

Introduction

Lexington has one of the highest per capita carbon emission rates in the United States. Both UK and KU have expressed the importance of reducing energy consumption to bring down carbon emission. The generation of electricity is responsible for most of this carbon emission, which in Lexington, is generated from coal. Kentucky Utilities (KU) reports that 95% of the electricity generated comes from coal. The University of Kentucky (UK) purchases 65% of their electricity from KU and in addition burns on average 33,811 tons of coal per year.

Purpose

To help reduce the carbon footprint of students by helping them replace incandescent light bulbs with Energy Star® compact fluorescent light bulbs. In the process we asked students to fill out a survey to understand their current energy use and their future habits.

Methods

The survey was developed based on a Proceedings of the National Academy of Science (PNAS) paper by Deitz titled 'Household actions can provide a behavioral wedge to rapidly reduce US carbon emissions'. We wrote the survey using this paper as a guide. The survey includes questions about students' current commuting patterns, interest in green energy and car maintenance. In addition the survey asks about students future energy consumption. All of the behaviors listed in the survey were based on behaviors that were listed in the PNAS paper that reduce energy consumption.

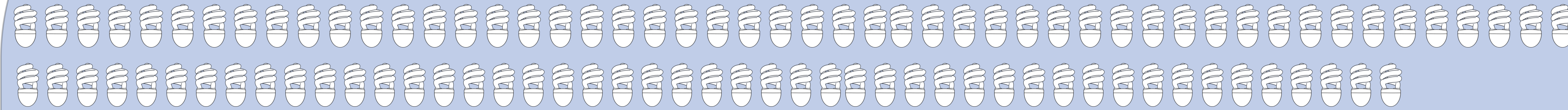
This was the survey process:

- First a two page survey was handed out with a letter explaining what the information would be used for and our project.
- Then once the subject completed the survey they were offered a Energy Star® compact fluorescent light bulb.
- Then all the surveys were manually entered into excel.
- Then the spreadsheet was brought in to SPSS where it was analyzed.

The survey given to students

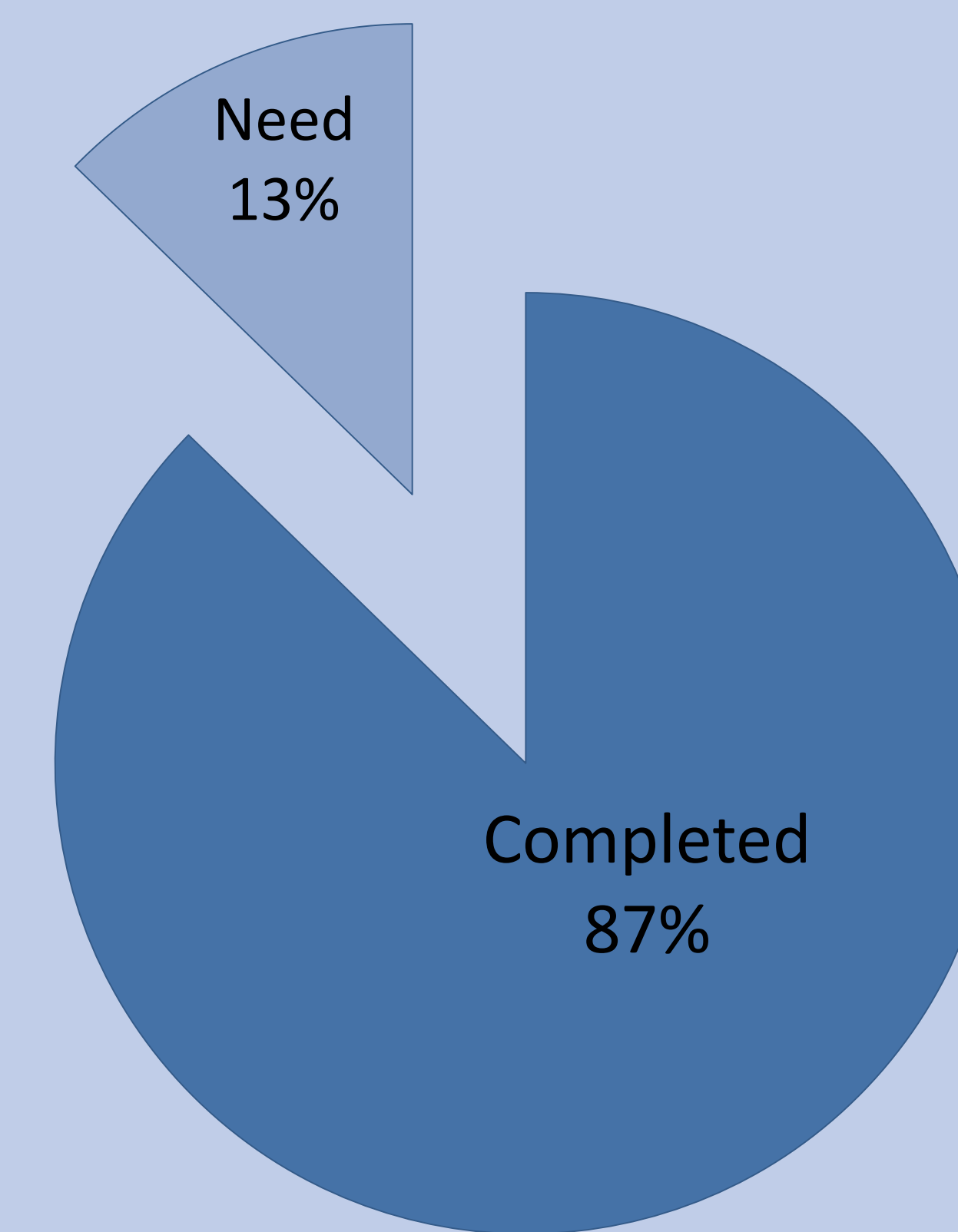
Progress

97 compact fluorescent light bulbs have been handed out to students



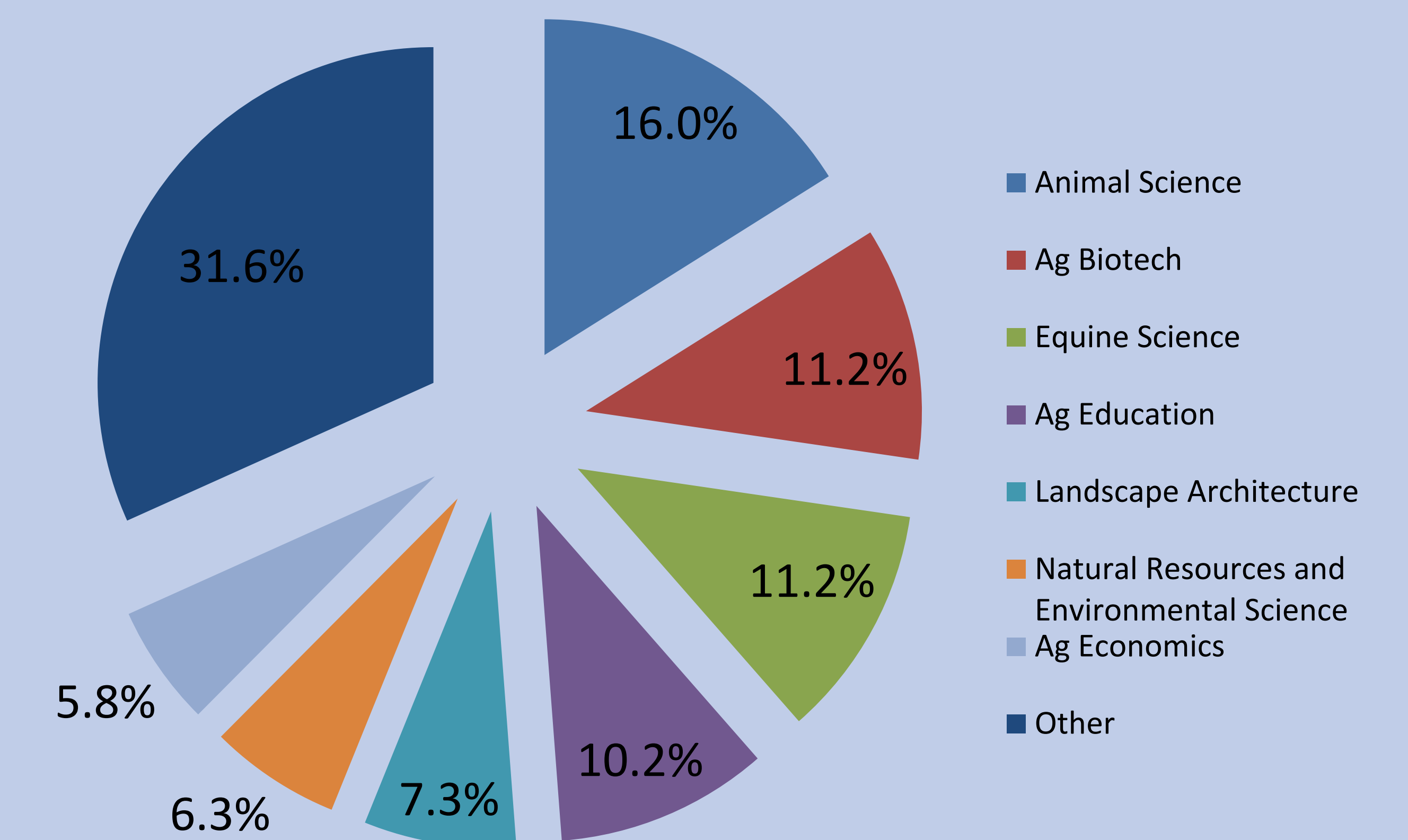
If all these bulbs replaced incandescent light bulbs then approximately 30,000 kwhs (\$2,500) will be saved over the life of these CFLs.

Percent of Completed Surveys



We only require approximately 30 more surveys

Majors Captured Through Surveying



While we have preliminary results we need the remaining surveys to capture the correct proportion of students in the College of Agriculture to accurately represent them. We are excited the data we have collected and hope to have a report soon.

Special Thanks

We would like to thank:

- Suzette Walling and Rebecca McCully for all their input and help along the way.
- Tracy Farmer Institute for Sustainability and the Environment for the grant and opportunity to study this important issue.
- Rosemarie Runyons and Lisa Harm for helping us reserve spaces to administer the survey.

Thanks!

References

Deitz et al, 2009 *Household actions can provide a behavioral wedge to rapidly reduce US carbon emissions* PNAS