Fiscal Year 2012 marks the seventh year that Millersville has measured its carbon footprint with Sightlines. Periodically, Clean Air-Cool Planet revises the carbon calculator based upon updated calculations from the EPA. These updated calculations often have the potential to change historical data, and have done so in some of the prior year’s data. These revisions are reflected in the FY12 Sightlines Go-Green MB&A. From the time period FY2005 to FY2012, gross emissions decreased by 22% (figure 1). The cataloguing of greenhouse gas (GHG) emissions falls into three distinct categories and are as follows: Scope 1 emissions are defined as emissions originating on campus, and include stationary combustion (utilities burned on campus) and fleet fuel consumption. Scope 2 emissions are end-use utilities purchased by the institution, consisting solely of electric on Millersville’s campus. These “upstream” emissions, while not released on campus, are the result of institutional energy demands, and are based upon the particular fuel blend of the RFCE eGrid subregion. Finally, scope 3 sources are indirect emissions. Daily commuting of campus users makes up the biggest portion of scope 3, and makes up 28% of Millersville’s total emissions profile. All emissions are calculated in metric tons of carbon dioxide equivalent (MTCDE). This method of collection has remained constant across the eight years of measurement.

Typical to most campuses, energy consumption is the largest source of emissions on campus. Millersville is unique to peers because of the mix of fuel used. In FY2012, 72.4% of energy consumption was electric, whereas only 25.2% was natural gas, 2.1% fuel oil, and .3% propane. Figure 2 illustrates that emissions from electricity drive the overall profile, accounting for 15,608 MTCDE in FY2012, or 50% of total emissions; a decrease from 57% of total emissions in FY11.

Millersville lies in the Mid-Atlantic electric grid (RFCE), where every 1 million kWh of electricity purchased emits 430 MTCDEs into the atmosphere. Electric consumption increased 3% from FY06 to FY09, mainly due to an increase in air conditioning the residence halls; however, Millersville reversed this trend and dropped electric
consumption by 19% from FY2009 to FY2012. Figure 2 highlights the overall positive, decreasing trend in emissions from FY2011 to FY2012, especially in scope 2 because of the reduced electric consumption.

In order to offset the electricity emissions, the Pennsylvania State System of Higher Education purchased renewable energy credits at 36% of electricity consumed for FY2010, compared with only 24% of electricity consumed FY2011; however, Millersville had to rely solely upon the Keystone Solar project offsetting at .58% of total electric emissions, as there were no purchased RECS from PASSHE.

The second largest emissions source on Millersville’s campus is commuting. In FY2012, commuting made up 28% of total emissions and 72% of Scope 3 (the catch-all category). A survey was distributed spring 2009 to collect commuting information, and this method has been applied across the 7 year analysis for students.

The commuting survey allows Sightlines to gather information to the details of how the institutional population is commuting to Millersville, how many trips, and how many weeks per year. In order to provide consistency in analysis, we have applied the mode of transportation percentages to all years based upon the conducted survey, and will continue to do this until a new survey is given. The only exception to this is the percentage of students commuting by car, as this is calculated by an extrapolation of current students living on campus, and the percentages of other forms of transportation. The miles per trip data is obtained by analyzing the institutional population’s zip codes relative to Millersville University.
Sightlines chose a peer group for Millersville that takes into consideration institutional size, region, technical complexity, and climate zone. This peer group consisted of Babson College, Bentley University, Fitchburg State University, Loyola University Maryland, Rider University, Slippery Rock University of Pennsylvania, The Richard Stockton University of New Jersey and The University of Dayton. The schools are arranged by density factor. In order to compare to peers, the emissions are normalized by the building footprint of campus (measured in gross square feet, GSF) as well as normalized by student. The two perspectives provide a different context for the analysis. When comparing emissions by GSF, the analysis stresses the efficiency in the operation of the physical plant. Analyzing emissions per student stresses the efficient use of space, the user density of campus, and captures the amount of emissions required to educate one student. Millersville lies slightly above the peer average on a Gross MTCDE/GSF basis (figure 3). Although Millersville is performing better on a consumption standpoint than in FY12, the electric dominated profile drives totals. When compared to the same peers on a per student basis, Millersville lies below the peer average. Millersville is a high-commuter campus with many students utilizing the space. Moving forward, Millersville will continue to focus on reducing its scope 2 emissions, and decrease its reliance upon electric energy.