle the vehicle engine when it is not in motion if the vehicle will be stopped for more than ten (10) seconds, and the operator of a diesel-powered motor vehicle shall not idle the vehicle engine for more than five (5) minutes when it is not in motion.

Operators shall be exempted from these procedures when at least one of the following conditions exists:

1. When it is necessary to operate defrosting, heating, or cooling equipment to ensure the safety or health of the driver or passengers;
2. When the vehicle is forced to remain motionless because of traffic conditions over which the operator has not control;
3. To bring the vehicle to the manufacturers recommended operating temperature;
4. When it is necessary to operate auxiliary equipment that is located in or on the vehicle to accomplish the intended use of the vehicle;
5. When it is not possible to pull the vehicle into a yard or parking area to allow the engine and safety lighting to be turned off;
6. When the vehicle is being operated by a mechanic for maintenance or diagnostic purposes;
7. When the vehicle is undergoing a Federal- or State-authorized inspection; or
8. When it would be in violation of a Federal, State, or local law, rule, ordinance, or regulation.

Large-scale Energy Conservation and Generation Projects

The Town shall consider supporting, while not discouraging, private or public proposals for energy conservation within Shelburne. The Town should further explore the following opportunities for the Shelburne community:

- Biomass energy supply for the Village Center
- Water powered micro-turbines
- Upgrading traffic lights to LED lights
- Upgrading or removing, lighting in public spaces, including street lights and security lights

- In conjunction with the Chittenden County Solid Waste District, a Composting facility for Wastewater Treatment Facility biosolids and residual organics.

Sources

1. Section 20-55e City of Burlington – Idling Ordinance
2. http://www.cswd.net – Idling Policy
3. http://www.10percentchallenge.org – Under "Business Resources" for conservation practices
4. http://www.aceee.org/utility/14bledtrafficca.pdf - LED Traffic Light Benefits

Adopted by the Shelburne Selectboard on this 14th day of December 2010

Robert Roesler, Chair

Bill Smith

Tim Pudvar

Al Gobeille

Gary von Stange