

December 2013



FAST FACTS:

- *Montgomery County has seen a 45% reduction in total energy use since the 2008 baseline year. (p. 2)*
- *Since JHU set their GHG reduction goal in 2008, MCC has decreased their total emissions by 44%. (p. 4)*
- *The campus continues to avoid bottled water usage with their filtration system. (p. 5)*
- *Montgomery County uses strategic bin location to help improve campus waste diversion. (p. 6)*
- *In FY2013, 96 percent of the paper purchased contained recycled content. (p.6)*

YEAR IN REVIEW

FY2013 was another good year for the Montgomery County Campus. Overall, the campus remained relatively consistent in their energy consumption when comparing FY2013 levels to FY2012. There was some fluctuation in heating fuels due to the more traditional winter. In order to keep all building occupants comfortable, the campus has a closet full of Snugglies available for use! This helps to avoid using additional heating energy. More information on the campus's energy consumption, greenhouse gas emissions, and water usage can be found throughout the report.

STAFF ENGAGEMENT

The Montgomery County Campus is a satellite campus to some of JHU's schools but these schools traditionally have evening classes for their graduate programs. Since these schools are not primarily housed at this campus, it is important to focus and engage the daytime staff on sustainability initiatives. In FY2013, the MCC staff transitioned their paper purchasing from non-recycled content paper to 30 percent recycled content paper. The statistics on the transition have been highlighted on Page 6. Another positive sustainability initiative that occurred during FY2013 was the transition from disposable kitchen cups to reusable ones. This has helped the campus reduce waste and save on their purchasing budget.

ENERGY

MCC ENERGY

Overview

In 2013, the Montgomery County Campus had an increase of 3.4 percent in overall energy consumption. This increase is partially due to having a more traditional winter than Maryland did during FY2012. FY2012 had a warmer than usual winter allowing for the campus to reduce heating utilities during the winter months. The overall increase in energy consumption can be seen to the right in Figure 1. The school had an equal increase in energy density at 3.4 percent. This can be seen in Figure 2.

Energy by Source

Overall, the campus had an increase in utilities in FY2013. The increase is due to the 2.6 percent increase in electricity and the 10.6 percent increase in natural gas usage. While Montgomery County did increase utilities over the last year, their total consumption amounts have decreased since the 2008 baseline year. Since 2008, the campus has decreased electricity by 16.9 percent and natural gas has decreased by 87.9 percent. This has led to a net decrease in total energy of 45 percent since 2008.

FIGURE 1: Total Energy by Source

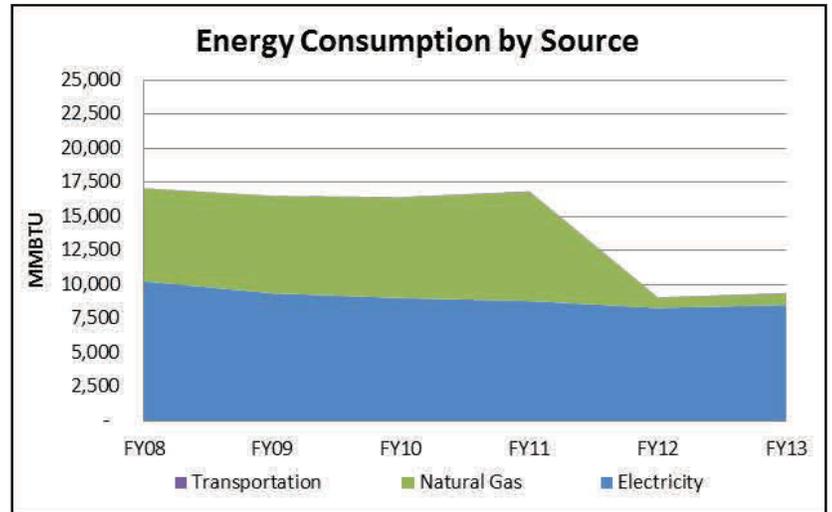
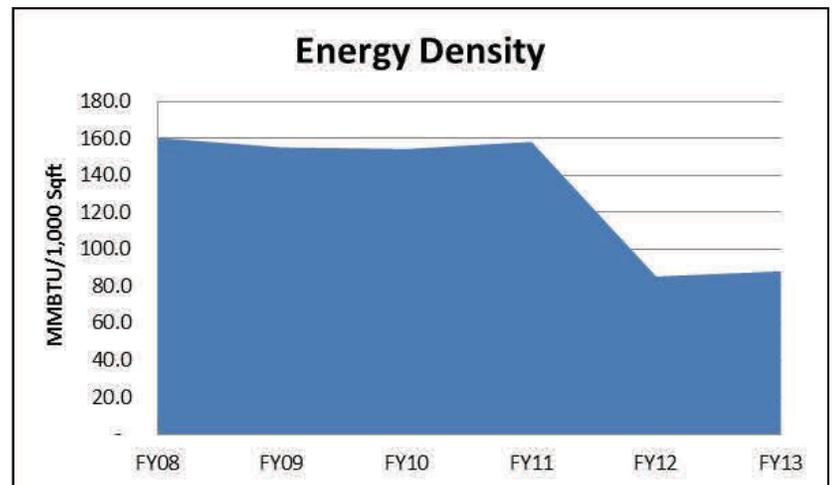


FIGURE 2: Total Energy Density



ENERGY AND GHG EMISSIONS

UNIVERSITY OVERVIEW

FIGURE 3: Total Energy

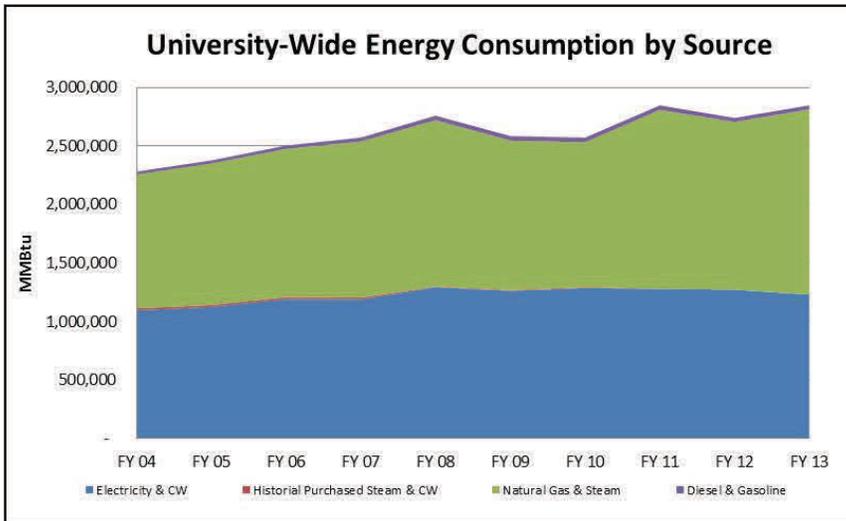
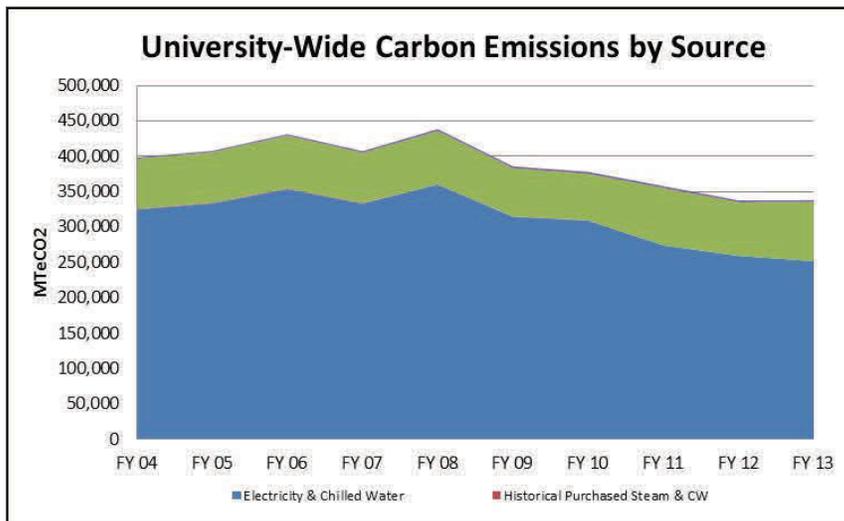


FIGURE 4: Total Emissions



University GHG Reduction Goal

Johns Hopkins University continues to strive to reach their 2025 greenhouse gas goal to reduce emissions 51 percent from 2008 levels by 2025. This section of the report reflects the University’s combined energy and greenhouse gas reduction progress.

JHU’s Five Year Progress

After five years, a population increase of 11% and an increase in buildings by 9%, JHU has kept their total energy consumption to 3%. The increase in energy is primarily due to the increase in natural gas and steam use. Since 2008, JHU has seen a decrease in emissions by almost 23%. A large amount of the emissions reductions can be attributed to the cleaner regional electricity grid.

Moving Forward

The Office of Sustainability and former members of the Climate Action Plan Task Force are assessing JHU’s progress thus far. This will help determine what changes should be made to the plan, if any, to ensure our progress toward the reduction goal. We plan to evaluate how to reduce site energy and emissions and whether electric grid carbon changes should be used. We are also evaluating how to better account for “business as usual” growth versus actual growth in the target goals, something that was not fully understood in the original plan.

GREENHOUSE GAS EMISSIONS

MCC EMISSIONS

Overview

In FY2013, the Montgomery County Campus did see an increase in emissions. Over the year, the campus increased emissions by 3.5 percent. This is due to the small increase in electricity and the increase in natural gas. As previously mentioned, some of the increase in emissions can be attributed to the more traditional winter. It is important to note that the electricity carbon coefficient stayed relatively consistent from FY2012 to FY2013. Figure 5 shows the proportion of emissions for the year and Figure 6 shows the overall carbon emissions by source. While the campus did see an increase in total emissions from FY2012 to FY2013, they have had one of the largest overall decreases in total emissions since the 2008 baseline year. Since 2008, the Montgomery County Campus has decreased total emissions by 44 percent.

FIGURE 5: FY2013 Emission Proportions

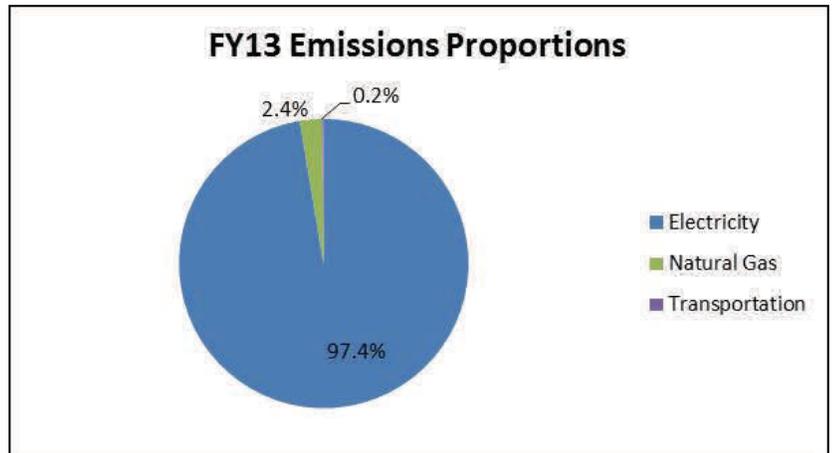
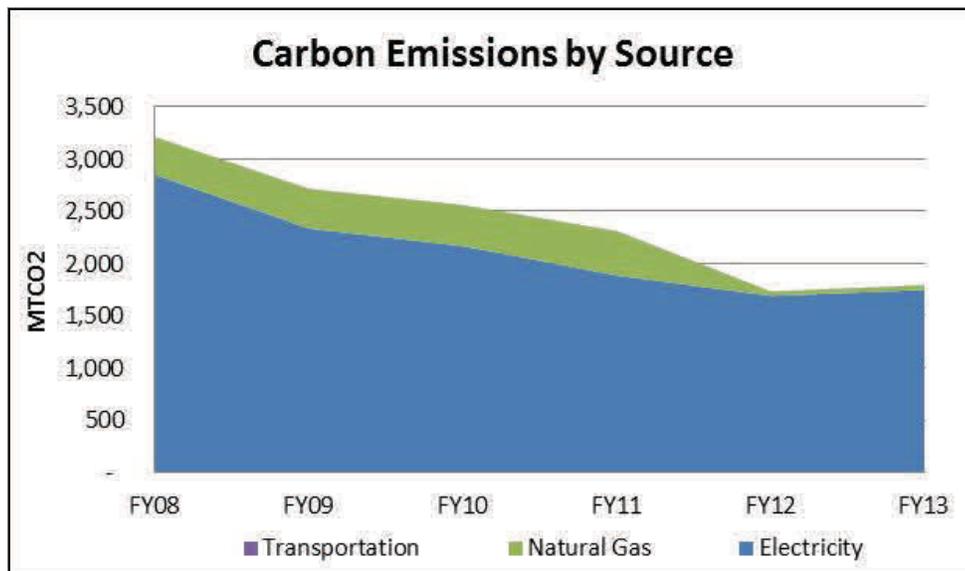


FIGURE 6: Emissions by Source



WATER USAGE

Overview

While the Montgomery County Campus saw an increase in their total amount of domestic water usage from FY2012 to FY2013, much of this spike was the result of the change of the Back Flow Preventer. This change caused water to leak and flood the basement level of the building for several hours. The sensors installed with the system worked to alert the system manager and reset the device so there was not too much water lost. MCC anticipates a decrease in water consumption over the coming year. Figure 7 shows the change in total water consumed from 2005 to 2013.

FIGURE 7: Total Water Consumed

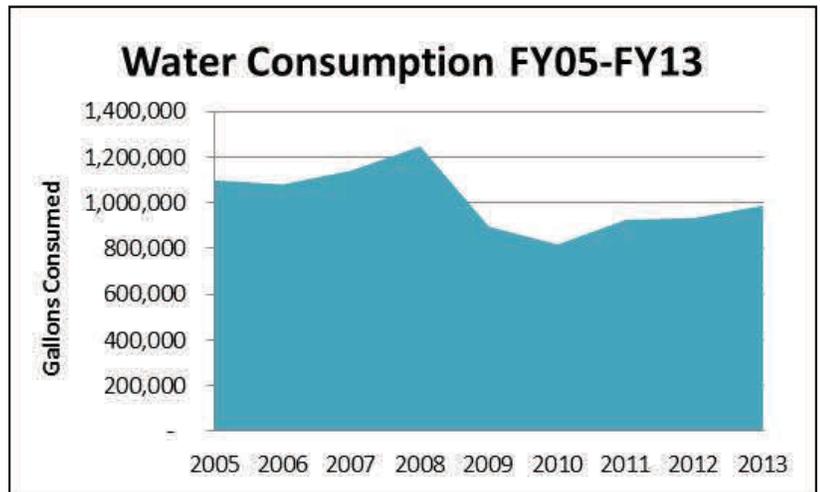


Figure 8: Picture of Bottle Filling Station

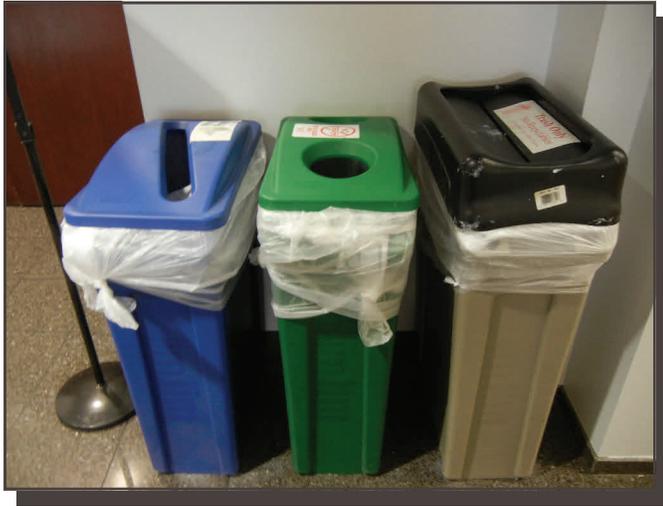


BOTTLED WATER

Over the past couple of years, the Office of Sustainability has been encouraging the different JHU divisions to find alternatives to disposable plastic bottle usage at their respective campuses. Some of the alternatives include installation of a Quench system, which filters tap water in an office setting, and the other is retrofitting a traditional water fountain with a goose neck or a bottle filling station. The Montgomery County Campus has always used a water filtration system that directly filters tap water instead of a 5 gallon bottle system. The system can be seen to the left. In order to reduce waste from paper cups, the campus recently purchased reusable cups for all employees to use at their leisure.

CHANGING BEHAVIORS

FIGURE 9: Recycling



RECYCLING

Recycling Highlights

The Montgomery County Campus continues to have bins strategically placed around campus with signage to improve diversion. As previously mentioned, the campus is finding ways to reduce the amount of waste generated on campus by doing things such as purchasing reusable cups for office staff. In 2012, the county set a recycling goal to reduce and recycle 70 percent of the county's total waste by 2020. This will impact future outreach efforts and infrastructural considerations in an effort to comply and play a part.

COPY PAPER

Paper Highlights

FY2013 represents the fourth year of paper collection data from our University office supplier. As we continue to collect information on paper purchasing, the data improves. The Office of Sustainability strives to encourage faculty and staff throughout the University to purchase recycled content copy paper and to find alternatives to printing but if needed to do so double sided.

The Montgomery County Campus saw a significant change in their paper purchasing habits over the year. In FY2013, the campus purchased 96 percent of their paper with recycled content. This is a 85 percent increase from FY2012. The campus also purchased 58 fewer cases than they did in FY2012. Figure 10 summarizes the data for the year and compares to past trends.

FIGURE 10: Copy Paper

