

Wartburg College Utility Use & Cost Summary 2008-2011



The following article outlines the water, gas, and electric usage and costs of Wartburg college for the academic years shown. Wartburg's academic year starts on June 1st and ends on May 31st of the listed fiscal year.

Not all of Wartburg's sustainable improvements are listed here. Visit Wartburg's sustainability website for more information on Schneider Electric updates.

The graphs below show water use of the college by month, academic year, and current academic year. Similar style graphs appear on the next page for both gas and electricity. For a summary of total utility usage, view the last page of this article.

Water Use

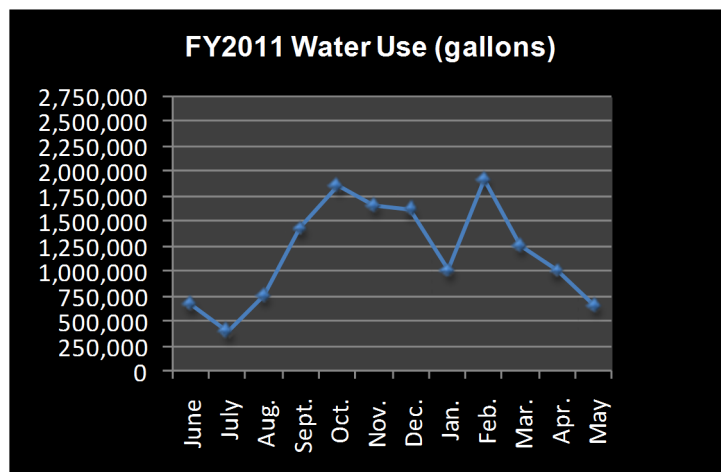
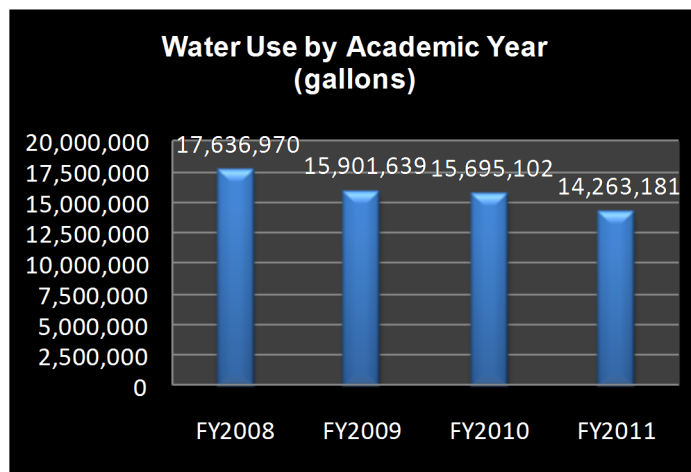
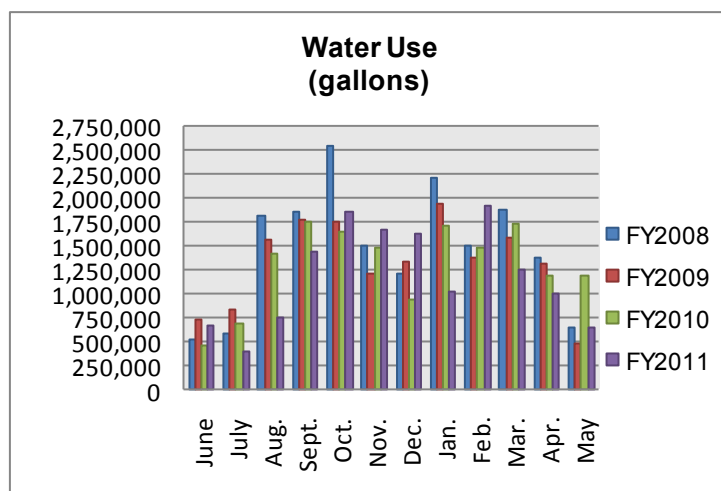
The campus uses water for general public use, food preparation, cleaning, etc. The college does not irrigate land, except occasionally sports fields.

Trends

Total water use decreased in 2011 by 9% from 2010; a savings of 1.4 million gallons. Water use continues to decrease since the completion of building projects in 2008, down by 19%.

Sustainable Improvements

In 2011, aerators were added to faucets all around campus. Toilets were also adjusted to use less water. This should reduce the use of water for years to come.



Gas

Natural gas is used to heat most of the hot water and many of the buildings on campus.

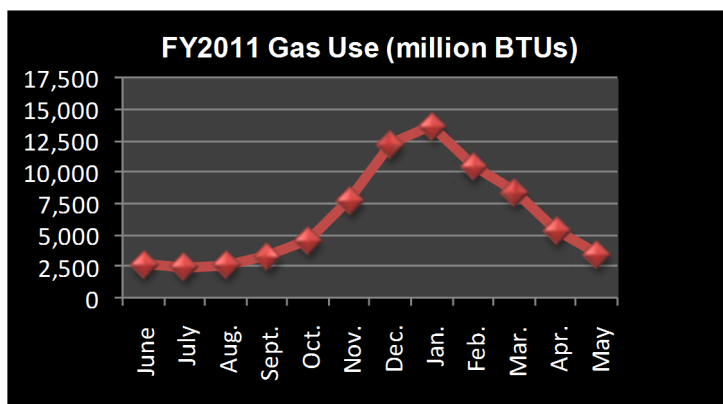
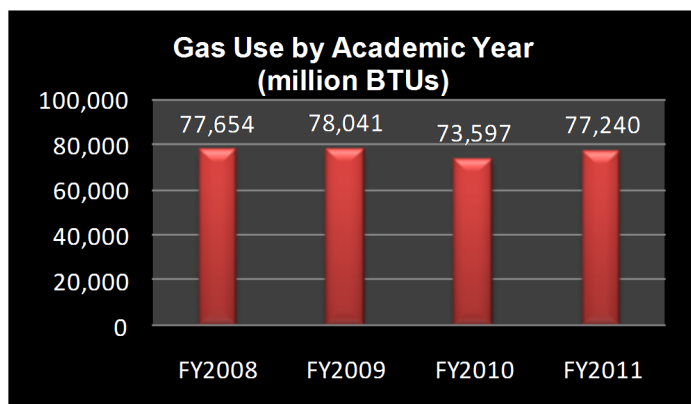
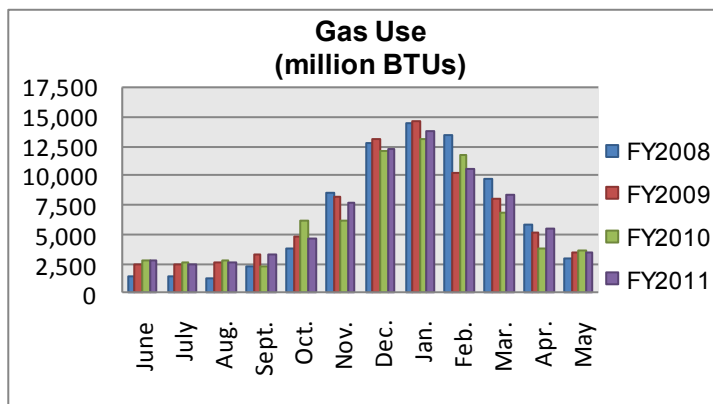
Trends

In 2011, Wartburg used almost 5% more natural gas than in 2010. The total cost of fuel for 2011 was 0.5% less than that in 2008

The use of natural gas is noticeably highest in the winter months to keep the buildings heated.

Sustainable Improvements

The boiler in Luther Hall and Neumann Auditorium will be replaced by the start of the fall semester for the 2012 academic year. This boiler is expected to have a fuel efficiency of 95% as opposed to an efficiency of about 65% that the old boiler has.



Electricity

Electricity is used throughout campus to power anything electrical, from lights, to automated door openers, to campus security's Golf cart

Trends

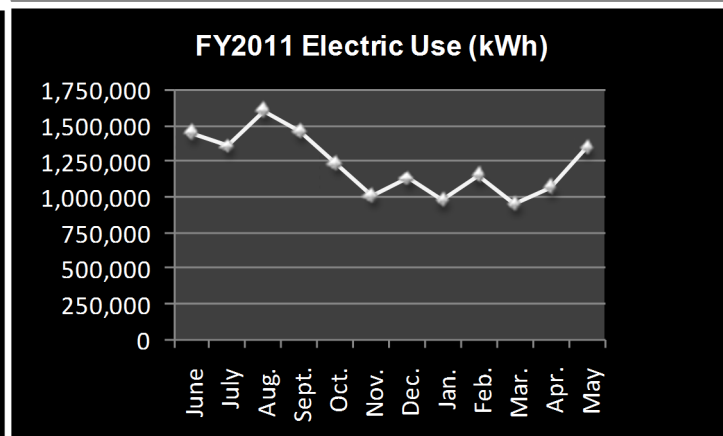
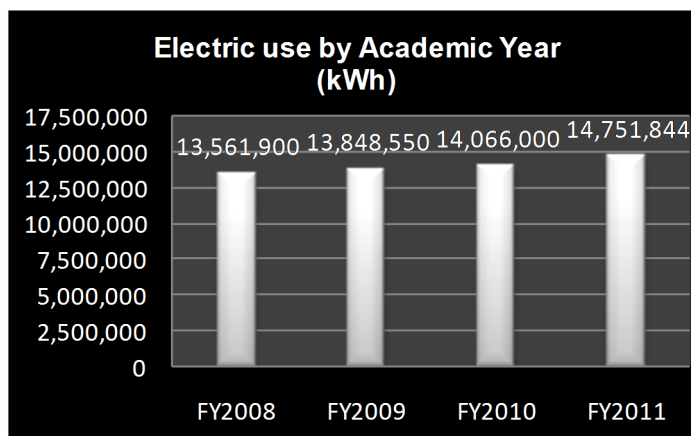
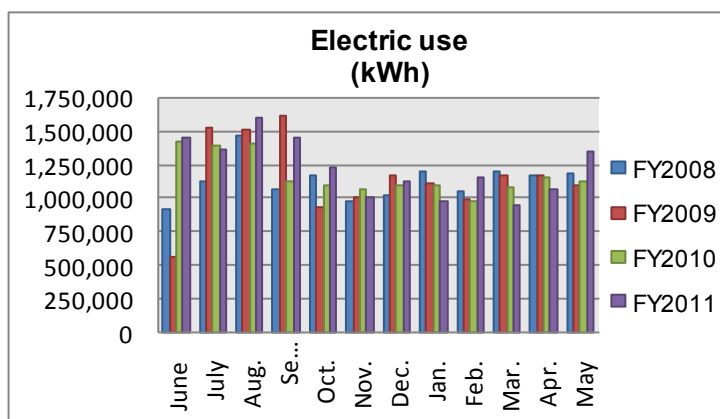
Total electricity use in 2011 grew by almost 5%. This is a 6.5% increase from 2008.

As the accessibility of wireless internet increases, more electricity is devoted to running the wireless equipment.

Sustainable Improvements

In 2011, new motion detectors were added to all academic buildings, as well as residential buildings to save electricity.

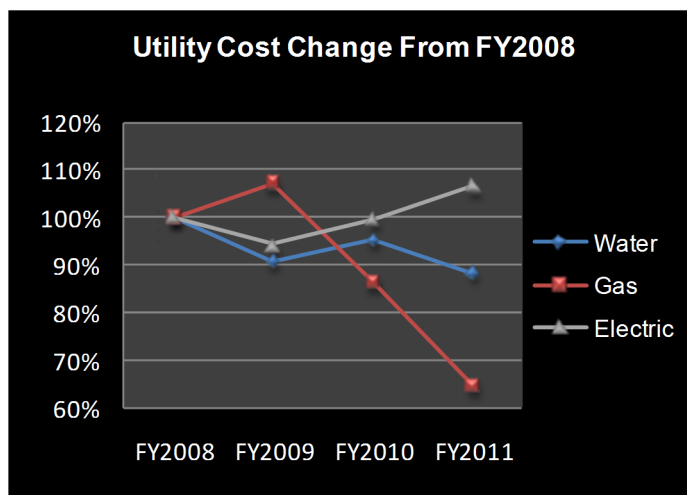
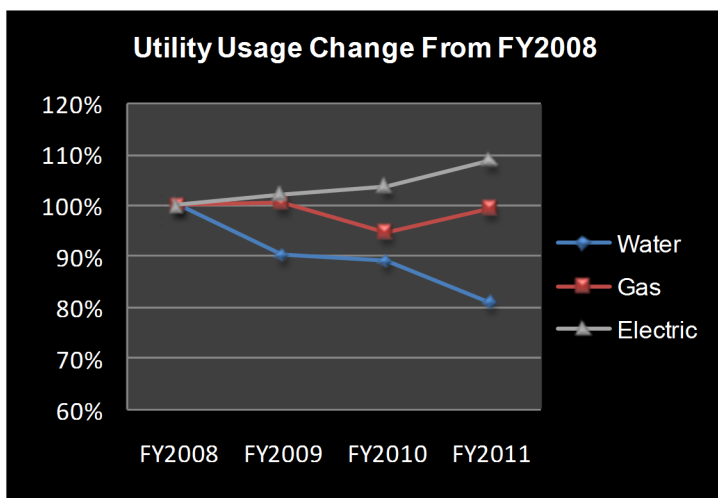
Lights are in process of being updated to more energy efficient tubes and CFLs for efficiency in energy use.



Utility Cost & Use Summary

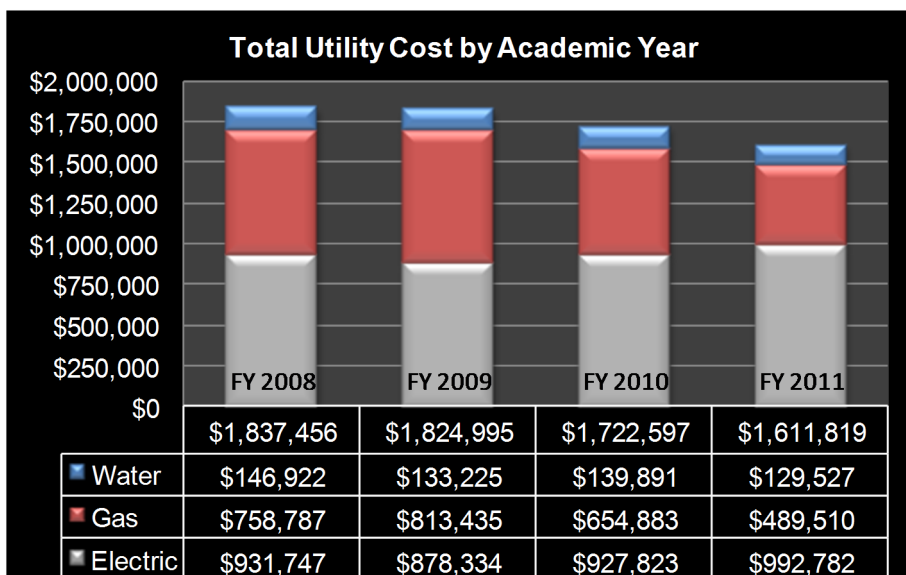
It should be noted that price changes can occur monthly for each utility. Thus a direct correlation to a change in utility use cannot be made from a change in total utility cost. Total gas costs from 2011 decreased, however the amount of gas used increased.

Monthly electricity costs are based on the peak energy use expected or received for that month by the college. Extra energy is kept in reserve for the college to be able to have electricity during those peak times. The best way to reduce electricity cost is to reduce peaks in energy use.



Trends

Overall, the utilities cost for 2011 decreased by over \$110,000 from 2010, a 6.4% decrease. Utility costs continue to decline from 2008. The total decrease in costs from 2011 to 2008 is 12.3% or \$225,000.



Utility breakdown

The first line of the following chart listed the total utility cost divided by the area of buildings that are currently in use. The rest of the rows list each individual utilities divided by the amount of part-time, full-time employed staff and faculty combined with the total students.

	FY2008	FY2009	FY2010	FY2011
Utility Cost per ft ²	\$1.69	\$1.67	\$1.58	\$1.48
Water (gal) per Person	7,877	7,017	6,929	6,342
mmBTUs Gas per Person	34.68	34.44	32.49	34.34
kWh Electricity per Person	6,057	6,111	6,210	6,559

Summary

It can be seen from the above data that Wartburg has decreased use of water in the past few years, whereas electric use has increased, and gas has varied. All utilities vary due to weather conditions, mechanical projects, construction projects, etc. Although projects and weather can lead to differences in utility use, we can all do our part to lower use and cost by considering our personal use of utilities, and adjusting daily routines to save both on utility use and cost.

Costs of water and gas continue to decrease, due to usage, and pricing, while electricity prices continue to increase with increased use. For future reduction in utility costs, consider using appliances and electronics less in peak energy times of the day, such as excessively hot days, and during daylight hours. Changing the thermostat temperature closer to the outdoor temperature and convincing others in your building to do so can lower gas and electricity costs too.