

US EPA ARCHIVE DOCUMENT



2009-2011 INDIANA ENERGY MANAGEMENT PILOT



City of Bloomington Utilities Monroe Drinking Water Plant

Who we are

The City of Bloomington Monroe Water Treatment Plant (CBU Monroe) was originally built in 1967 and currently serves a population of 110,000. It is one of two water treatment plants operated by CBU and serves a total population of 69,000. In 2010, CBU Monroe treated and delivered an average of 448.36 million gallons (MG) per month of drinking water.



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Natural Gas Usage

- 2008: 24,745 Therms
- 2009: 25,200 Therms
- 2010: 18,298 Therms
- 2011: 12, 182 Therms

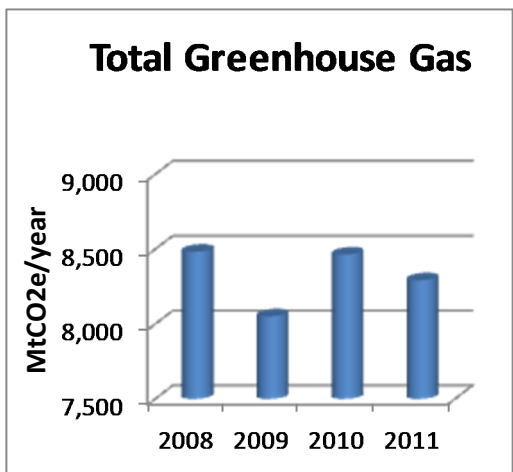
Greenhouse gas (GHG) avoided as a result of improvements: 12.6 metric tons of carbon dioxide equivalent (2008 baseline compared to 2011).*

Project Success Story

As a result of the 2009-2011 Indiana Energy Pilot, CBU Monroe staff and management began to focus more closely on energy billing, cost of energy and its impact on the overall budget. CBU began evaluating energy use and energy billing in 2011. Prior to that, energy bills were viewed by the accounting department and as a result CBU staff did not evaluate energy use patterns and/or corresponding energy charges.

After educating staff and critically analyzing energy bills, CBU requested that the energy provider to do a rate structure comparison for all of the rates the CBU Monroe was eligible for. The rate structure comparison showed that the rate currently used was not on the most cost-effective. On May 05, 2011, the rate was changed from a High Load Factor (HLF) rate to a Low Load Factor (LLF) rate.

Changing the energy billing rate structure at the CBU Monroe resulted in a savings of \$6,651.79 over 2 billing cycles. This change, which required no financial investment, could result in an estimated annual savings of over \$39,000. The evaluation of rate structures will be requested of energy providers on an annual basis.

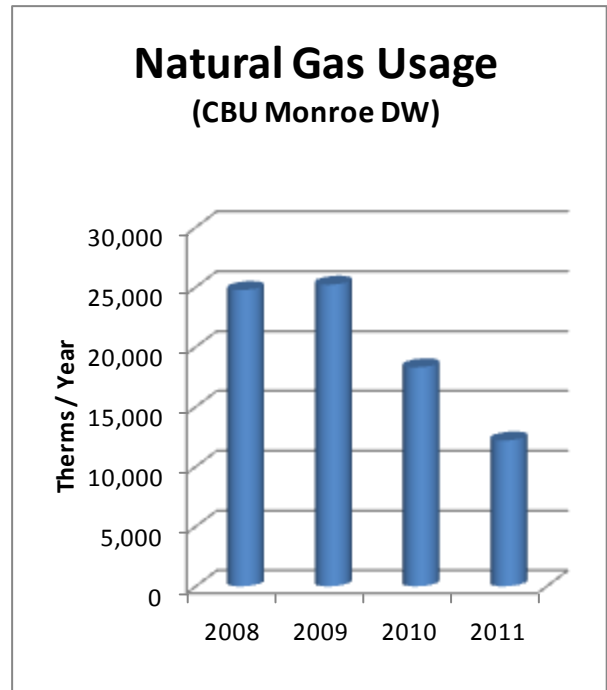
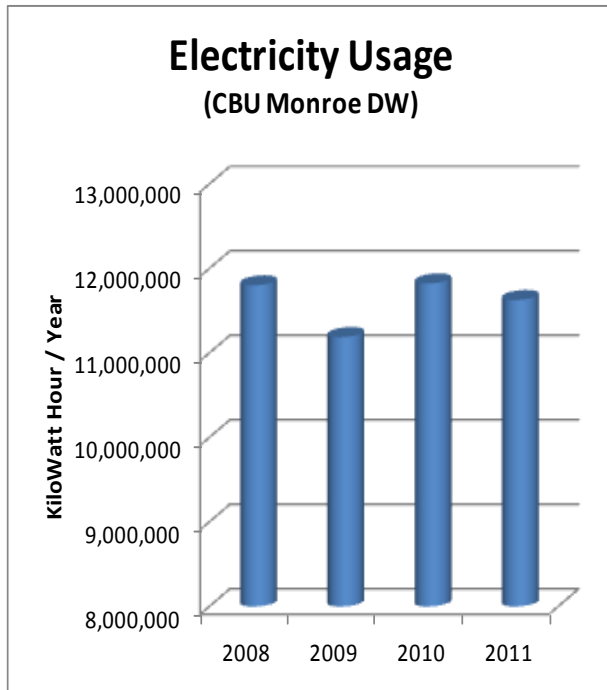


Greenhouse gas emissions avoided are equivalent to

- Removing 2.5 vehicles from the road for a year
- Electricity for 1.6 homes for a year
- 0.69 Railcars of coal
- 29.3 Barrels of Oil

*Green House Gas Equivalencies calculated using USEPA calculator (<http://www.epa.gov/cleanenergy/energy-resources/calculator.html>)

Documented Results



Key Improvements

Goal	Improvement Process	Annual energy saving (kWh)	Implementation cost	Annual cost saving	Simple pay-back, years
Energy billing rate structure change (HLF to LLF)	Reduction in energy bill of ~\$2,500/month	N/A	\$0	\$30,000	0
Pump water based on previous day's demand	Reduction in peak kW usage and subsequent reduction in demand-based energy bill charges	N/A	\$0	\$4,800 to \$12,000	0

