

**October 6, 2008**

**Natick Board of Selectmen Meeting**

**Greenhouse Gas (GHG) Emissions and Energy Use Report for Town Government**

Introduction

- Spring 08, Communities for Climate Protection (CCP) presentation to BOS on GHG emissions, Global Warming and the connection with Energy Use
- CCP in a collaborate effort with schools, general government and private parties completed a GHG emission inventory for energy use by all Town Departments.
- GHG emission report was completed in August, 2008
- Summary Report results comparing energy use in FY04 to energy use in FY07

**FY 04 vs FY 07 Report Summary Results**

Town-wide (includes energy use for General Government and School Department)

- Reduce GHG emissions (CO2 equivalent) by approximately 850 tons or by 6.2% (the equivalent of removing almost 145 cars from the road in Natick)
- Energy Use (for electricity, building HVAC, vehicles, and Streetlights) decreased by 7.8% saving approximately \$300,000 dollars)
- Energy costs increased by 19%

General Government and School Building (Sector)

- Percentages for GHG emission by sector have not changed
- Percentages for Energy equivalents by sector have not changed

Energy Use and GHG Emissions

- More emissions from electricity use than any other energy source (31% of total Energy used produced 44% of GHG emissions)
- Less emissions from natural gas than any other energy source (23% of total Energy used produced 15% of GHG emissions)

Building Electricity Use (General Government and Schools)

- Electricity use dropped about 3% (ex. Lighting improvements and Conservation)
- Electricity cost dropped about 6% (ex. Conservation, Great Bulk Supply Contract, lighting improvements and ice maker)

- Savings from conservation and reduced cost for supply of electricity
- Electricity has different cost factors making building to building comparison difficult (building rate code – NSTAR, bulk supply cost - Trans-Canada, time of use – peak vs off peak)

#### Building Natural Gas Use

- Use dropped by 21% (ex. Energy Management Systems - Schools and General Government – a 1% cost savings for every degree lowered on the thermostat over an 8 hour period)
- Cost increased by 16%

#### Building Heating Oil Use (Primarily the High and Kennedy schools)

- Use dropped by 11% (Energy Management Systems - Schools)
- Cost increased by 97%

#### Total Building Energy Consumption and Cost

- Overall use decreased by 6%
- Overall cost increased by 10%

#### Vehicle Fuel Use (gasoline and diesel)

- Gasoline consumption decreased 2.8% (New School Busses, Policies)
- Diesel consumption decreased 1.4% (Mild winter and Policies)
- Cost of fuel increase 84%

#### Government GHG emission, Energy Use and Cost Conclusion (Again)

- Decrease GHG emission 6.2%
- Decrease energy use 7.8%
- Increase cost 19%

#### Next Steps

- Complete Community GHG emission inventory
- Establish a Natick Energy group to identify and promote energy use conservation, energy efficiency, and opportunities for renewable energy for Town operations (Building Managers for Schools and General Government, Vehicle and Equipment Manager, Business Managers for Schools and General Government )
- Following CCP methodology (forecast anticipated future emissions for both government and community operations, set a target to for future GHG reduction measures)