



“As of 2012, the County now has a more complete and comprehensive set of data from which to benchmark its energy reduction efforts. As such, it is recommended that this more complete baseline data be used moving forward for forecasting energy and emissions and for setting additional reduction targets.”

5. GREENHOUSE GAS Inventory Update



For government buildings & operations, emissions dropped 31% from 11,854 metric tons of carbon dioxide equivalent (“CO₂e”) in 2005 to 8,224 metric tons of CO₂e in 2012 (equivalent to emissions from electricity use in 499 homes).

The County completed GHG Inventories in 2005, 2008 and 2010.²⁹ Each subsequent inventory updated GHG emissions data, but also energy account information to improve the detail of reporting to reflect existing conditions. As part of ongoing efforts to be a leader in energy efficiency and sustainability, Monroe County has again in this planning process updated its GHG emissions inventory, comparing the County’s 2012 results to an original 2005 baseline. This inventory measures total energy consumption and GHG emissions in two (2) categories: government operations and the community at large. Measuring emissions is an important component of managing the County’s contributions to climate change and identifying the greatest opportunities to reduce those impacts while simultaneously pursuing more efficient and economic use of energy. This 2012 GHG Emissions Inventory serves as a significant milestone in documenting the County’s progress toward sustainability and in determining next steps for targeting opportunities for continuous improvement.

In recent years, the County has worked closely with its local utilities to maintain a more complete and

accurate set of electricity data. The County has also started utilizing the Facility Dude *UtilityTrac* system, which further supports maintenance of a comprehensive set of energy data. As of 2012, the County now has a more complete and comprehensive set of data from which to benchmark its energy reduction efforts. As such, it is recommended that this more complete baseline data be used moving forward for forecasting energy and emissions and for setting additional reduction targets. This new baseline is valuable for enabling a more precise analysis of Monroe County’s energy usage and GHG emissions, ensuring consistency in data tracking and billing, and identifying additional opportunities for further reductions.

Results of the 2012 GHG Emissions Inventory Update are as follows:

Government Operations

Since 2005, the County has demonstrated significant progress in reducing GHG emissions in all sectors of County operations. This reduction means the County has already exceeded the reduction

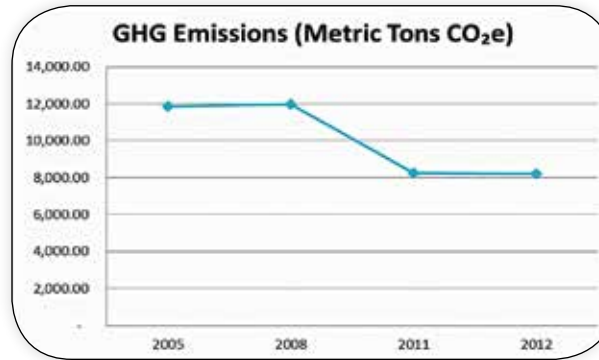
targets established in its Energy Efficiency and Conservation Strategy of 2011 to reduce GHG by 20% by 2020 as compared to the 2005 baseline.

Moving forward, this inventory update shows that buildings and facilities produce nearly 65% of the County's GHG emissions, which illustrates that targeting government buildings for efficiency upgrades will be an important opportunity for improvement. Monroe County can claim success in its energy efficiency efforts to date, and should target other facilities that use large amounts of energy, like the Gato Building, Marathon Government Center and Annex, and the airport terminals, for future energy efficiency improvements. Transportation, at 20% of emissions, provides the next greatest area of potential improvement.

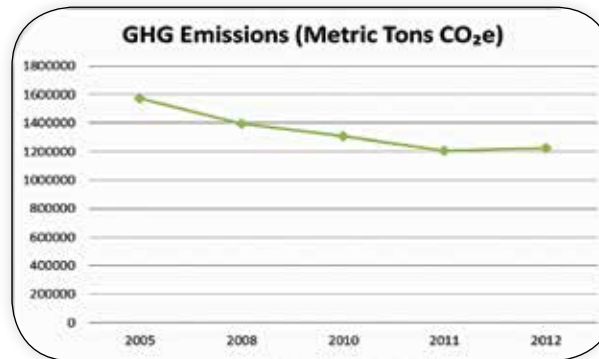
Community Scale

At the community scale, emissions decreased by 22%, from 1,572,770 metric tons of CO₂e in 2005 to 1,224,278 of CO₂e in 2012. Community emissions decreased in all sectors, and have surpassed the 20% reduction target. Note that this reduction includes a one-time transition from municipal solid waste being entirely landfilled to the majority being incinerated in a waste-to-energy facility, which provides significant and ongoing GHG reductions. While this reduction should be celebrated and is a reflection of effective waste management and climate action planning, it needs to be remembered when setting future targets that it will be challenging to identify additional climate actions able to reduce emissions at a similar magnitude across all sectors.

A large contributor of emissions to the community scale is also electricity usage, which presents a significant opportunity for implementation of building energy efficiency programs and a shift to renewable sources of electricity. Of note is the



GHG Emissions from Monroe County Government Operations



GHG Emissions from Monroe County Community Activities

electricity usage of the commercial sector, which dropped significantly between 2008 and 2010, but has been climbing back toward pre-recession levels since 2010. Thus, energy efficiency efforts aimed toward the commercial sector may be especially effective in keeping emission levels down. Similarly, the large contribution of the transportation sector to community emissions shows the potential for community-scale reductions if efforts are made to reduce vehicle miles travelled within Monroe County and to shift to alternative fuels.

The supporting documentation for the GHG Inventory Update is provided in Appendix B.

