



GHG Emissions Reduction for the City of Burnsville


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Sustainability Guide Plan

- ▶ Visioning process
 - ▶ City Council Governance Process
 - White Paper
 - Expert Testimony
 - Public Testimony
 - ▶ EOR consultant/ten organizations
 - ▶ 14 Best Practice Areas (BPA's), Goals, Strategies, Activities
 - ▶ Sustainability Team
 - ▶ Sustainability Coordinator
 - ▶ Sustainability is every employee's job
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Energy Efficiency BPA - Activities

- Strategy – 1: Increase Energy Efficiency of City Buildings
- Implemented recommendations of energy audits
- Utilized the B3 database
- Developed an EPP policy
- Established a Sustainability Fund



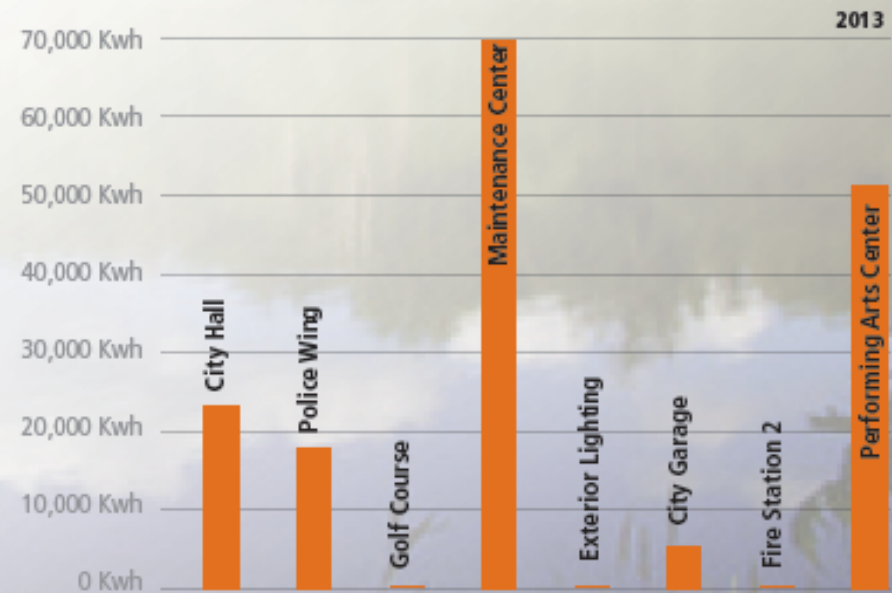
Energy Efficiency BPA - Results


Energy Efficiency

Kilowatt Hours Saved By Energy Conservation/Efficiency Measures

Obsolete and worn-out equipment is being replaced with the most energy efficient equipment available. The return on investment for the equipment varies from six months to three years. In 2013, the city of Burnsville received \$18,688 in rebates on a total investment of \$67,621. The projected 10 year cost savings for projects completed in 2012 and 2013 is more than \$200,000.

	2012	2013
Light fixtures permanently removed	77	71
Kilowatt hours saved	91,423	171,834
Annual Savings	\$6,763	\$13,459





“ Burnsville will strive to inventory and set reduction targets for greenhouse gas emissions for city facilities ”

**Greenhouse Gas Reduction BPA
Goal**



GHG Reduction BPA

- ▶ Brian Ross & Michael Orange
- ▶ Sustainability Team
- ▶ City Operations & Community Wide
 - GHG Reduction Targets
 - Implementation Priorities
 - Baseline Assessment



GHG Reduction BPA - Targets

- ▶ MN State 'Next Generation Energy Act'
- ▶ GHG emissions reduced by 15% by the year 2015 below the 2005 base levels, 30% by 2025 and 80% by 2050
- ▶ Implementation Priorities
 1. Cost effectiveness
 2. Greatest GHG reduction
 3. Impacts on quality of life/service
 4. Impacts on other sustainability goals



GHG Reduction BPA – Pumping Efficiency

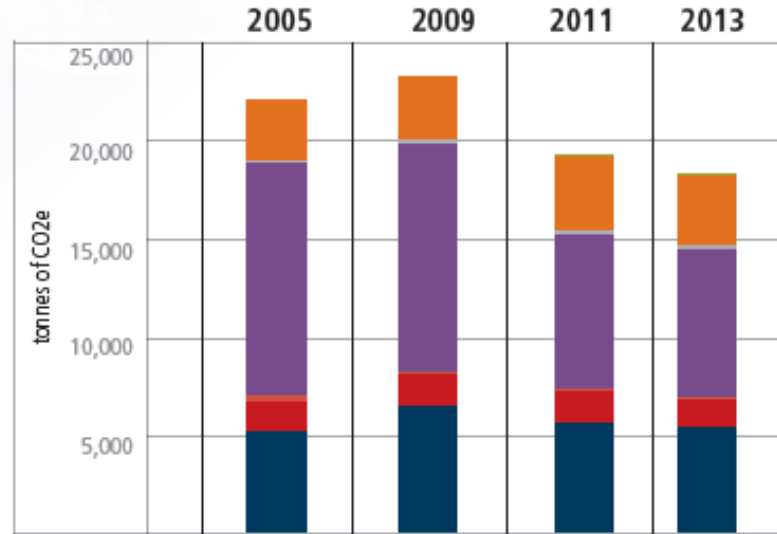
- ▶ 17 wells with their own pumps
- ▶ Six large pumps for the aquifer and quarry pumping
- ▶ It takes a lot of electricity to pump water
- ▶ Took a look at GHG Inventory
- ▶ Installed VFD & other energy efficiency measures

Results:

Greenhouse Gas Reduction

Greenhouse Gas Emissions Inventory for City Operations

Most greenhouse gases come from burning fossil fuels (oil, coal and petroleum) to run our vehicles, power our buildings, and pump our water. The decrease in greenhouse gas emissions is primarily due to energy conservation efforts, improved fuel efficiency and reduced reliance on coal.




Emissions (tonnes)	2005	2009	2011	2013
Buildings and facilities	5,093	6,442	5,554	5,330
Streetlights	1,540	1,572	1,560	1,439
Signals and flashers	345	141	121	115
Potable Water	11,814	11,703	7,968	7,542
Sanitary Sewers	141	118	150	152
Transportation	3,117	3,251	3,813	3,660
Waste	79	71	69	77
CO2e emissions total	22,129	23,297	19,233	18,226
Per-FTE CO2e	80	72	61	59

*The Performing Arts Center and the Heart of the City parking ramp were not open in 2005. These new uses increased electricity consumption for 2009.



Questions?



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