



TOWNSHIP OF LONG HILL

Environmental Commission

COUNTY OF MORRIS

GILLETTE, HOMESTEAD PARK, MEYERSVILLE, MILLINGTON, STIRLING

Township Offices:

915 Valley Road
Gillette, NJ 07933
Tel.: 908-647-8000
Fax.: 908-647-4150

Reducing Energy Costs in Long Hill Township January 2009

Introduction

In April, 2008, the Township Committee adopted a document entitled *Toward a Comprehensive Energy and Resource Conservation Policy in Long Hill Township*. The energy policy, prepared by the Environmental Commission included a broad series of policies and initiatives to guide the Township over the next decade or two.

The Commission has been pleased to note that steps have already been taken to reduce energy costs in Town Hall and other municipal buildings:

- Thermostats have been readjusted and reprogrammed to reduce heating and cooling costs;
- Motion sensors have been installed in low-use rooms to reduce lighting costs;
- Special summer hours were adopted to reduce air conditioning and other costs.

We urge the Township Committee to keep this document in the forefront of planning for Long Hill.

The Environmental Commission maintains an ongoing discussion of energy consumption in Long Hill Township not only because of the obvious impact on the Township's budget, but also as a part of our obligations to the larger community to reduce our reliance on fossil fuels and minimize harmful impacts on the global environment. The current document puts forth a set of high-priority initiatives that can create immediate and continuing reductions in energy costs in Long Hill Township.

We consider this to be the first draft of a working document. With the Township Committee's approval, we will continue to refine these recommendations with charts, diagrams, maps, and descriptions of planned installations. The Environmental Commission is eager to see Long Hill Township become a model for energy conservation.

Solar Energy Installations

The Morris County Freeholders have developed an innovative program to assist municipalities in launching solar energy production. The program, involving a partnership between the County and a solar energy company, will install energy producing solar panels at no cost to the Township. Over a 15-year contractual period, the Township would realize significant energy savings. The Commission recommends that the Township Committee take full advantage of this opportunity and actively pursue installations at a variety of locations throughout town:

- Ground Installations
 - Open area near the wastewater treatment plant
 - Open field area in Clover Hill
 - Open field on White Bridge Road
 - Where land is available, at pumping stations

- Rooftop Installations
 - Public Works Building
 - Town Hall & Library
 - Police Department
 - Fire Houses
 - Community Center¹
 - Senior Center
 - Pump stations (if cost-effective)

- Canopy Installations
 - Open area behind municipal complex parking lot²
 - Bleacher stands at playing fields

Township Vehicles

All replacement vehicles for the Township fleet should be energy-efficient hybrids. These vehicles have proven reliable even under the severe driving conditions of New York City cabs, routinely having lifetimes of over 120,000 miles. Depending on gas prices, hybrid cars save between \$25,000 and \$35,000 over their lifetime even though the purchase price may be higher!

Hybrid SUVs have been effectively used by police departments across the country, including Westwood, NJ and Edison, NJ.

Diesel-electric truck technology has lagged behind that of hybrid automobiles, but Volvo, Peterbilt and Kenworth have all developed both medium and heavy duty trucks

¹ Special contractual arrangements would need to be made for semi-public buildings not directly owned by the Township.

² A large covered area could be used as a shelter for a farmer's market or other events.

that offer fuel savings comparable to those achieved by hybrid cars. Congress has encouraged the development of these vehicles and rebates are likely to be available. Energy efficient trucks will almost certainly be available in the near future and could provide substantial savings for the Department of Public Works.

Regardless of the type of vehicle being used, the Environmental Commission recommends that each department head be asked to submit proposals for mileage reduction plans.

Electricity Costs

The ready availability and ease of using electrical energy makes it, perhaps, the easiest of all our resources to waste. The growing cost of electricity makes it one of the best areas to realize savings.

The Environmental Commission recommends a three-pronged approach to conserving routine use of electricity in Township buildings:

- *Employee education.* It is important to make employees a part of the team effort to conserve electricity by providing information about the savings that can be attained.
- *Feedback.* The Environmental Commission is still collecting information on this, but metering systems are available that provide easy-to-read information about current electricity usage. These systems can provide an excellent stimulus to find a switch or two that can be flipped off.
- *Employee incentives.* Modest incentives such as gift cards could be provided for energy-saving ideas. For departments that achieve annual reductions beyond established targets, more substantive rewards (e.g., an extra vacation day) might be considered.

The Environmental Commission is working with an energy consultant to learn more about Peak Metering. There may be opportunities for substantial savings by monitoring regional consumption and reducing local consumption during peak periods (usually, hot summer days). For these specific occasions, special plans can be developed to reduce or eliminate air conditioning in certain building areas for the duration of the ‘energy emergency’.

The single biggest consumer of electricity in Long Hill is the wastewater treatment plant, which costs about \$20,000 per month. The Commission urges the Township Committee to continue its policy of purchasing the most energy-efficient pumps and other equipment as upgrades to the system are made.

Another big consumer of electricity is street lighting, which costs about \$5,000 per month. Most of our street lights still have fixtures that use standard incandescent bulbs, one of the least efficient methods of lighting. Halide lights provide more light per

kilowatt used, but the light is somewhat harsh and does not fit with Long Hill's semi-rural image. The most energy-efficient lights are LEDs, which also provide a 'warm' light closer to that of traditional incandescent bulbs, but at a fraction of the cost.

Conversion to LED lighting will be somewhat complicated:

- Most of Long Hill's more than 600 street light fixtures are owned by JCP&L and leased to the Township on a flat monthly fee rather than on energy consumption. The Environmental Commission recommends that the Township enter negotiations with JCP&L to modernize the fixtures for LED use along with a reduced monthly rate, perhaps prorated over several years to pay for the new fixtures.
- Alternatively, it might be cost effective to arrange for the Township to own the fixtures and pay for usage directly.
- This might be an opportunity for Long Hill to work with other towns through the League of Municipalities in a combined effort to eliminate this archaic and widespread use of incandescent lighting.

Heating Costs

Furnaces and other types of heating plants have a relatively long functional lifespan. After a decade or so, the units are typically much less efficient than current models. The Environmental Commission recommends that each municipal heating system be evaluated to calculate the potential benefits of replacing the unit with current high-efficiency models. In some cases, it will be less costly to replace the unit than to wait for it to malfunction.

Conclusion

The Environmental Commissions stands ready to assist the Township in pursuing these and other policies that will reduce the carbon footprint of Long Hill Township.