

## Spelman Carbon Footprint Conclusion

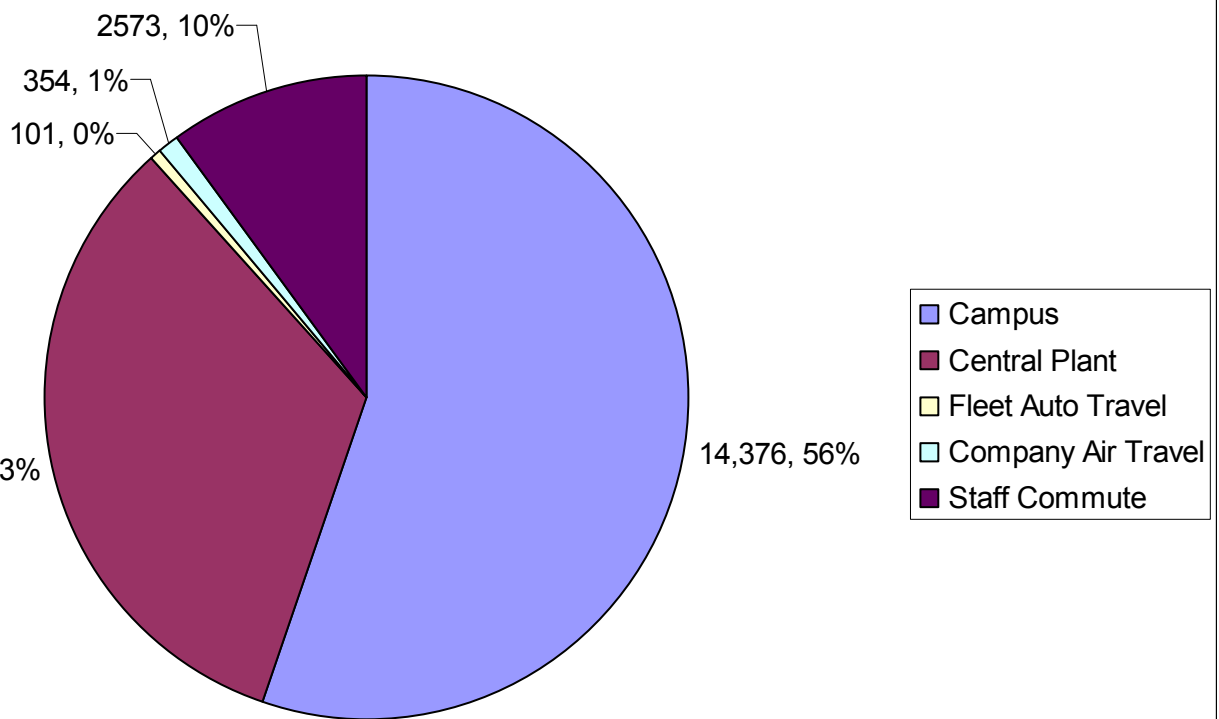
Taking into account Spelman's Campus and Central Plant, Staff Commutes, Air Travel, and Fleet Vehicle Travel there are a couple of areas where Spelman should focus their efforts to reduce the organization's environmental impact. *(Student commute data was inconclusive).*

The largest portion of Spelman's carbon footprint is its campus. The entire campus, or the combination of the Campus and the Central Plant utilities, accounts for 89% of Spelman's carbon footprint. This means that Spelman has to make their buildings more efficient to reduce its carbon footprint.

### Annual Carbon Footprint for 2008

Campus	14,376 tons of CO <sub>2</sub>
Central Plant	8,665
Staff Commute	2,573
Air Travel	354
Fleet Auto Travel	101
<b>TOTAL</b>	<b>26,069 tons of CO<sub>2</sub></b>

**Total Annual Carbon Footprint with Staff Commute for '08**  
(values in tons of CO<sub>2</sub>)



## **Cutting Emissions**

### **Campus Buildings (Top Priority)**

A perfect example of how Spelman can begin to cut their emissions can be found in the results of the energy audit of the Science Center. The audit report summarizes energy efficiency measures that will have a quick return on investment and also cut significant amounts of CO<sub>2</sub>. With a return on investment in 1.3 years, energy efficiency measures will result in approximately \$120,000 annual savings and prevent 2.4 million pounds of CO<sub>2</sub> from entering the atmosphere annually. That would reduce the annual carbon footprint by 1,183 tons, a 5% decrease from the total carbon footprint. Spelman should consider sub-metering the Science Center, implementing all of the recommendations in the audit report, and use the improvements as a model for the whole campus. It is clear that with energy efficiency measures, Spelman will save operating costs and significantly reduce CO<sub>2</sub> emissions.

Spelman should also consider creating a campus wide campaign which promotes the conservation of energy and educates people on energy and environmental issues. This has had a very significant impact on many campuses across the US.

### **Staff and Student Commute**

While Spelman should focus their efforts on implementing energy efficiency measures in their buildings, ~10% of Spelman's carbon footprint is the Staff Commute. While some organizations don't view staff commutes as their responsibility, the truth is that employers can have a great influence on how people get to work. By encouraging carpools and other alternative commute options, Spelman can influence employee habits in a way that benefits employees' lives and the environment. The Clean Air Campaign is often the best resource for improving the staff commute. Also, conducting in-house ride matching via carpool software or Google Maps is a strong option. Please review the recommendations under the "Staff Commute Recommendations" section earlier in this report.

While the Student Commute carbon footprint was not included due to inconclusive data, it is safe to say there is room for improvement here. For commuting students, consider implementing a campus wide program to promote alternative commuting such as carpooling and using public transit.

### **Fleet Vehicles and Air Travel**

As fleet vehicles and air travel are a combined 1.7%, focusing on reducing emissions here will not significantly decrease Spelman's carbon footprint. However, any decrease in emissions is excellent. If Spelman wishes to put some effort into these areas, please see the recommendations earlier in this report which include teleconferencing, choosing smarter airlines, and eliminating driving trips.

## **Summary**

As a whole, these are some of the strategies we would like to emphasize:

- Energy Efficiency in Buildings
  - Sub-Meter the Science Center
  - Improve energy efficiency of the Science Center based on the audit report
  - Use the improvements as a model for the campus
- Improve the Staff and Student Commute
  - Promote Carpooling & Use Alternative Commute Incentives
  - Clean Air Campaign Commuter Rewards
  - Internal infrastructure to support carpooling

- Carpool Mapping (Google Maps)
- Continue Tracking Performance
  - Use Carbon Footprint Tools provided to track improvement
  - Set and track annual goals for CO<sub>2</sub> emissions reductions

In setting concrete goals for reducing Spelman's carbon footprint, the ultimate and long-term goal is carbon neutrality (zero carbon dioxide emissions). Of course this is challenging and takes time, so it is important to set short-term, realistic carbon reduction goals. Spelman could use a percentage reduction strategy in setting goals, say 5% annually. These goals should also be modified and updated as appropriate to continuously approach carbon neutrality.

### **Offsets**

If you feel that you have made all of the buildings as efficient as possible, and improved the staff and student commutes, you may consider offsetting your carbon footprint. However, we feel that these energy improvements will take Spelman time, and carbon offsets should only be considered after the campus has explored and implemented all available measures to reduce its energy consumption.

Carbon offsets are credits that are purchased to fund projects that reduce the amount of carbon dioxide in the atmosphere, essentially negating your carbon emissions. Many criticize carbon offsets, arguing that they are less easily quantified when compared to efficiency improvements. There is also some controversy associated with planting trees to offset emissions due to many variables and questions of long term permanence. While there are many third party verification standards, there is not a unified standard for carbon offsets.

However, many proponents say that these offsets are creating measurable results. Offset projects include energy efficiency, renewable energy, reforestation, protection of forests in jeopardy, and others. If you consider purchasing offsets, you should ensure that the offset provider you choose has a third party certification that verifies the authenticity of the projects. Third party certifications include the Climate Community and Biodiversity Standard, the Gold Standard, the American Carbon Registry, and Green-e Energy among others. A list of potential providers can be found at [offsetoptions.com](http://offsetoptions.com), and some will let you choose the projects that offset your emissions. There are many options out there, but the most important thing to look for is third party verification.