

# **Massachusetts Interfaith Power and Light**

## **Case Study: Elliot Newton (UCC), Newton MA**



### **These are the Major Energy Conservation *Capital* Actions**

**\*Heating** - A new hydronic oil fired boiler was installed in 2002. Programmable thermostats were installed with a new zone valve (2003) for 5 zones. Sanctuary roof was insulated in October 2006. Air blower installed in the boiler room to increase efficiency of both boiler and DHW.

**\*Electricity** - CFLs were installed October 2006 in the sanctuary recessed fixtures.

**\*Gas** - DHW blanket installed October 2005 to increase efficiency of DHW heater. Timer on DHW tank installed November 2005. Recirculation pump changed from 24 hours/day to 8AM-2PM

**•Water** – Upgraded toilet in accessible rest room.

### **These are the major energy conservation *management* actions...**

**\*Heating** - Three programmable thermostats installed plus a zone valve and thermostat in the chapel. These set the temperature to 68 degrees F when the spaces are occupied and 58 degrees F when not occupied. Locked plastic boxes cover the thermostats so the settings cannot be changed by anyone except the office manager.

**\*Electricity** - Turn off lights and electrical appliances when not in use. Turn off and cover a large (19") exhaust fan in the chapel during winter months.

**\*Fuel** - Elliot Newton buys bio-fuel low sulfur heating oil in a 80%/20% oil to bio mixture.

### **Results**

**\*Heating** - Eliot Newton saves approximately 2,300 gallons of fuel oil per year. Through installing programmable thermostats alone, Elliot Newton has saved \$17,068 since 2004 for a savings of \$5,690/year. Heating costs are guaranteed to rise every year, so the savings per year will continually increase.

**\*Electricity** - Electricity use went down 12% from 2002 to 2003, then jumped back up from 2004 to 2005 and remained at a constant consumption level. BUT there has been a 20% drop in electricity use since 32 CFLs were installed in the sanctuary in June 2006. Turning off computers at night will lower electricity use even further.

**\*Gas** - Gas use has gone from 661 therms per year in 2001 to 507 therms in 2006, a drop of nearly 25%.

**\*Water** – Consumption down more than anticipated, prompting consideration of change in other restrooms to low-flow starting with most-used

### **Here is the Environmental impact...**

By *reducing fuel oil consumption* from approximately 27,000 to 19,364 gallons (a 28% reduction), Newton Elliot has reduced its environmental impact in

**CO<sub>2</sub> Reduces global warming**

**NO<sub>x</sub> Reduces smog**

**SO<sub>2</sub> Reduces acid rain**