

# NORTH CAROLINA STATE UNIVERSITY

## Assessing Student Attitudes Toward Sustainability Issues



Submitted by:  
Energy Management  
University Sustainability Office  
Facilities Operations  
NC State University

February 2012

## Student Sustainability Attitude Survey Project Introduction

**Survey Project Description** –Energy Management and Office of Sustainability conducted a student survey that measures current attitudes and behaviors regarding sustainability, energy, transportation, waste reduction and recycling was in Feb 2010. This survey was a repeat of the 2010 survey, some additional questions were included, and the focus was shifted slightly towards energy. Many questions from the 2010 survey were also included to allow for comparison.

**Business Case** – Given the downward pressure on university budgets, a student survey was the best method to maximize limited outreach dollars by gaining a statistical understanding of student behaviors and attitudes.

**Survey Methods** – An on-line questionnaire was sent to 5,000 randomly selected enrolled NC State students, undergraduates and graduates, who live on and off campus, on Oct 19, 2011. The questionnaire was closed on Nov 11, 2011.

**Survey Response Rate and Sampling Error** – 827 students completed the questionnaire; thus, the survey had a 17% response rate.

**Limitations** – The survey is subject to self-selection bias (e.g., respondents with an interest in sustainability were more likely to notice the call for participation). As such, the questionnaire results may, or may not, be representative of the entire student population.

### **Project Leadership:**

Paul McConocha, Energy Program Manager, Energy Management, Utilities and Engineering  
Tracy Dixon, Director, Office of Sustainability  
Roxanne Ryan, Energy Program Assistant, Energy Management, Utilities and Engineering

### **NC State Survey Project Partners:**

Office of Energy Management  
Office of Sustainability  
Waste Reduction & Recycling  
Transportation Office  
University Planning and Analysis

### **Key Survey Findings:**

- 47% of students feel that NC State does not give enough attention to the issue of climate change.
- 83% of respondents think that it is important for Americans to conserve personal use of energy.
- 78% of the student sample think that it is important for NC to be a leader in sustainability and the environment, this is less than 2010, when 85% indicated it was important.
- 66% of the student sample indicated they had never heard of the *Change Your State* campaign.

*Who took the survey?*

Total 2011 Undergrad and Grad Student Population : 34,767  
 Randomly generated sample frame: 5,000  
 Response rate: 826 students (17%)  
 Survey Period: October 19, 2011 to November 9, 2011

**WHAT IS YOUR STUDENT CLASSIFICATION?**

Freshman 134 (16%)	Junior 132 (16%)
Graduate Student 297 (36%)	Senior 150 (18%)
	Sophomore 112 (14%)

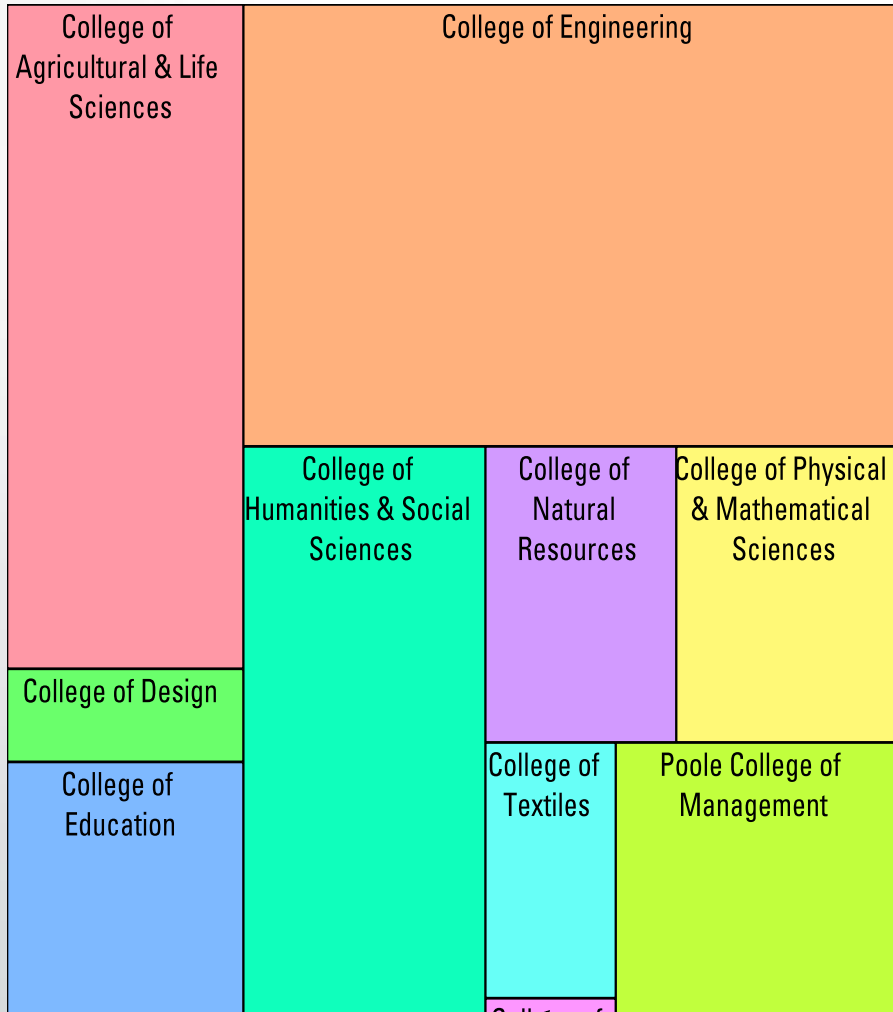
**WHAT IS YOUR GENDER?**

Female 409 (50%)	Male 409 (50%)
------------------------	----------------------

**DO YOU LIVE ON- OR OFF-CAMPUS?**

off-campus 554 (67%)	on-campus 271 (33%)
----------------------------	---------------------------

## WHAT IS YOUR ACADEMIC COLLEGE AFFILIATION?

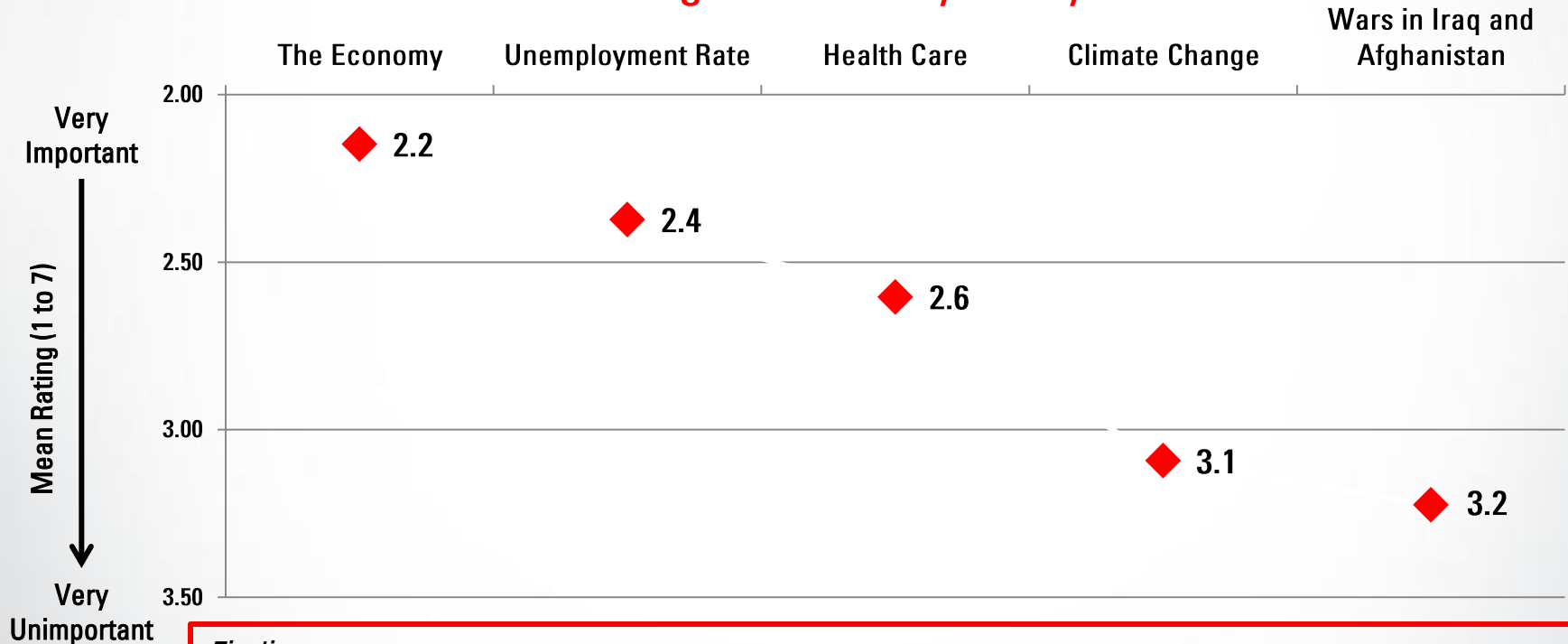


College of Veterinary Medicine

College	Survey		Actual* (%)
	count	(%)	
Engineering	263	32	25
Agricultural & Life Sciences	142	17	16
Humanities and Social Sciences	125	15	15
Management	70	9	9
Physical & Mathematical Sciences	60	7	5
Education	54	7	6
Natural Resources	51	6	5
Textiles	30	4	3
Design	20	2	2
Veterinary Medicine	2	0.2	1

\*Actual percentages taken from the registrars office website

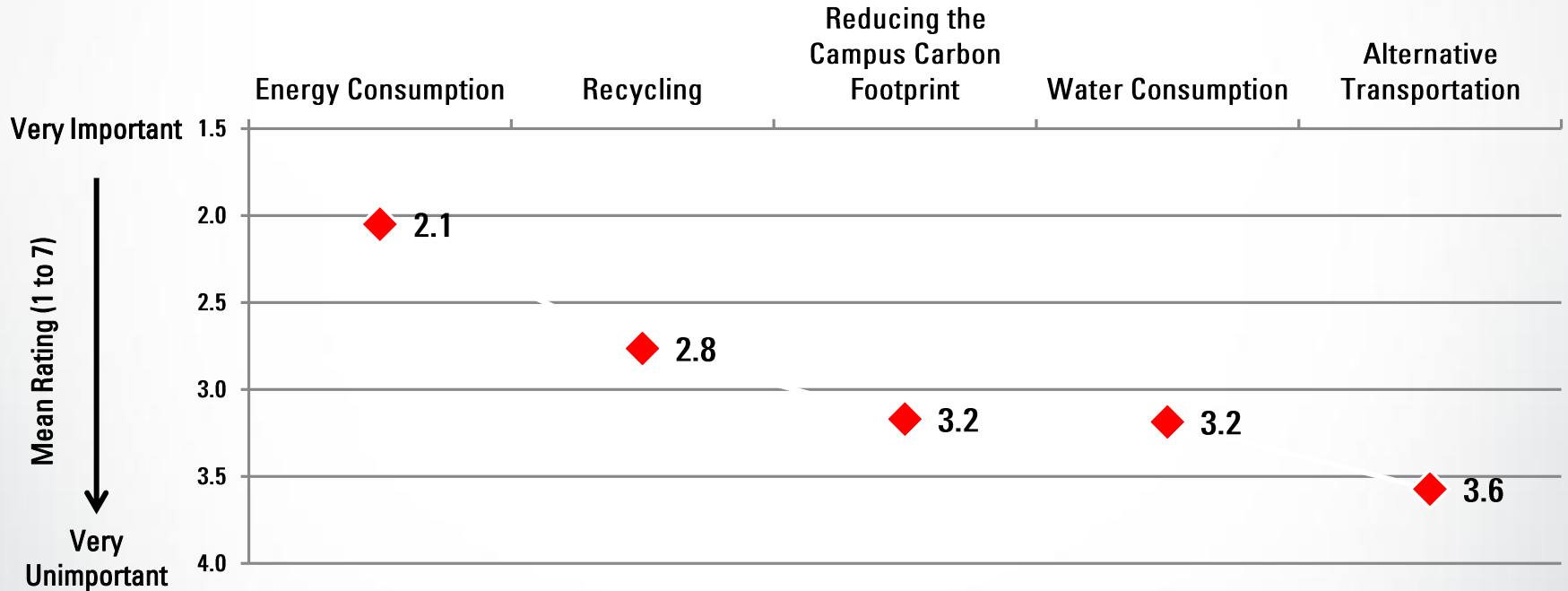
On a Scale of 1 to 7, with 1 meaning “Very important” and 7 meaning “Very Unimportant” how important to you is each of the following issues facing the country today?



**Findings:**

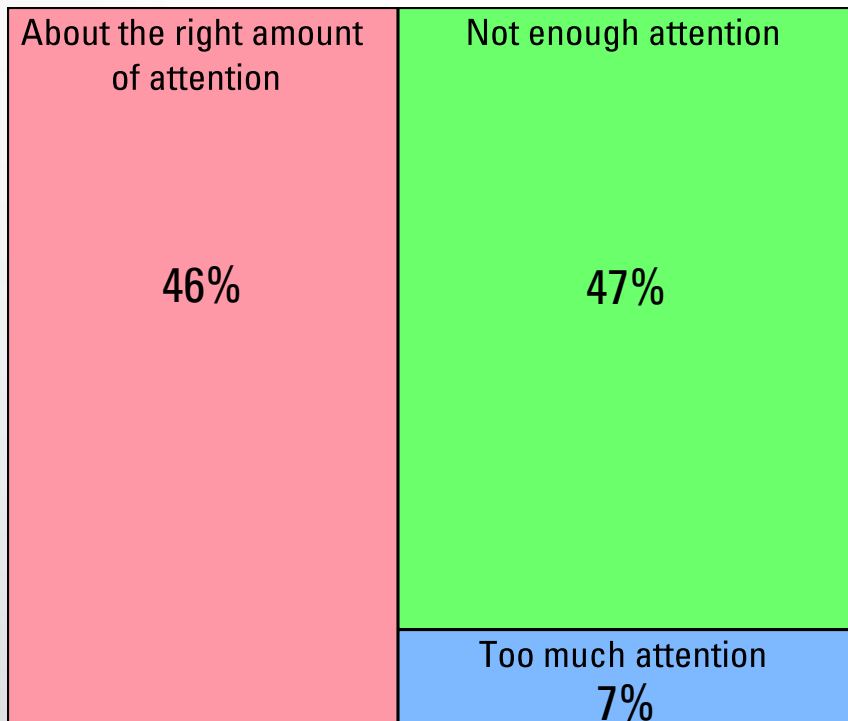
- Respondents feel that the economy, the unemployment rate, and health care are more important than climate change.
- This is consistent with the Feb. 2010 survey, in which economy and health care were found to be more important than climate change (unemployment rate was not included).

Please rank in order of importance the following environmental related issues at NC State. Where 1 is “Most Important” and 7 is “Least Important”.



**Finding:** Respondents indicated that energy consumption is the most important environmental issue at NC State, this is a change from the Feb. 2010 survey where recycling was found to be the most important followed by energy consumption.

## Which of the following best describes the amount of attention given to the issue of climate change at NC State?



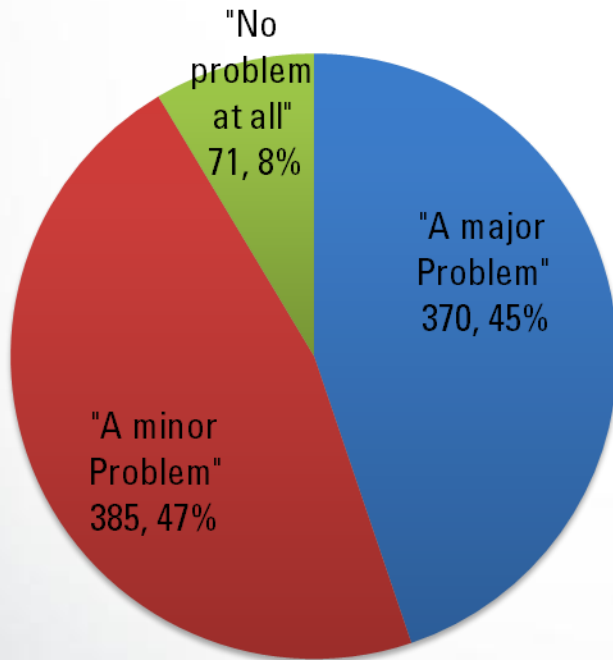
*Finding:*

Almost 50% of Students feel that NC State should be giving more attention to climate change.

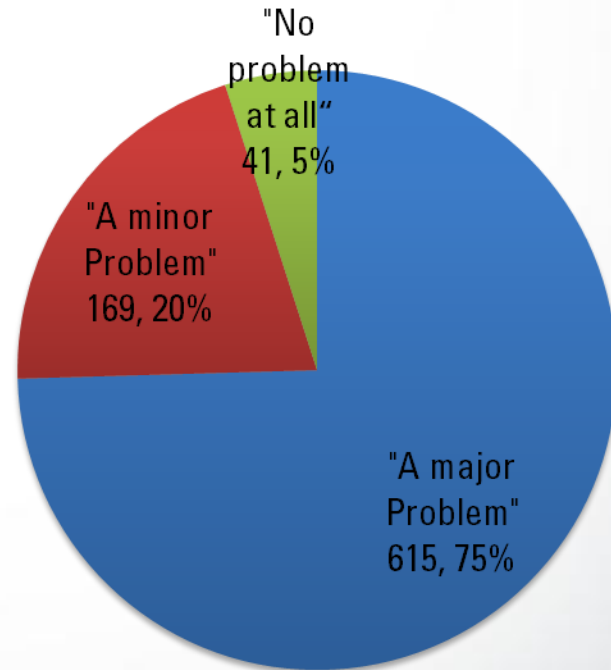
The University should step up education efforts and encourage programs which address climate change.

Global climate change refers to an increase in the earth's air and water temperature caused by greenhouse gases released into the atmosphere.

In my lifetime I think that global climate change will be:

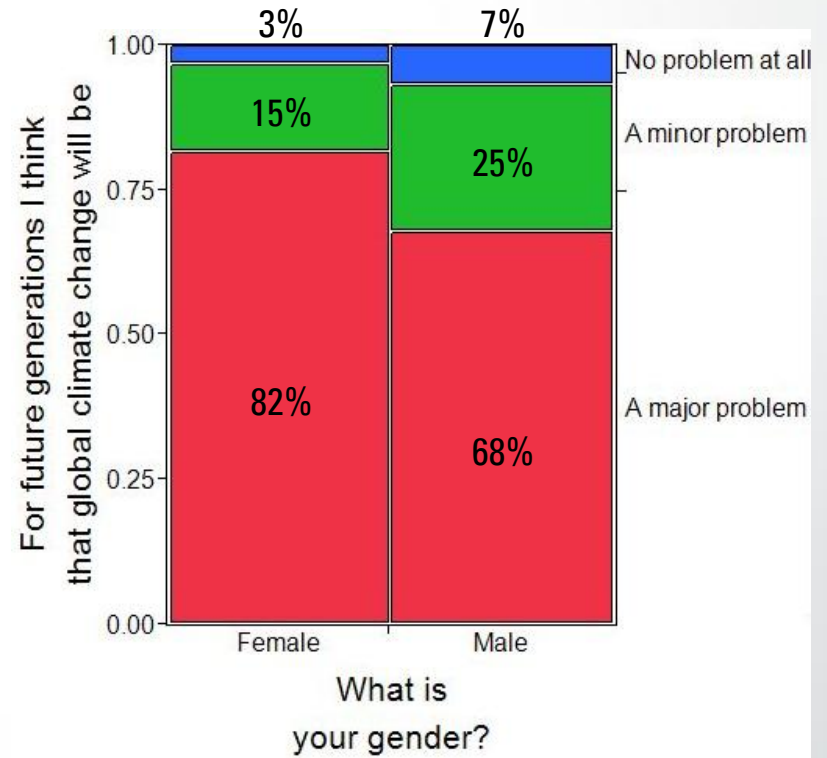
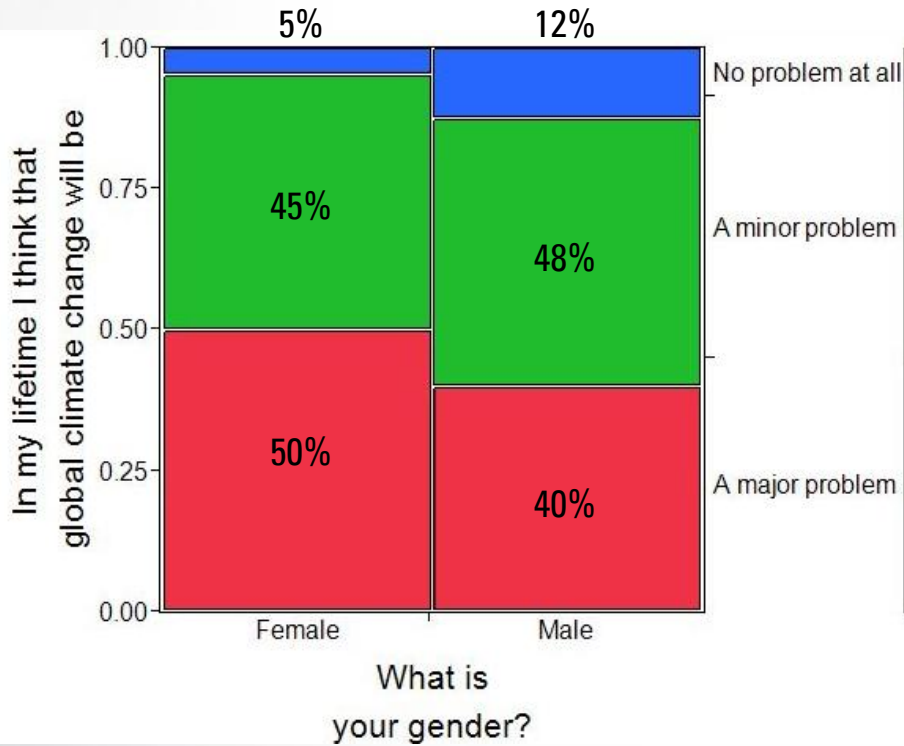


For future generations I think that global climate change will be:





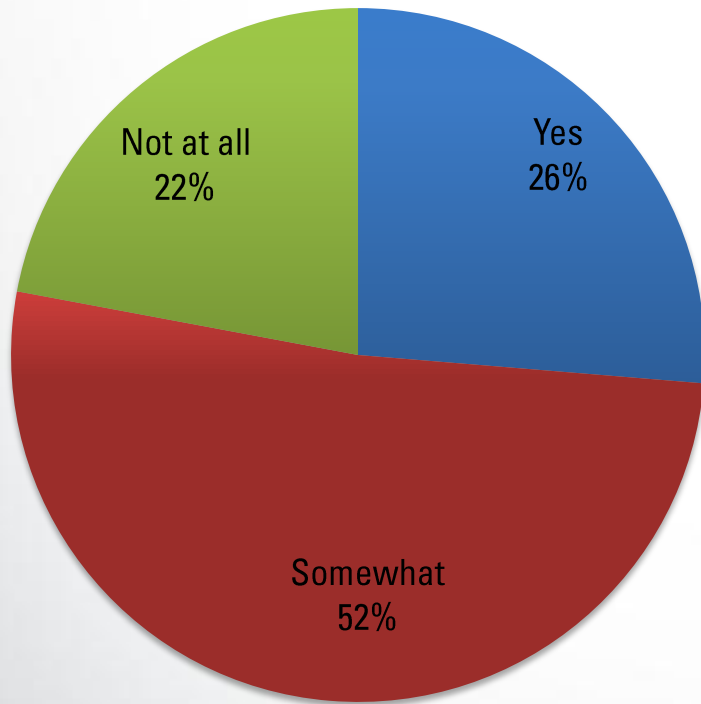
In *my lifetime* I think that global climate change will be: “A major problem”, “A minor problem”, “No problem at all”



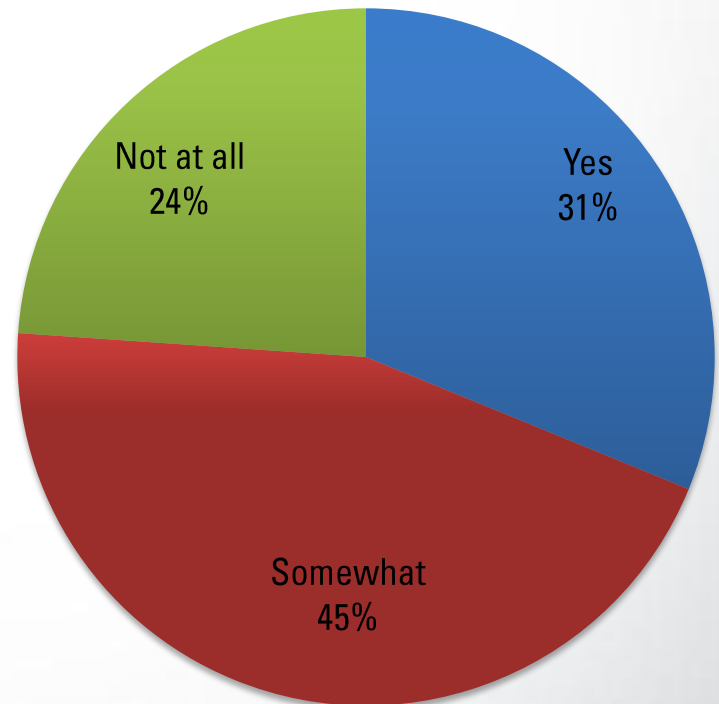
**Finding:** Female respondents are more concerned about global climate change than male respondents. Both males and females feel global climate change will be a bigger problem for future generations.

# Do you feel, as an individual, that your actions will affect the impact NC State has on the global climate and environment...

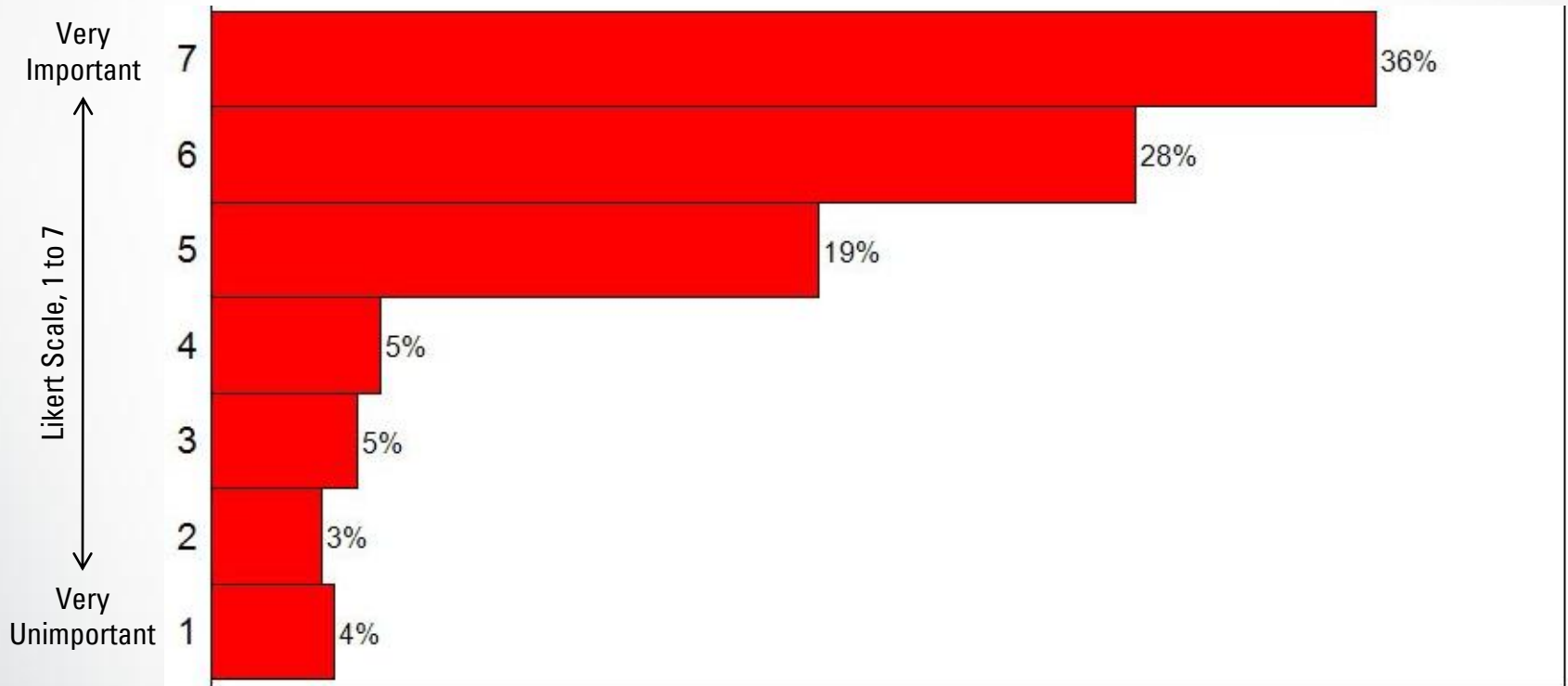
In your lifetime?



In future generations?

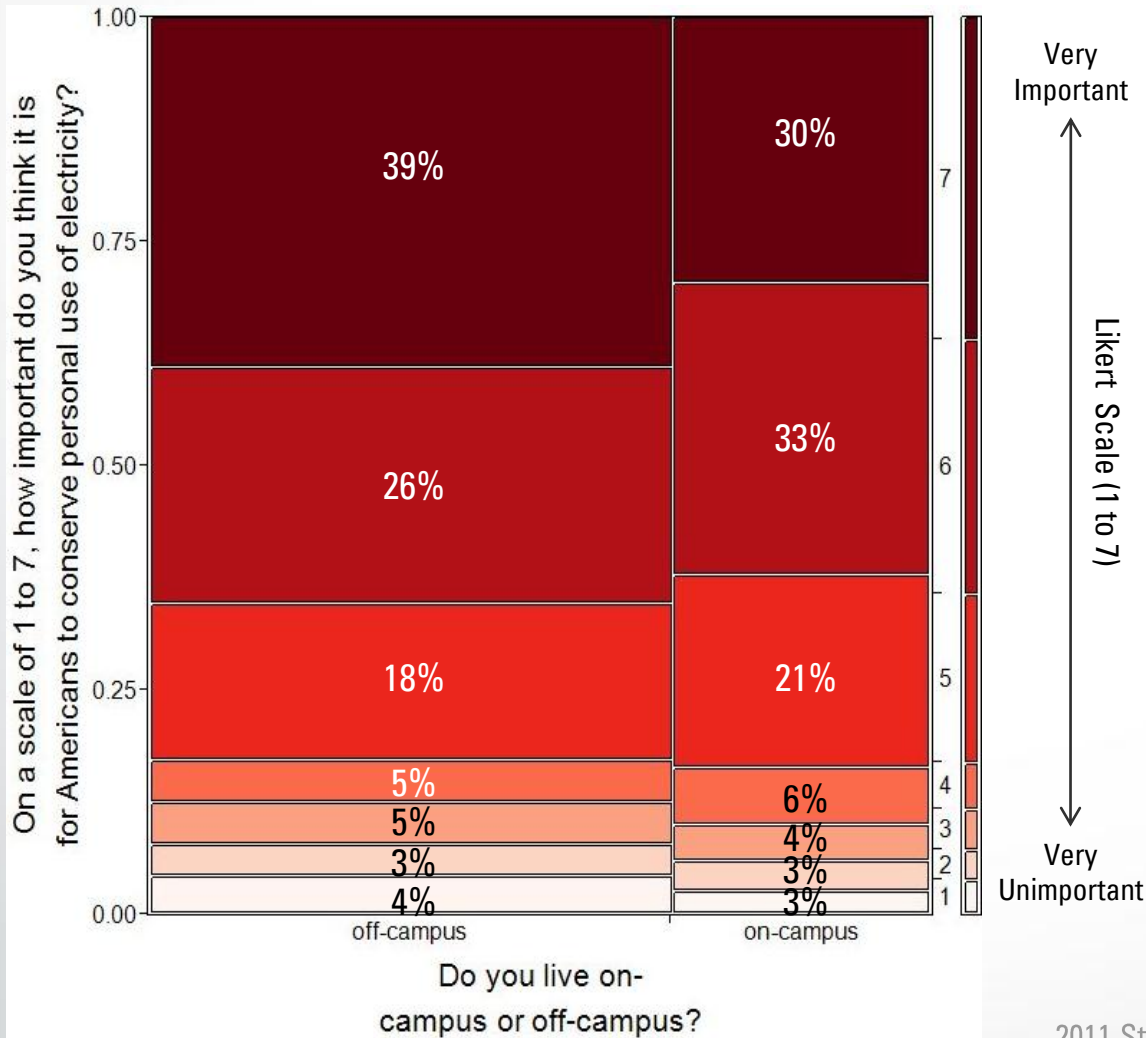


On a scale of 1 to 7, where 1 means “Very Unimportant” and 7 means “Very Important”, how important do you think it is for Americans to conserve personal use of electricity?



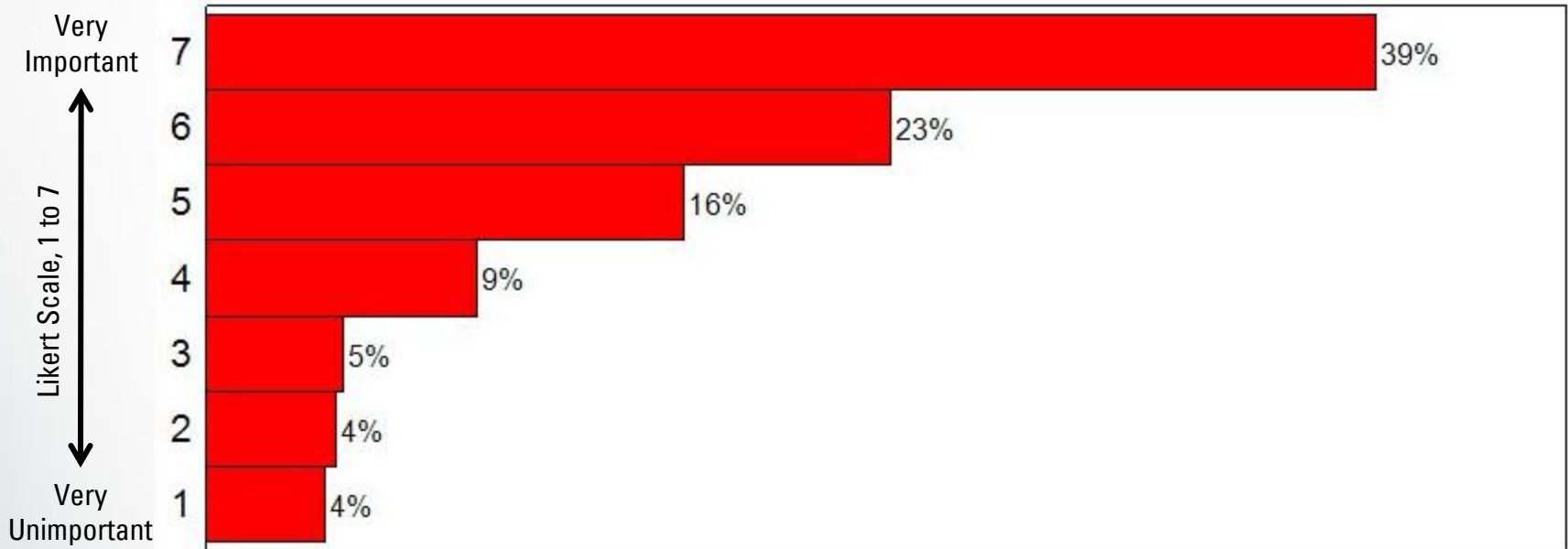
**Finding: 83% of respondents think that is important to conserve personal use of electricity.**

On a scale of 1 to 7, where 1 means “Very Unimportant” and 7 means “Very Important”, how important do you think it is for Americans to conserve personal use of electricity?



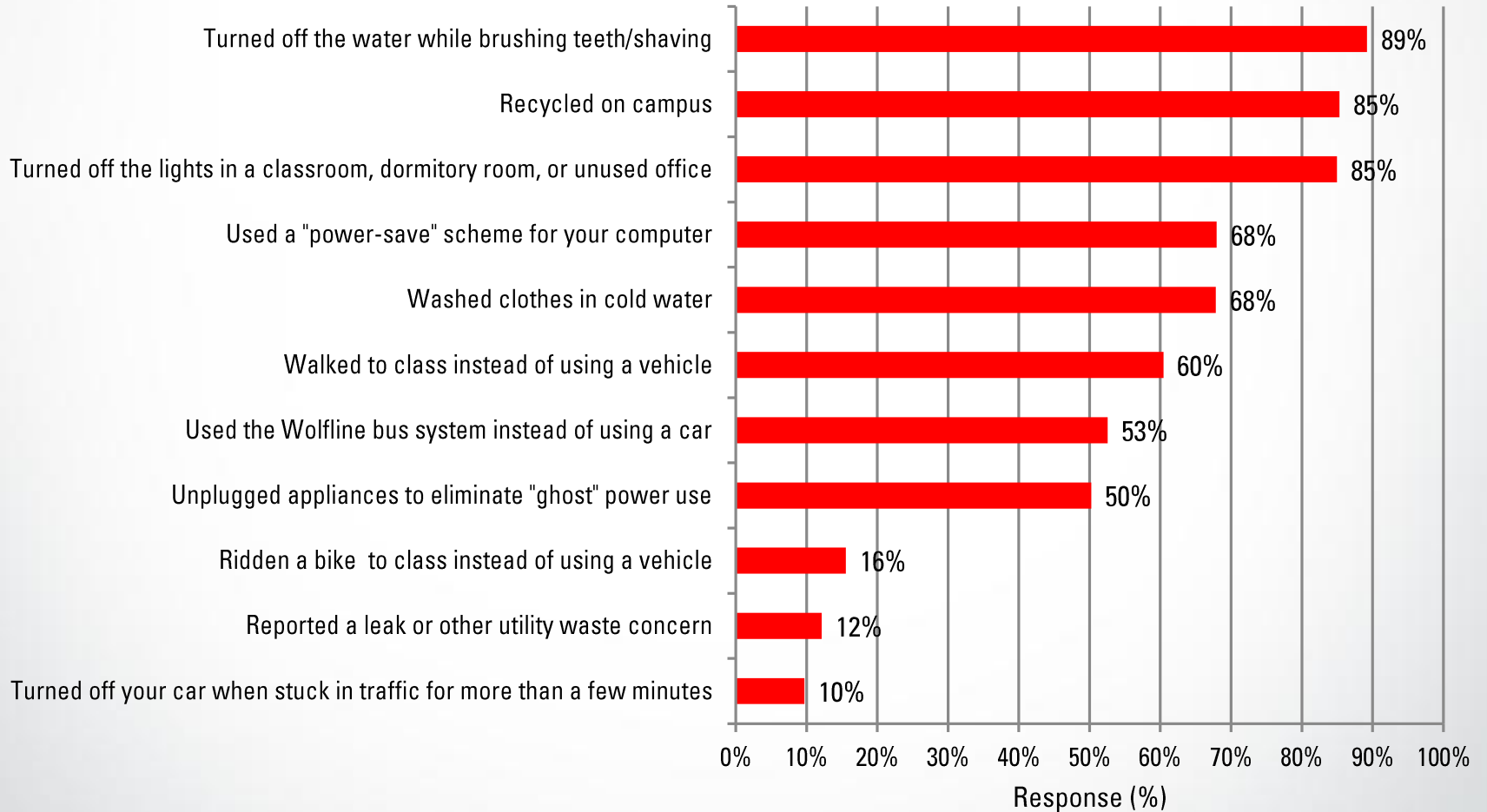
*Finding:* Students who live off campus think that is slightly more important to cut down on personal electricity usage, then those who live on campus. This could be because off campus students frequently pay their own utility bills.

On a scale of 1 to 7, where 1 means “Very Unimportant” and 7 means “Very Important”, how important is it to you that NC State be a leader in sustainability and the environment?

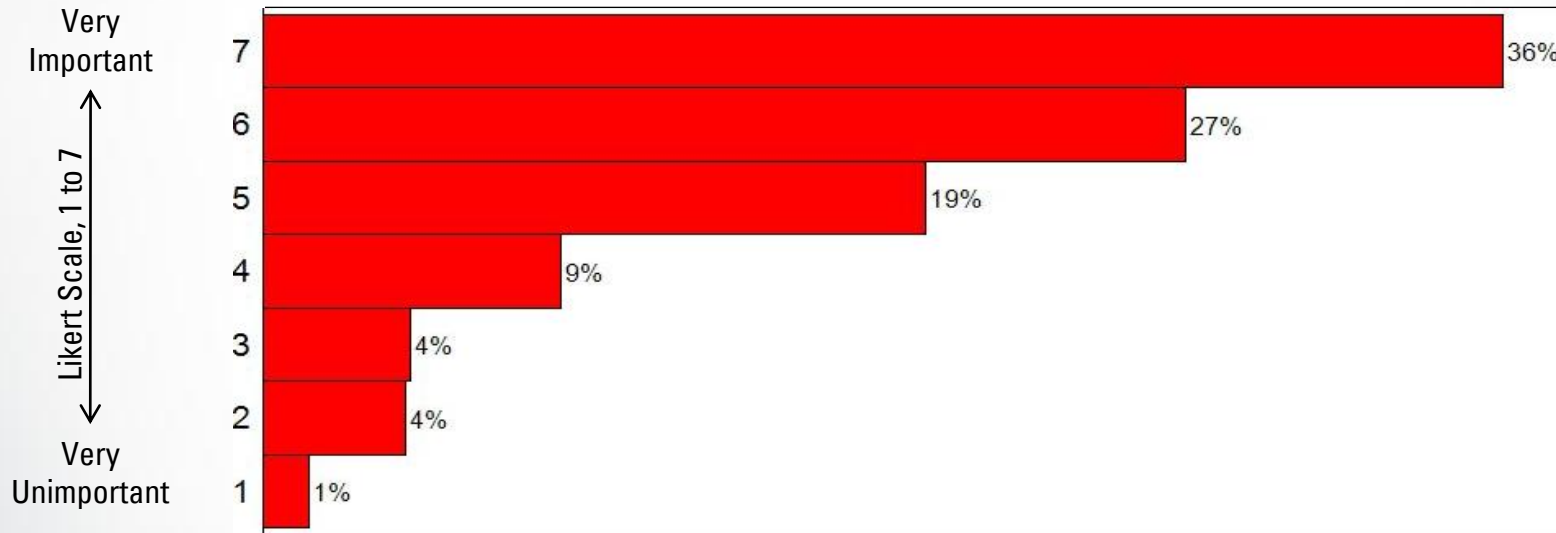


Finding: 78% of respondents think that it is important for NC State to be a leader in sustainability and the environment. This is less than the 2010 survey where 85% of students indicated that being a leader was important.

Please indicate which of the following you have done or used in the last 30-days (mark all that apply).

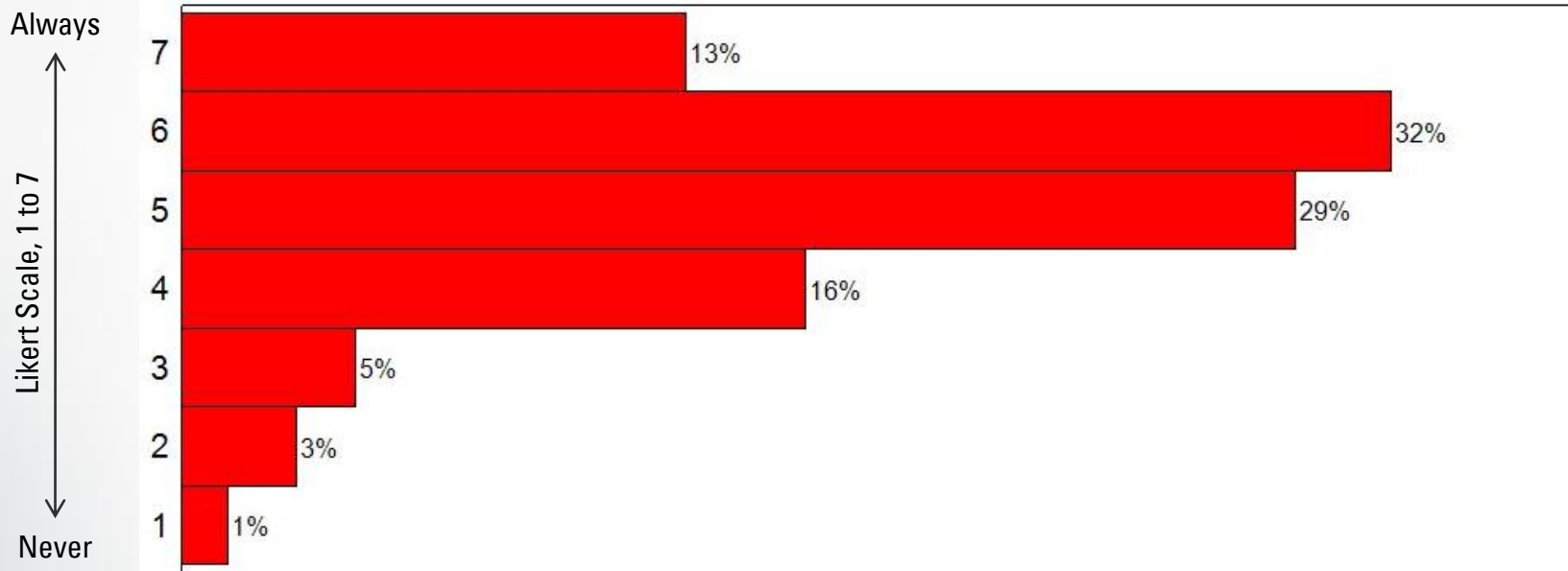


On a scale of 1 to 7, where 1 means “Very Unimportant” and 7 means “Very Important”, how important is it to you to recycle the products you use?



Finding: 82% of respondents think that it is important to recycle the products they use. In 2010, the response was 85%.

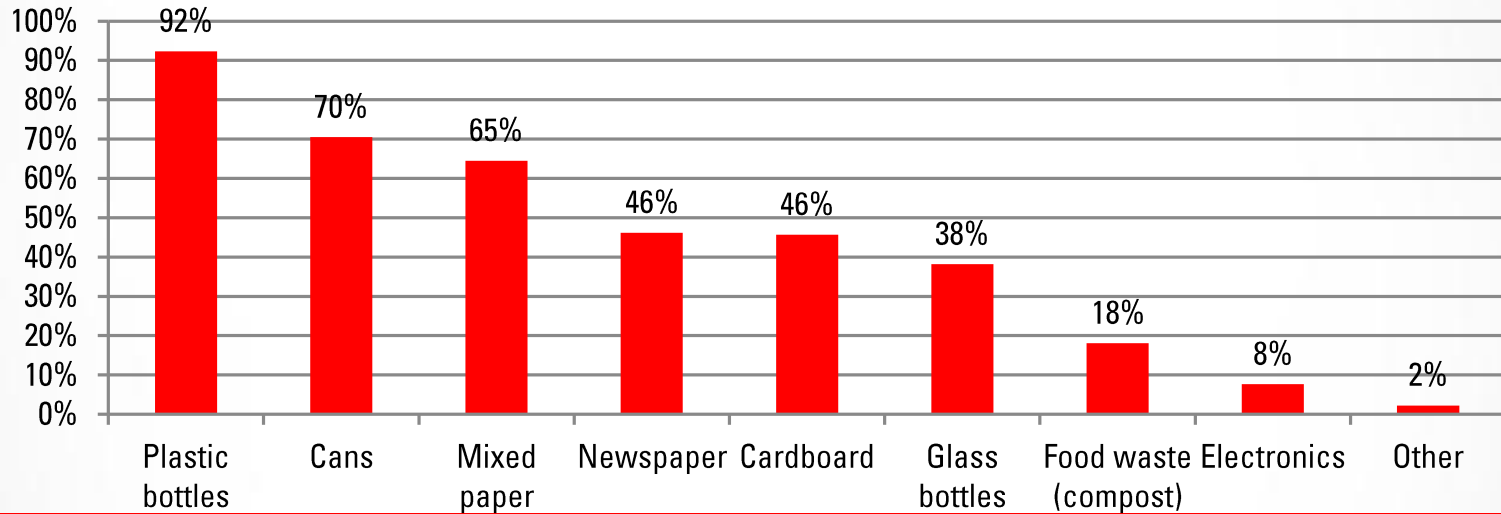
On a scale of 1 to 7, 1 being "Never" and 7 being "Always", to what extent do you practice the 3-Rs, Reduce, Reuse, Recycle?



Finding: 75% of respondents consistently practice the 3-Rs



## What types of items do you regularly recycle on NC State's Campus? (mark all that apply).



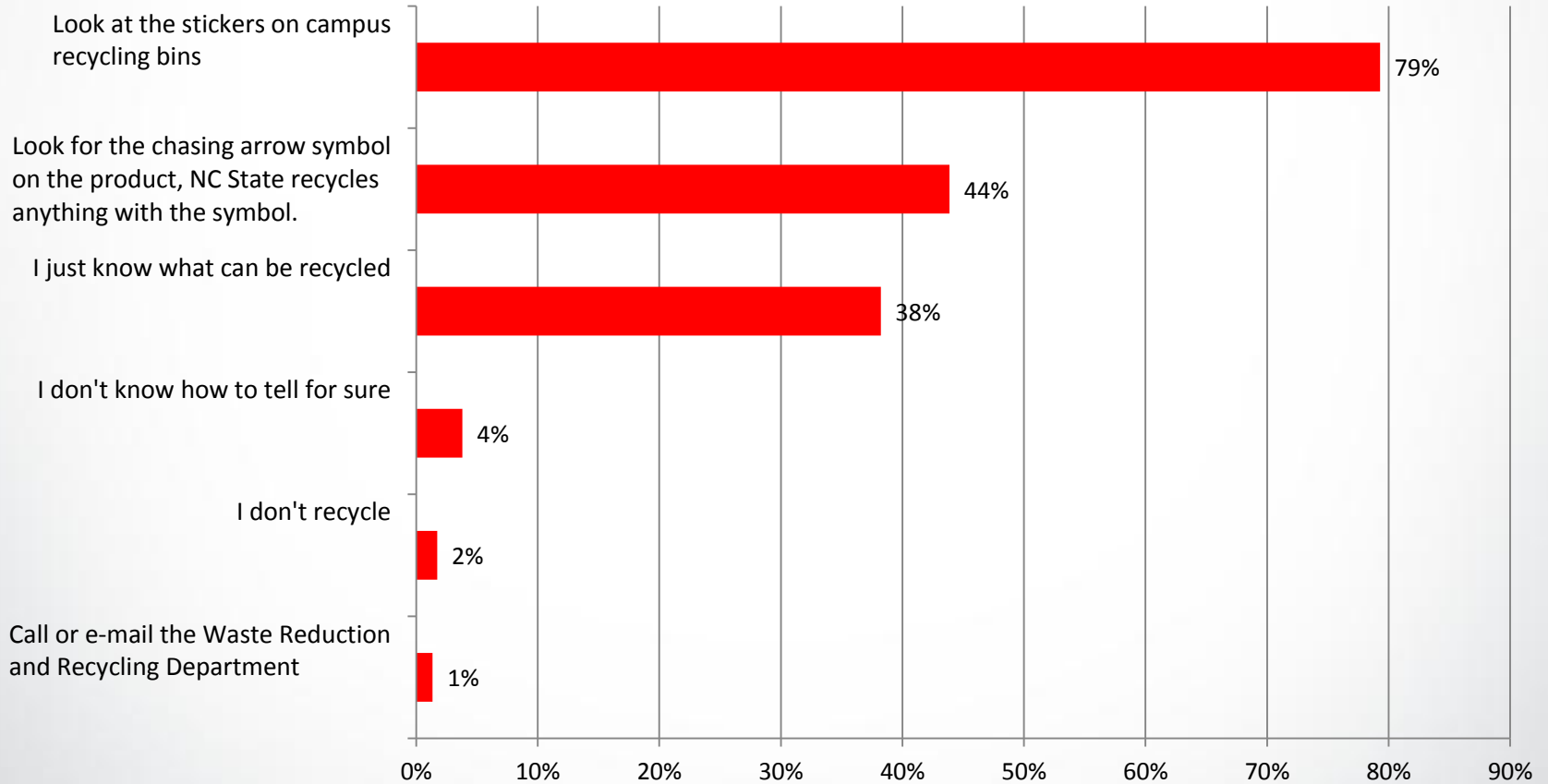
*Other responses: "ink cartridges" , "laundry" , "Batteries" , "Throw away plates and spoons" , "Polythene bags" , "lab stuff eg. pipette tip box" , "plastic grocery bags" , "Compost at Home"*

*"I don't recycle anymore. I've seen the recycling people toss recycles in the garbage. Waste of students' time to try."*

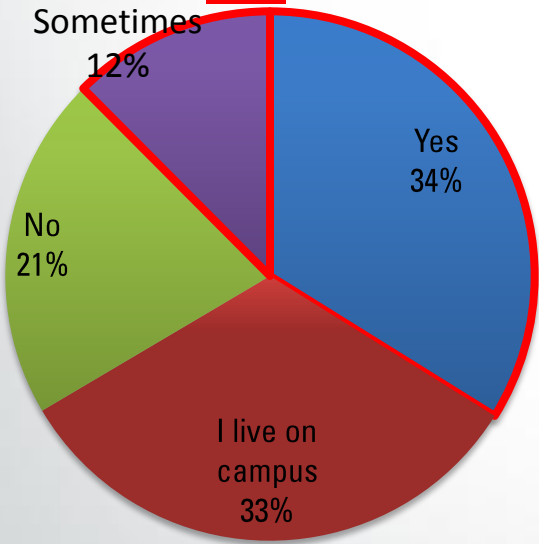
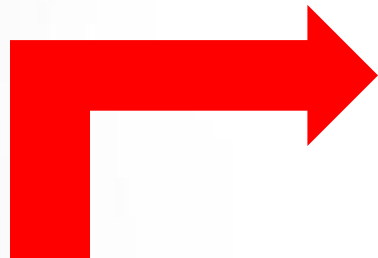
*"there is no compost bin at state that i know of"*

7 students indicated that they were distance education students and therefore the question was not applicable to them.

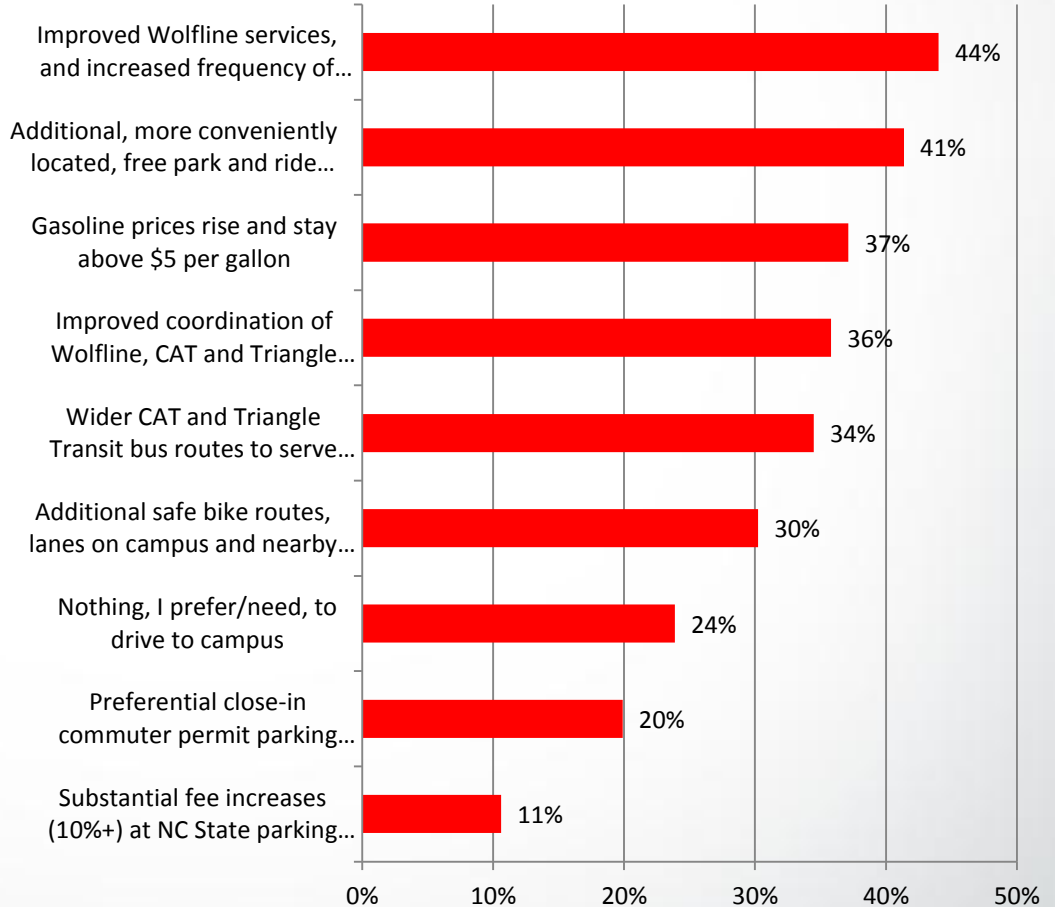
# What do you do when you are trying to determine if an item can be recycled at NC State?(Mark all that apply)



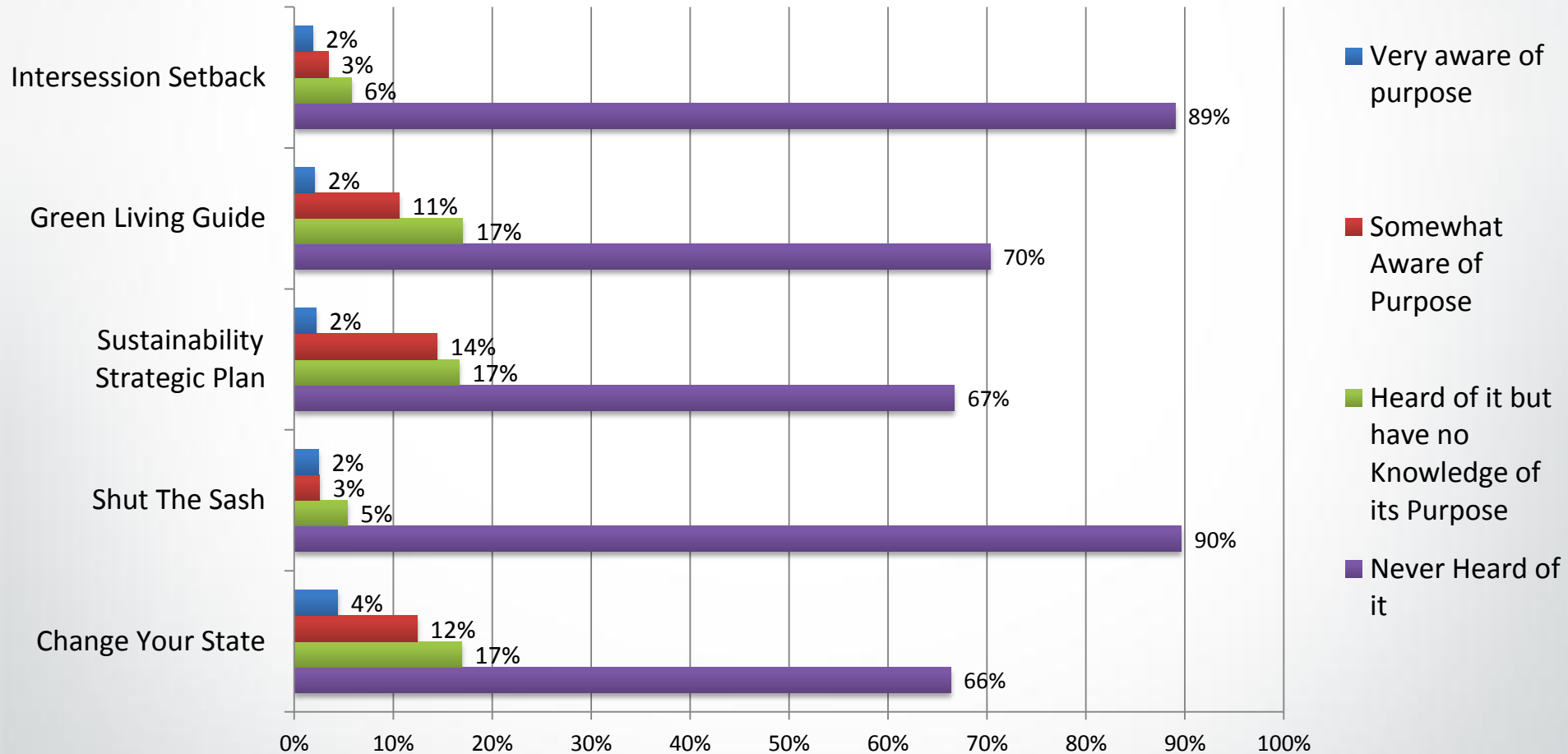
If you live off campus do you commute alone to campus in a motor vehicle?



If yes or sometimes, please indicate what would motivate you to leave your vehicle at home, reduce the distance you drive alone, or otherwise alter your travel mode (mark all that apply) ?

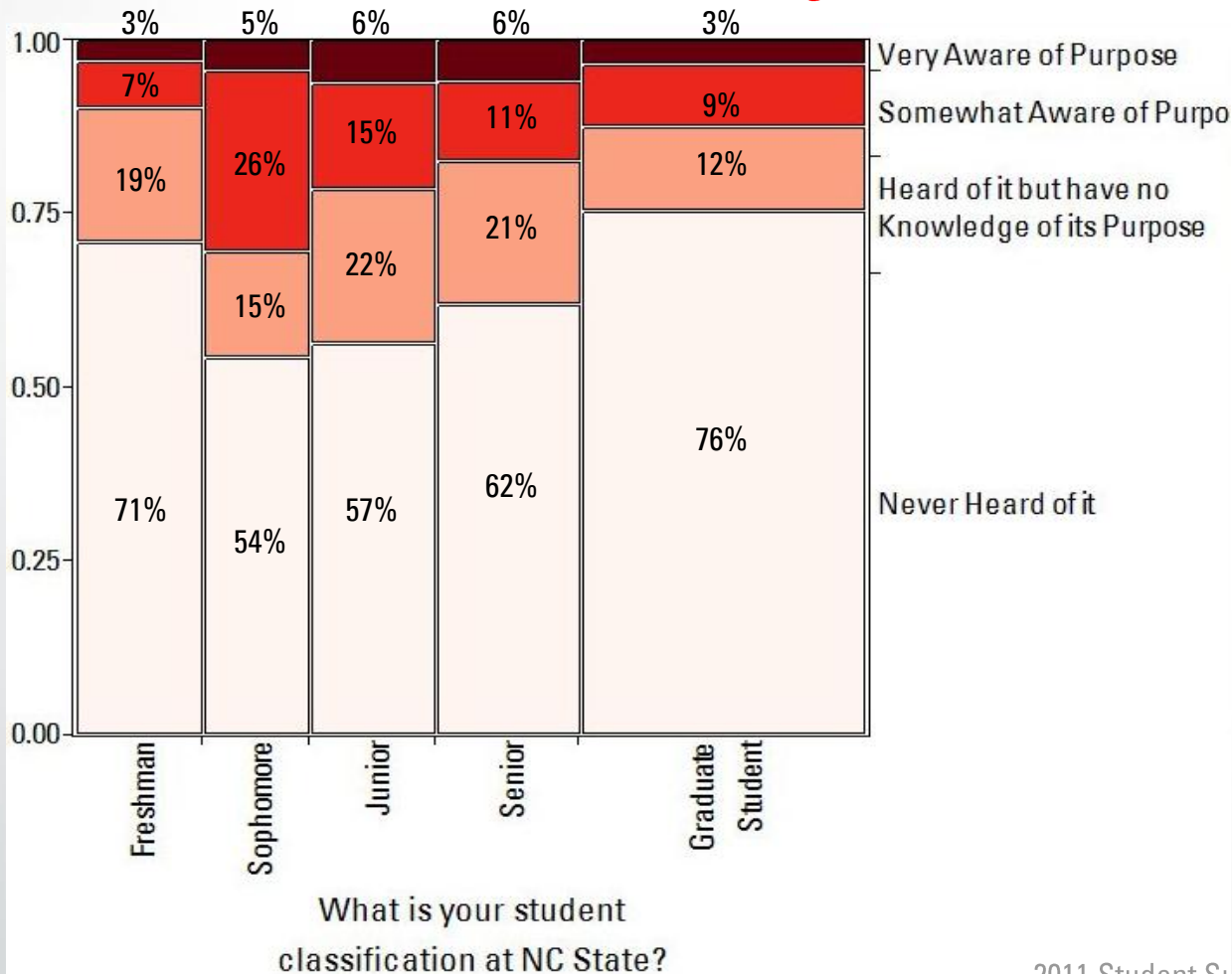


## Please indicate the extent of your awareness of the following sustainability campaigns at NC State.



Please indicate the extent of your awareness of the following sustainability campaigns at NC State:

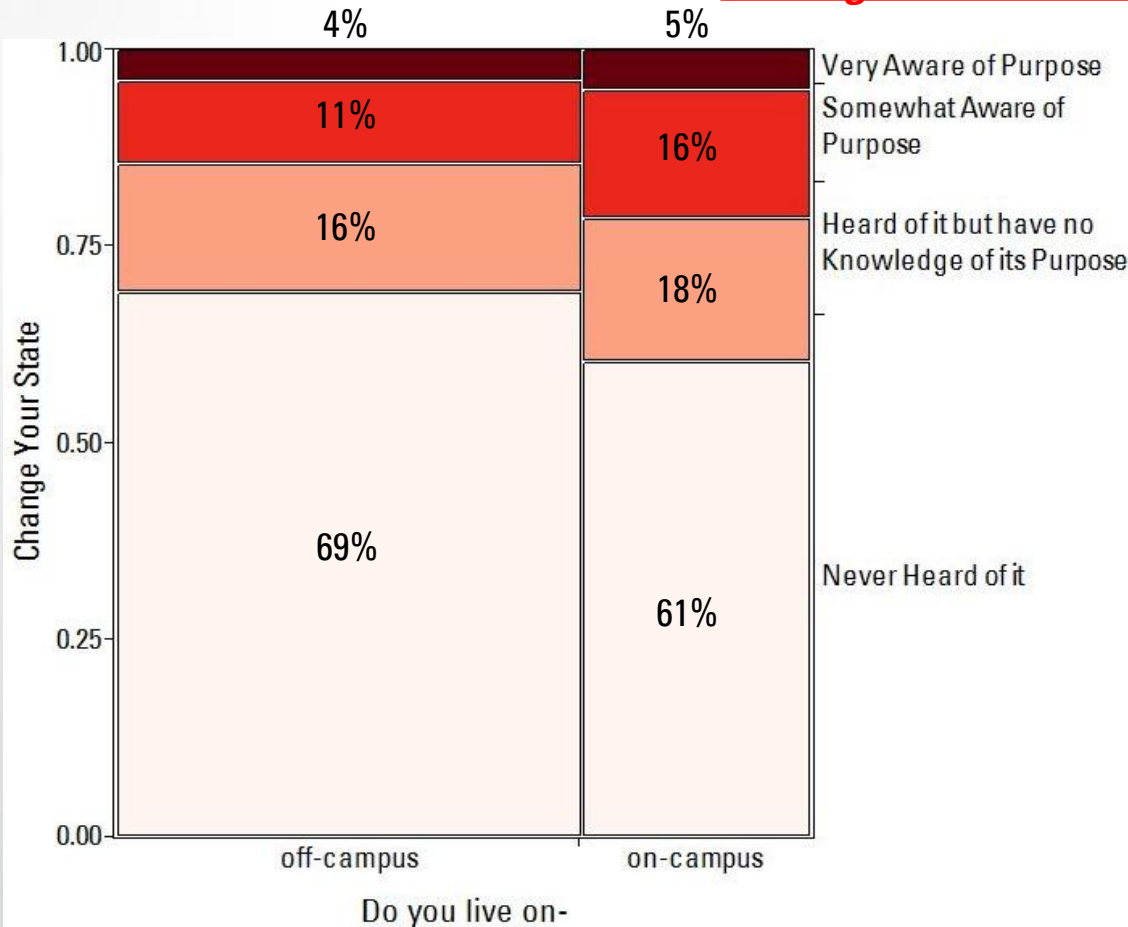
Change Your State



**Finding:** Over all 66% of respondents have never heard of *Change your State*. The biggest opportunity for increased outreach efforts are within the freshman class, and within the Grad school, as they have the highest percentages of students indicating that they have never heard of *Change Your State*.



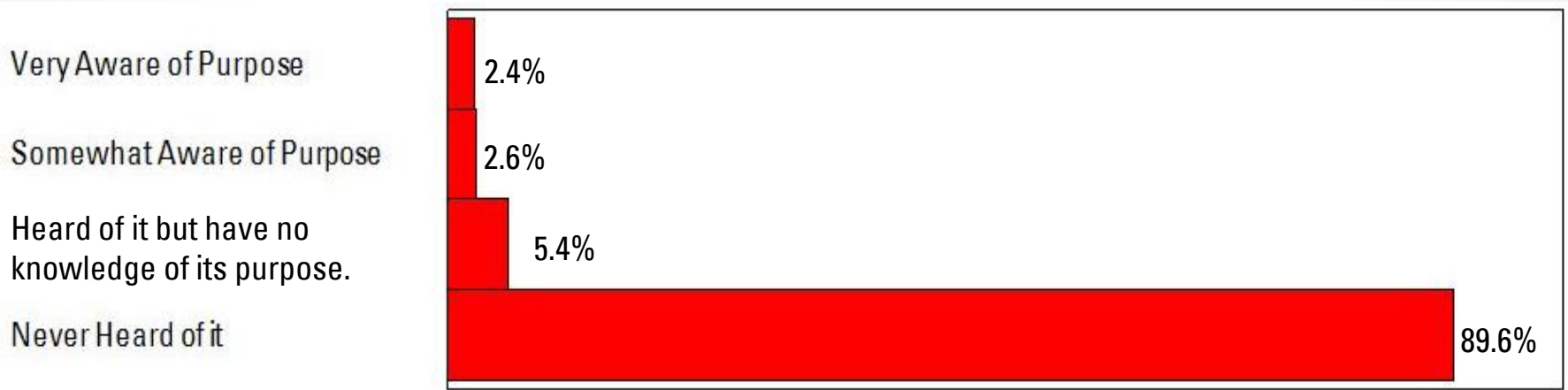
Please indicate the extent of your awareness of the following sustainability campaigns at NC State:  
*Change Your State*



**Finding:**  
 Students who live on campus are slightly more aware of *Change Your State*, then those who live off campus. This shows that there is an opportunity to increase outreach efforts for off campus students.

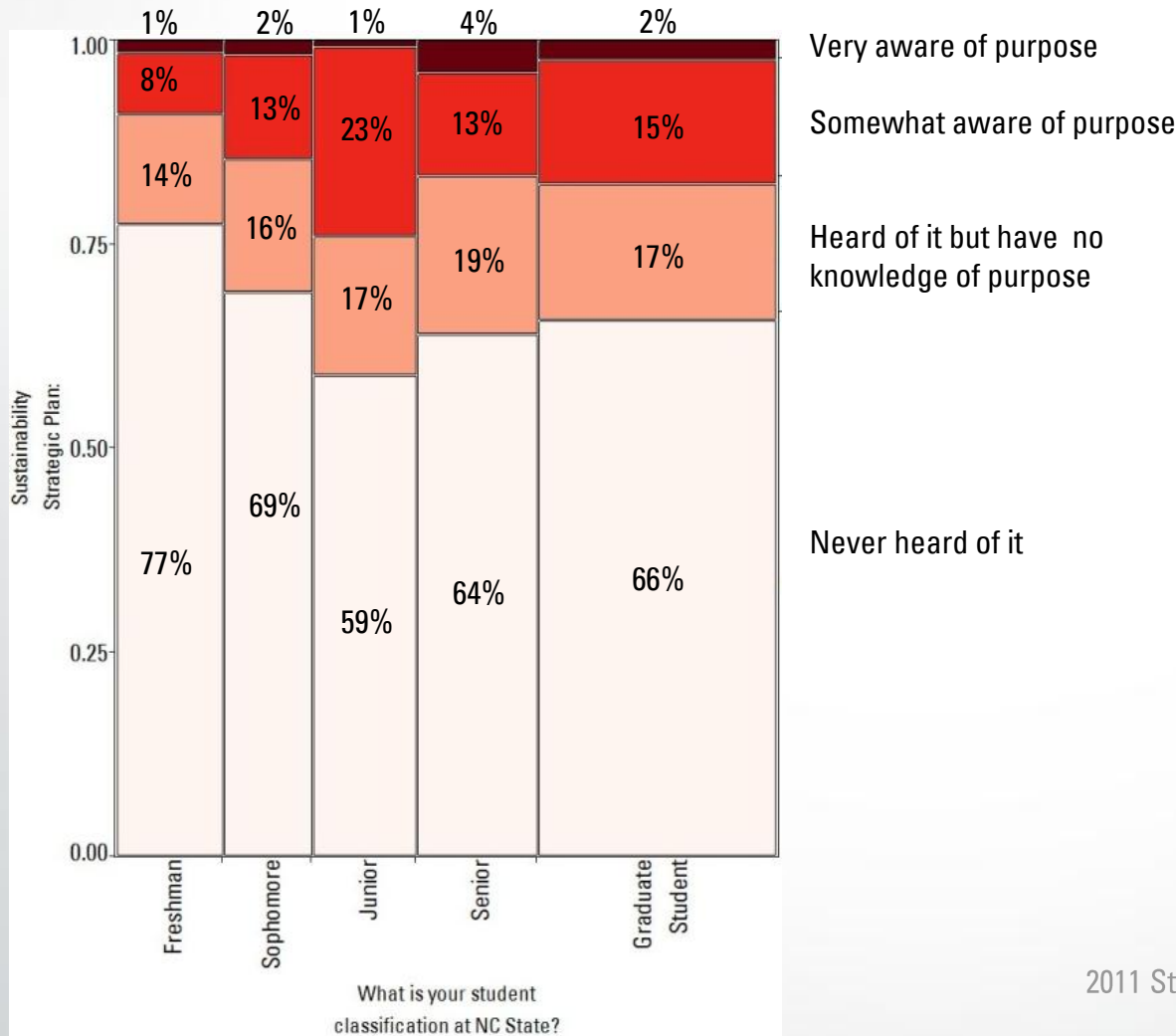


Please indicate the extent of your awareness of the following sustainability campaigns at NC State:  
Shut the Sash

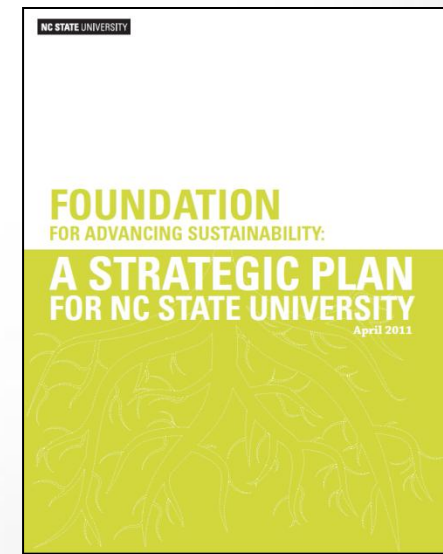


*Finding:* When cross tabulated by age, gender, on vs. off campus, and college no statistically significant distinctions were found.

Please indicate the extent of your awareness of the following sustainability campaigns at NC State:  
Sustainability Strategic Plan

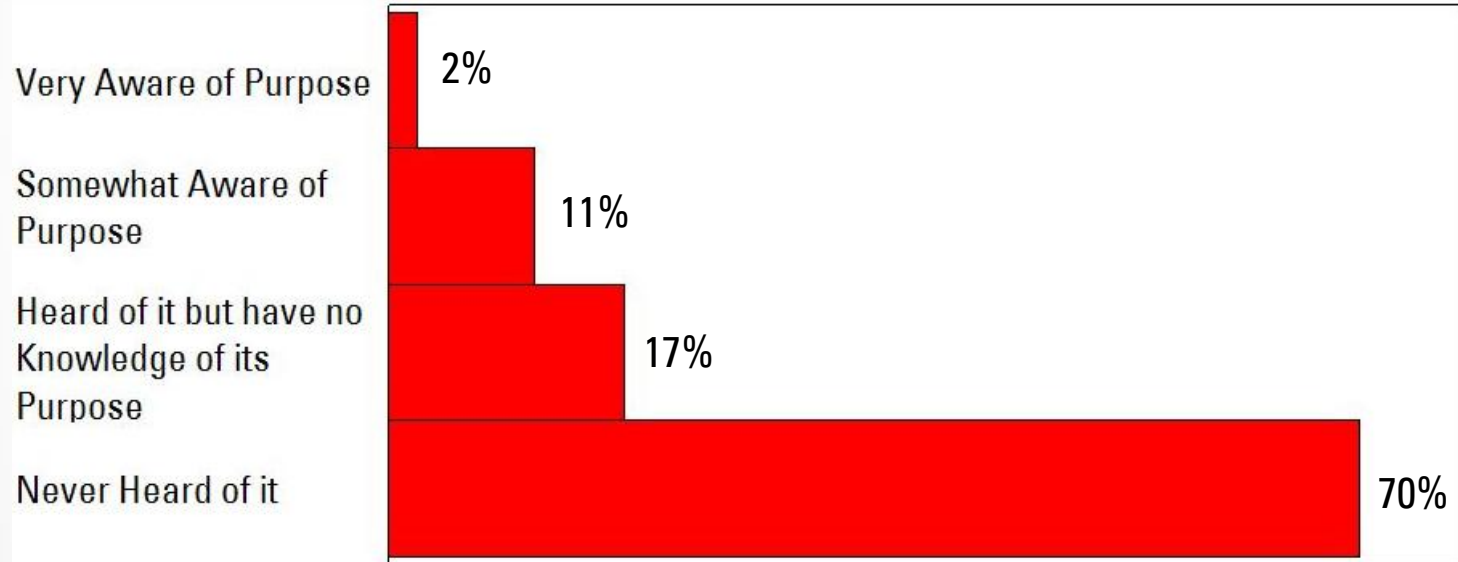


**Finding: Underclassmen are the least aware of the sustainability strategic plan, where juniors, seniors and graduate students are slightly more aware. Out reach efforts should focus on underclassmen.**



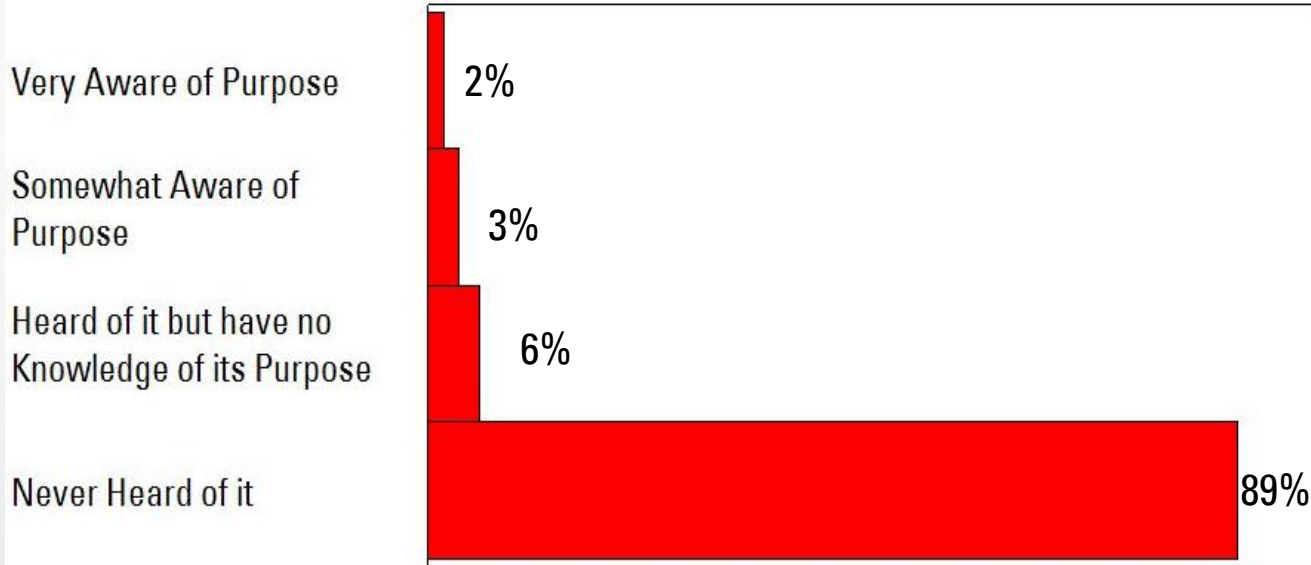


Please indicate the extent of your awareness of the following sustainability campaigns at NC State:  
Green Living Guide

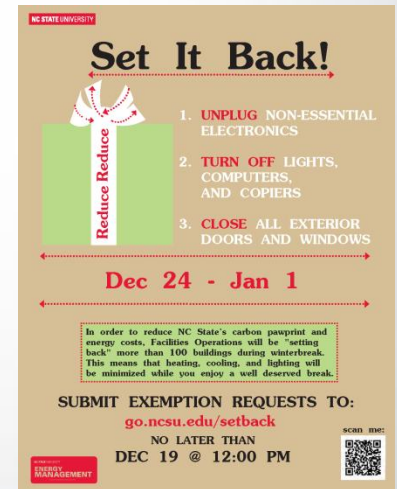


Finding: None of the demographic categories had a significant effect on the responses. Including living on versus off campus.

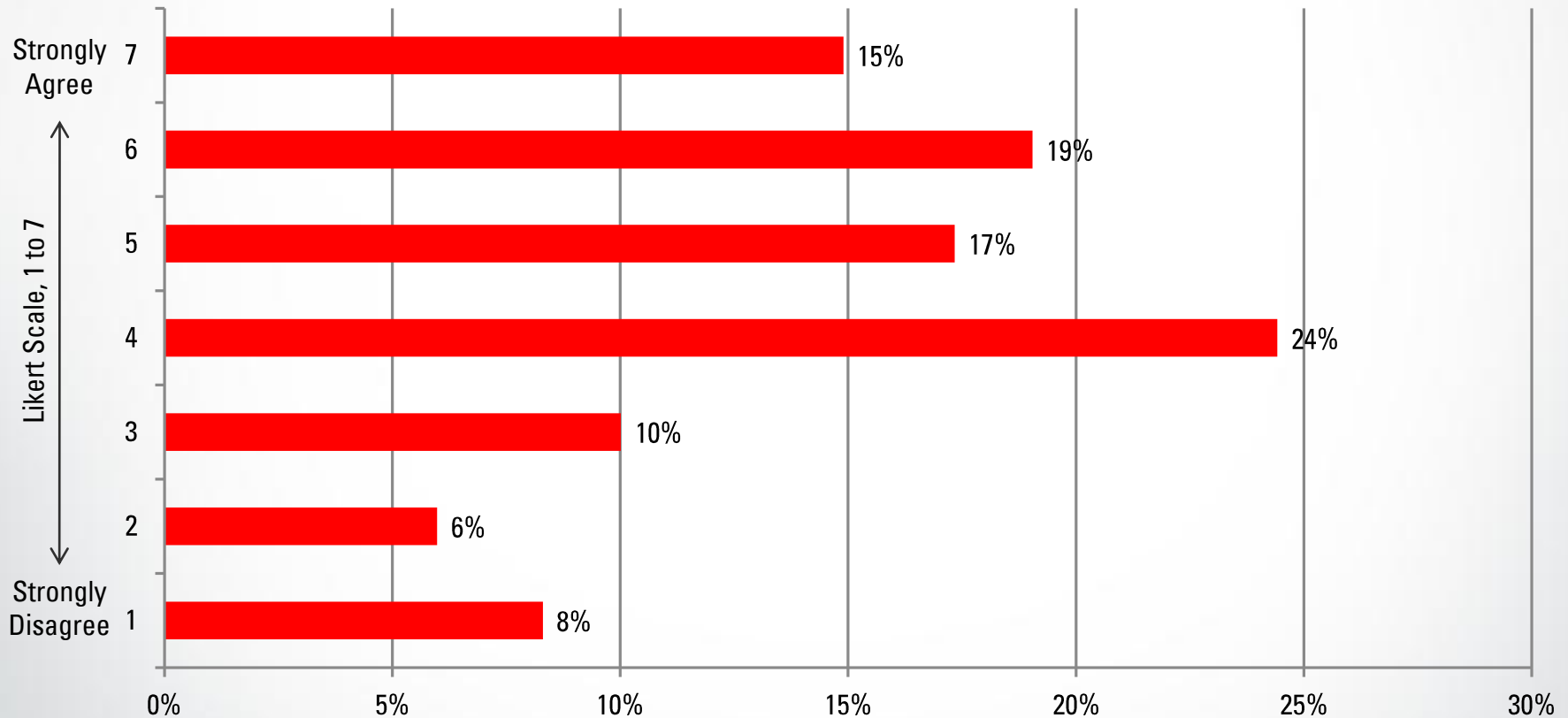
Please indicate the extent of your awareness of the following sustainability campaigns at NC State:  
*Intersession Setback*



Finding: None of the demographic categories had a significant effect on the responses.

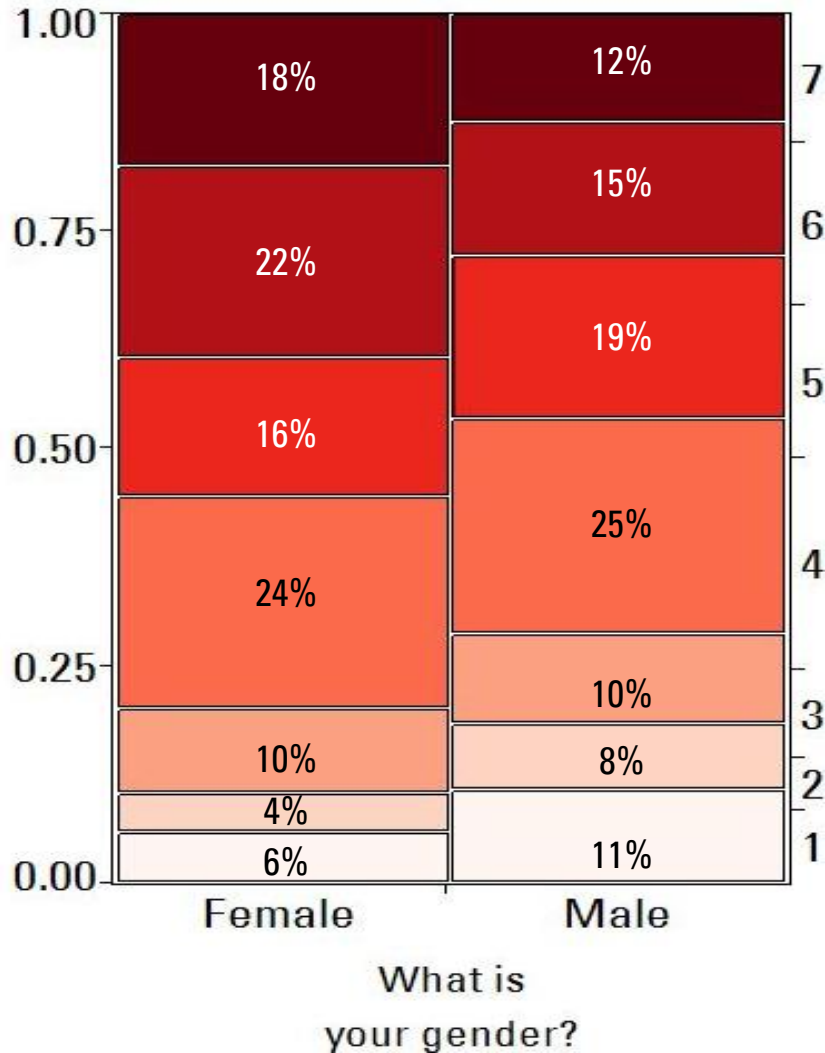


Indicate your level of agreement with the following statement: "NC State should establish a program to implement student-funded sustainability projects on campus."



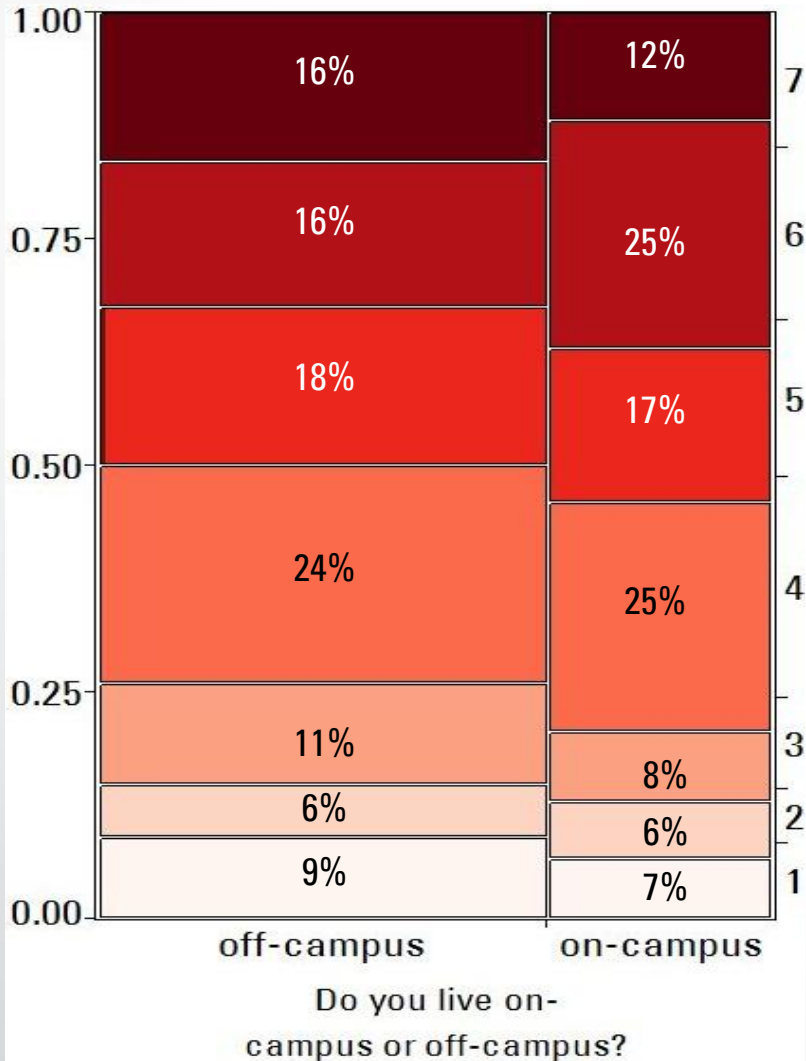
**Finding:** only 51% of students agree that a program to implement student funded sustainability projects should be implemented.

On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree", Indicate your level of agreement with the following statement: "NC State should establish a program to implement student-funded sustainability projects on campus."



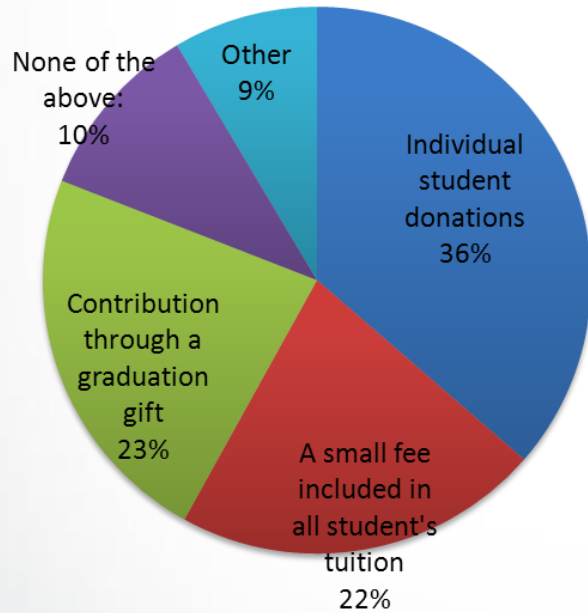
**Finding:**  
 56% of female respondents agree that NC should have student funded sustainability projects on campus, while only 46% of males agree. This presents opportunity to gear marketing towards the male population.

On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree", Indicate your level of agreement with the following statement: "NC State should establish a program to implement student-funded sustainability projects on campus."



*Finding:*  
 On-campus students are slightly more supportive of student funded sustainability projects, then off campus students. This could be because students who live on campus feel a stronger connection the campus and community.

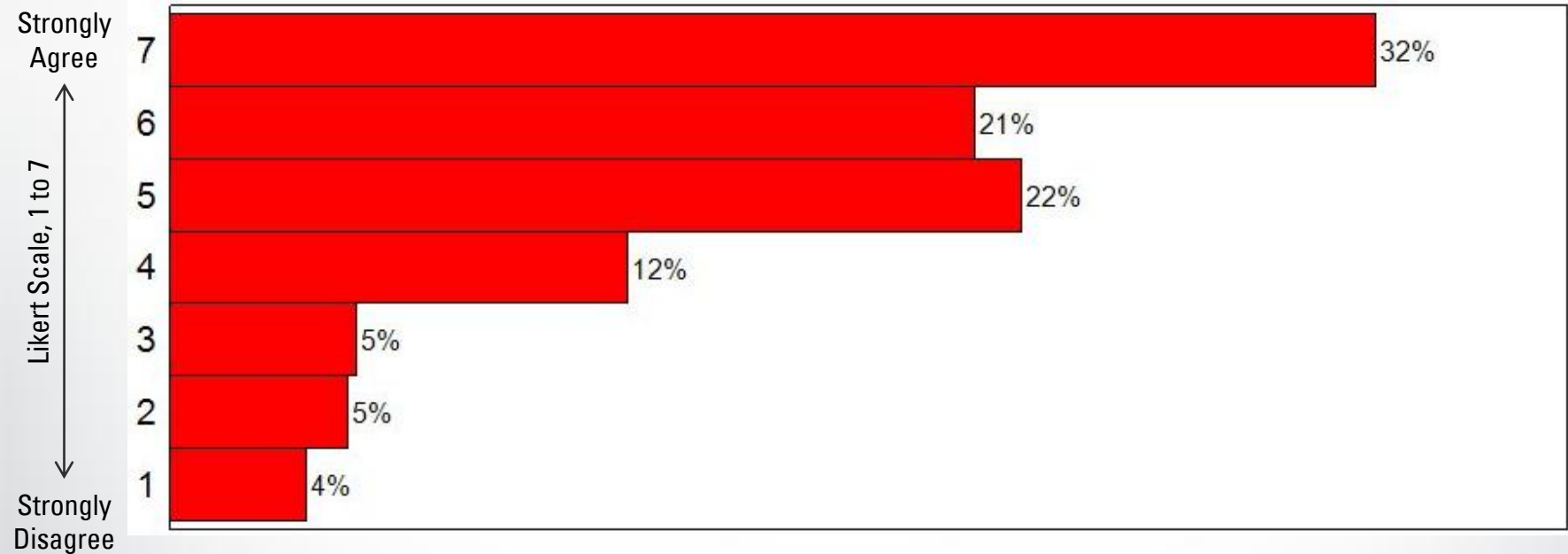
In your opinion, what is the best way for students to contribute to a fund to support sustainability projects on campus?



"Other" Categories	Count
Student fundraisers	26
Volunteering of time	22
No extra fee in tuition	9
Voluntary monetary donations	6
Alumni donations	5
student funds/fees	5
Students should not make a contribution	4
Sustainability tax	4
Collaboration/research by students and faculty	3
Other	11

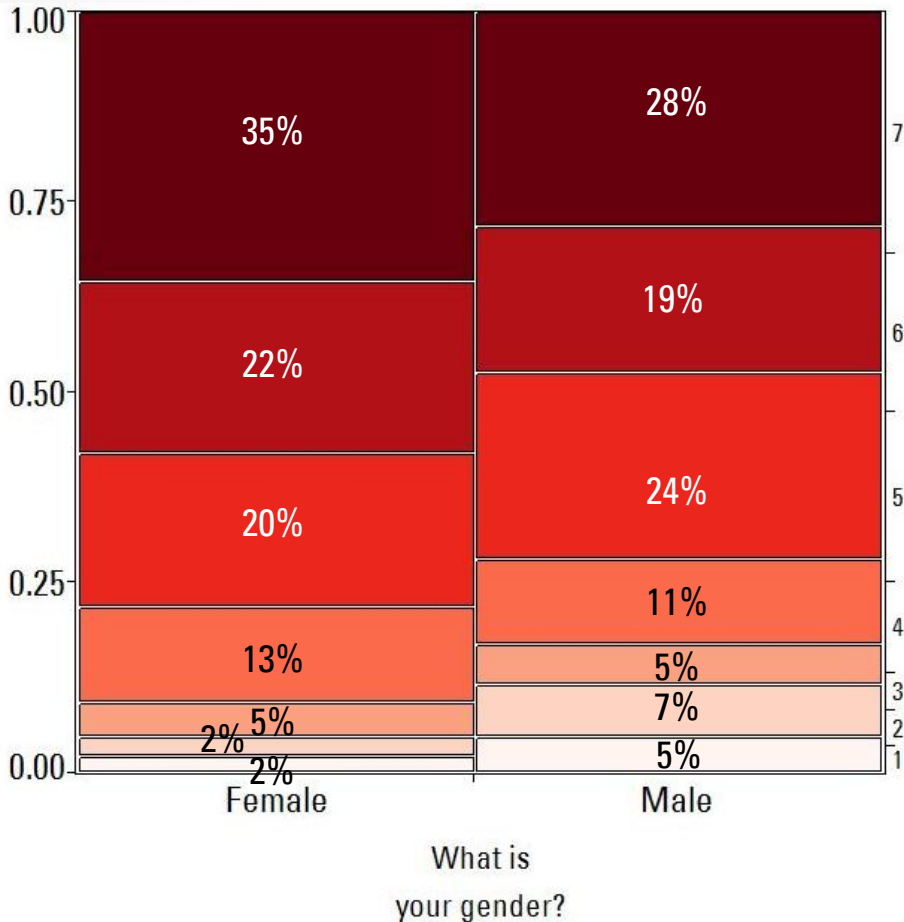
**Finding:**  
 It is apparent from reading through the comments, that this is a topic which students care about, and have strong opinions about. Further analysis will be required.

On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree," indicate if you agree with the following statement:  
*"When I conserve energy, my actions have an effect on the bigger picture by contributing fewer greenhouse gases to the atmosphere."*



**Finding:** 75% of respondents agree that their actions have an effect on the bigger picture by contributing fewer greenhouses to the atmosphere. This is unchanged from the 2010 survey.

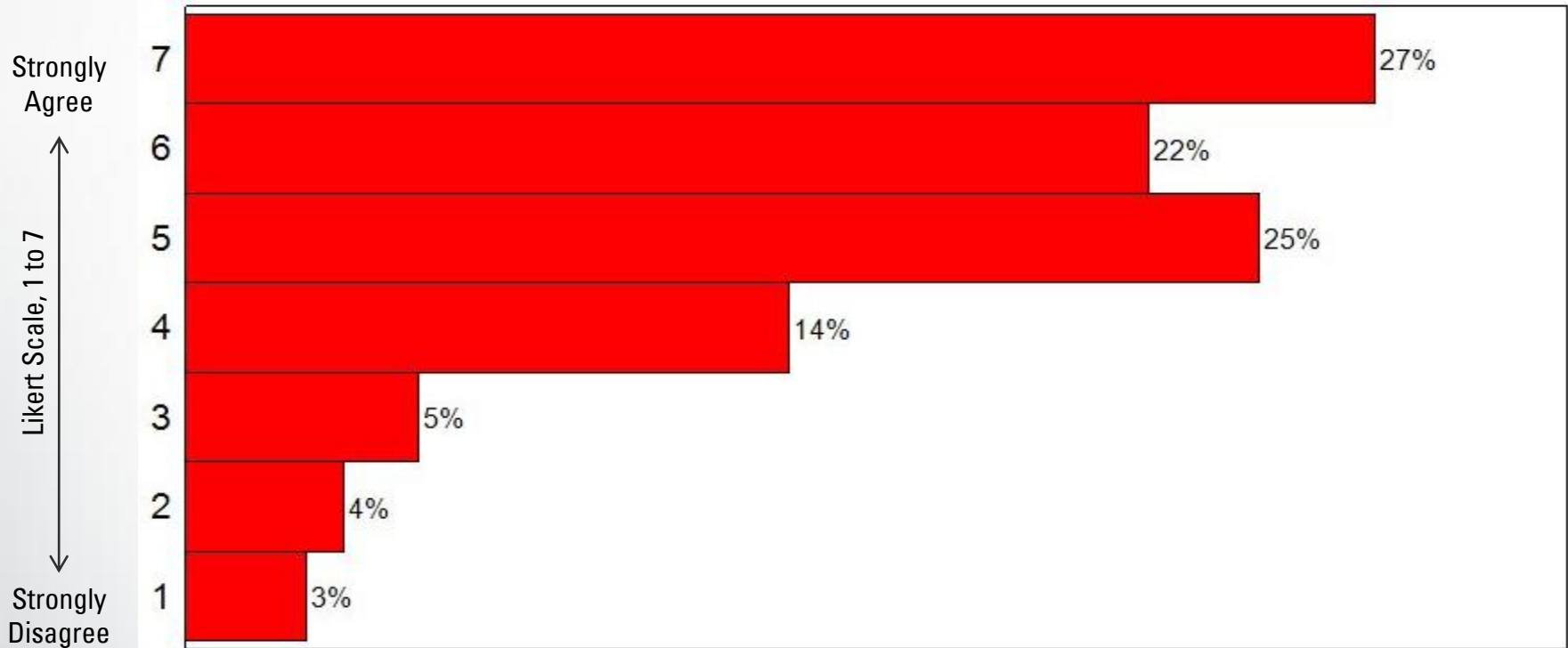
On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree," indicate if you agree with the following statement:  
*"When I conserve energy, my actions have an effect on the bigger picture by contributing fewer greenhouse gases to the atmosphere."*



*Finding: 77% of females agree that their actions have an affect on the bigger picture while only 71% of males do.*

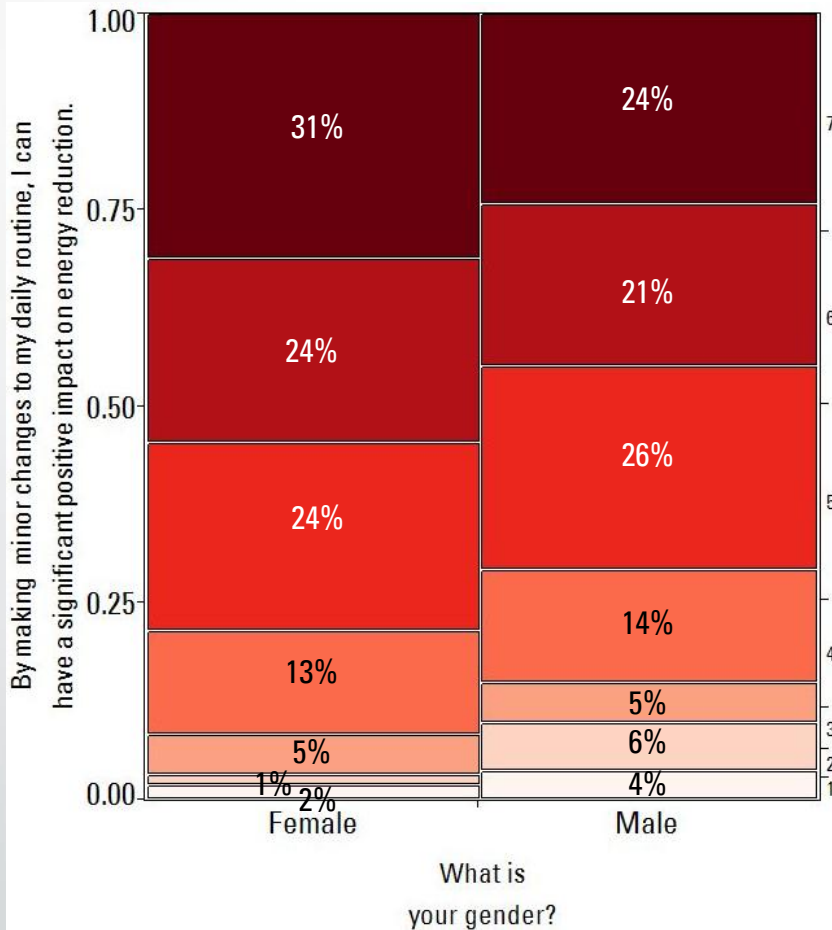


On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree," indicate if you agree with the following statement:  
*By making minor changes to my daily routine, I can have a significant positive impact on energy reduction.*



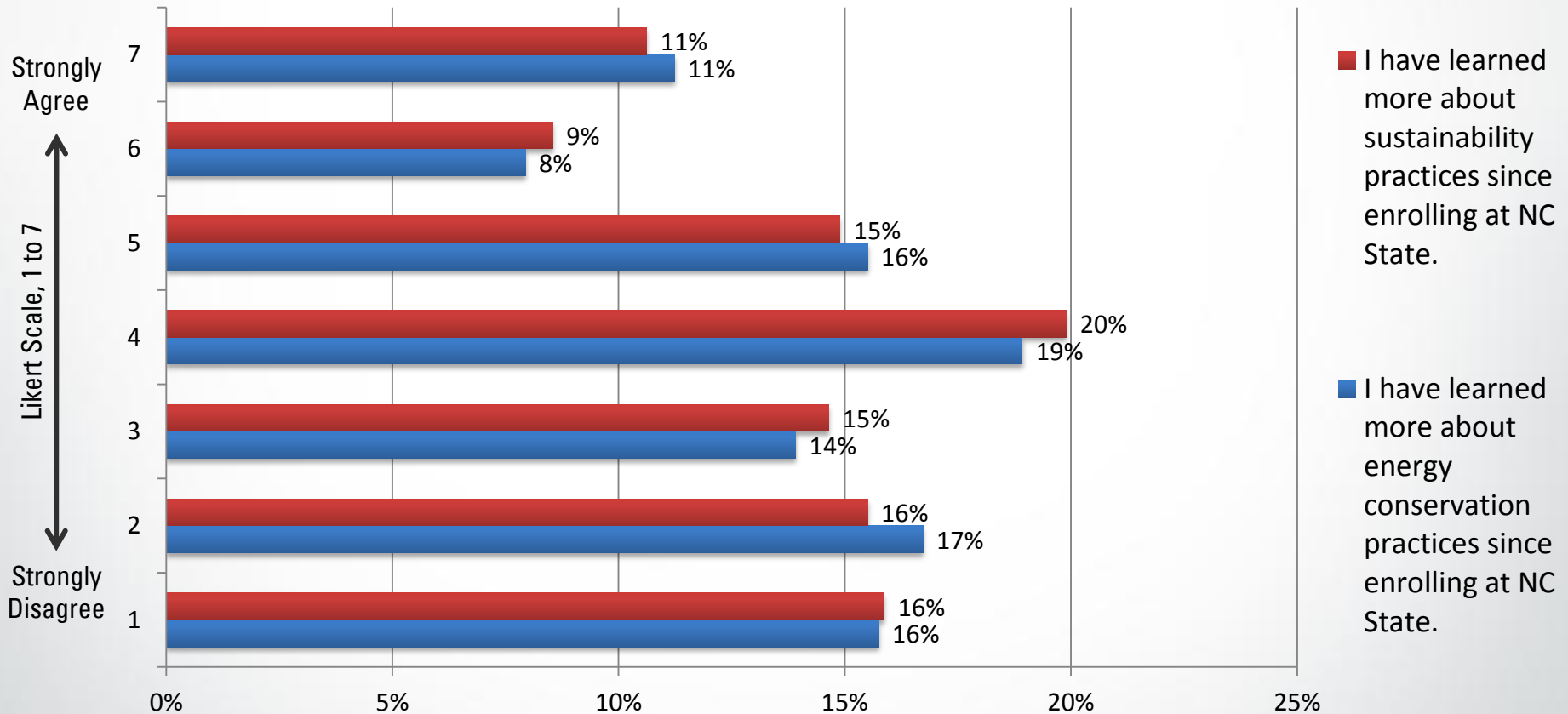
**Finding:** 74% of respondents agree that with minor changes they can have a positive impact on energy reduction.

On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree," indicate if you agree with the following statement:  
*By making minor changes to my daily routine, I can have a significant positive impact on energy reduction.*

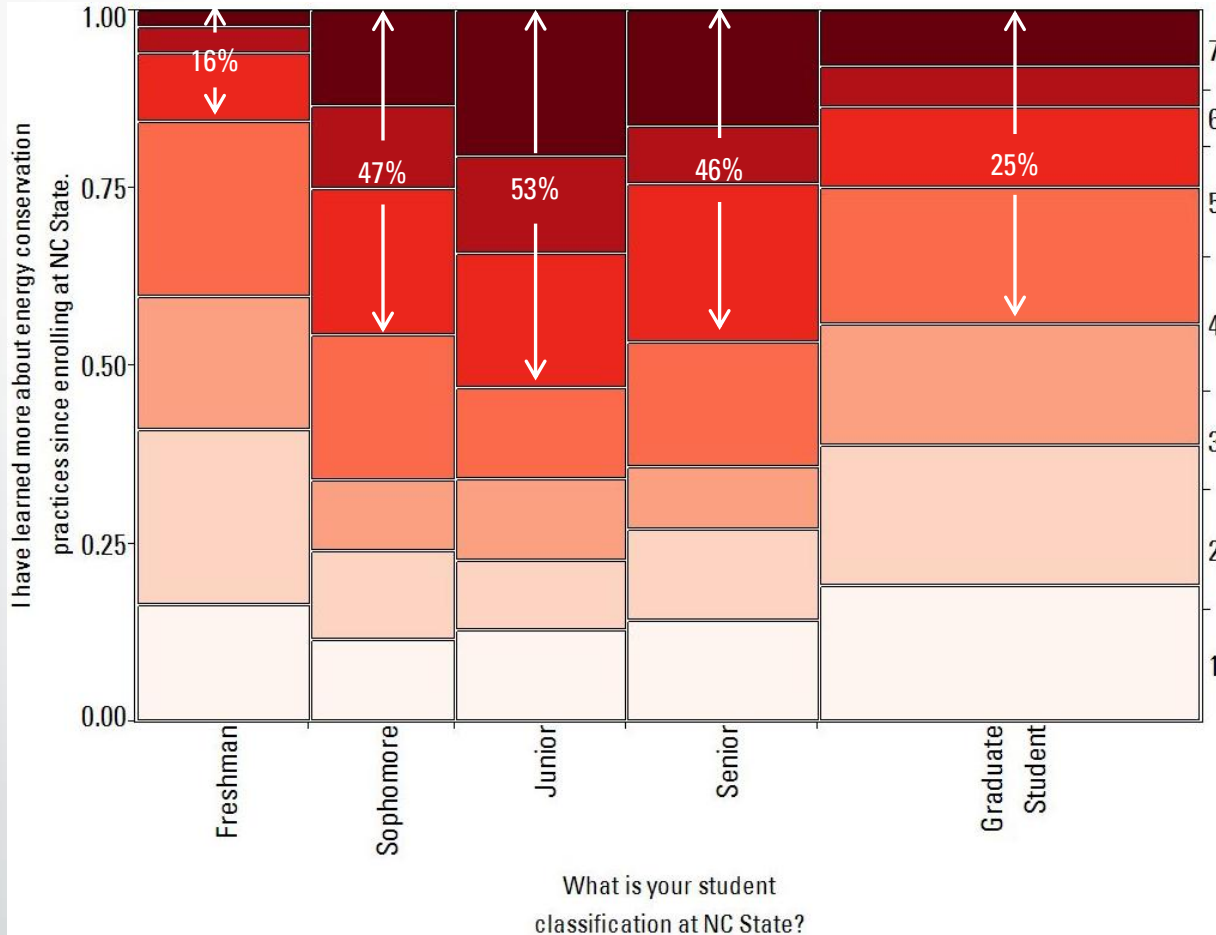


*Finding:* 79% of females agree with this statement where as only 71% of males agree with the statement. This and the previous question seem to indicate that females feel more empowered to effect and change the bigger picture than males do.

On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree," indicate if you agree with the following statements:

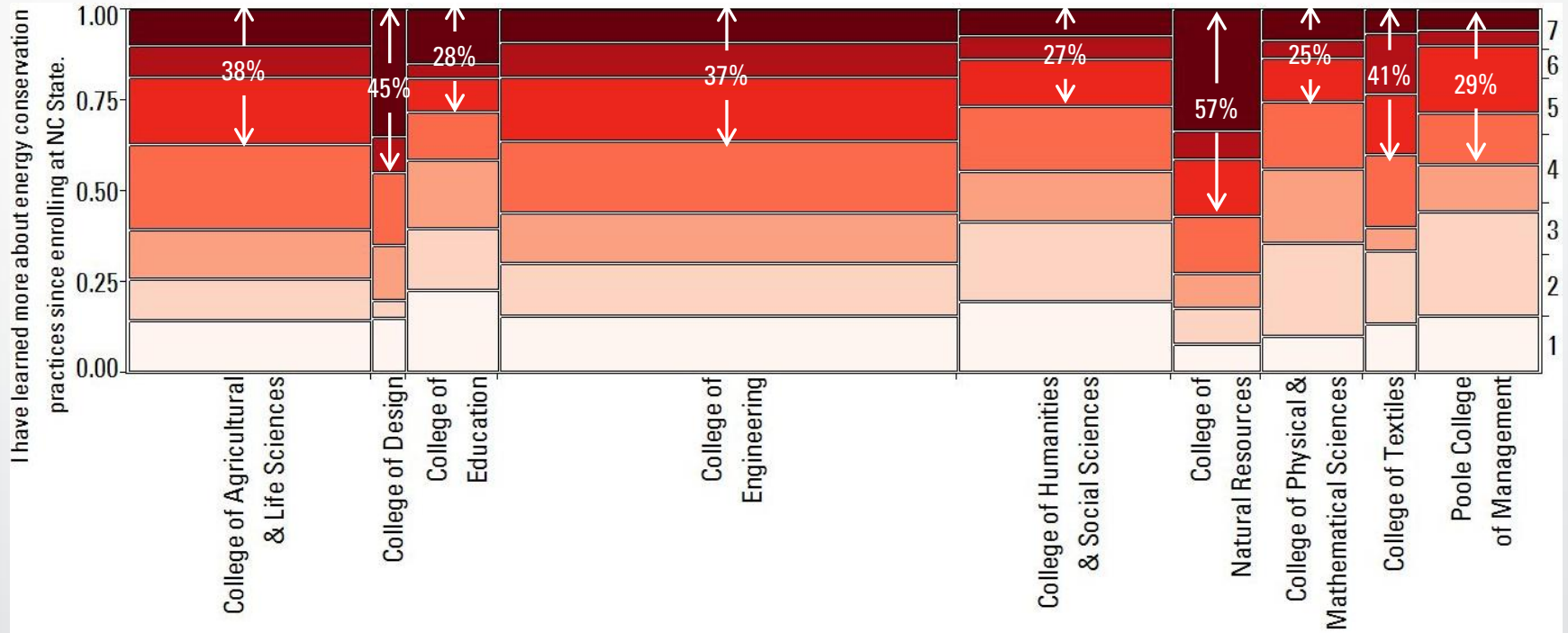


On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree," indicate if you agree with the following statement:  
 " I have learned more about energy conservation practices since enrolling at NC State."



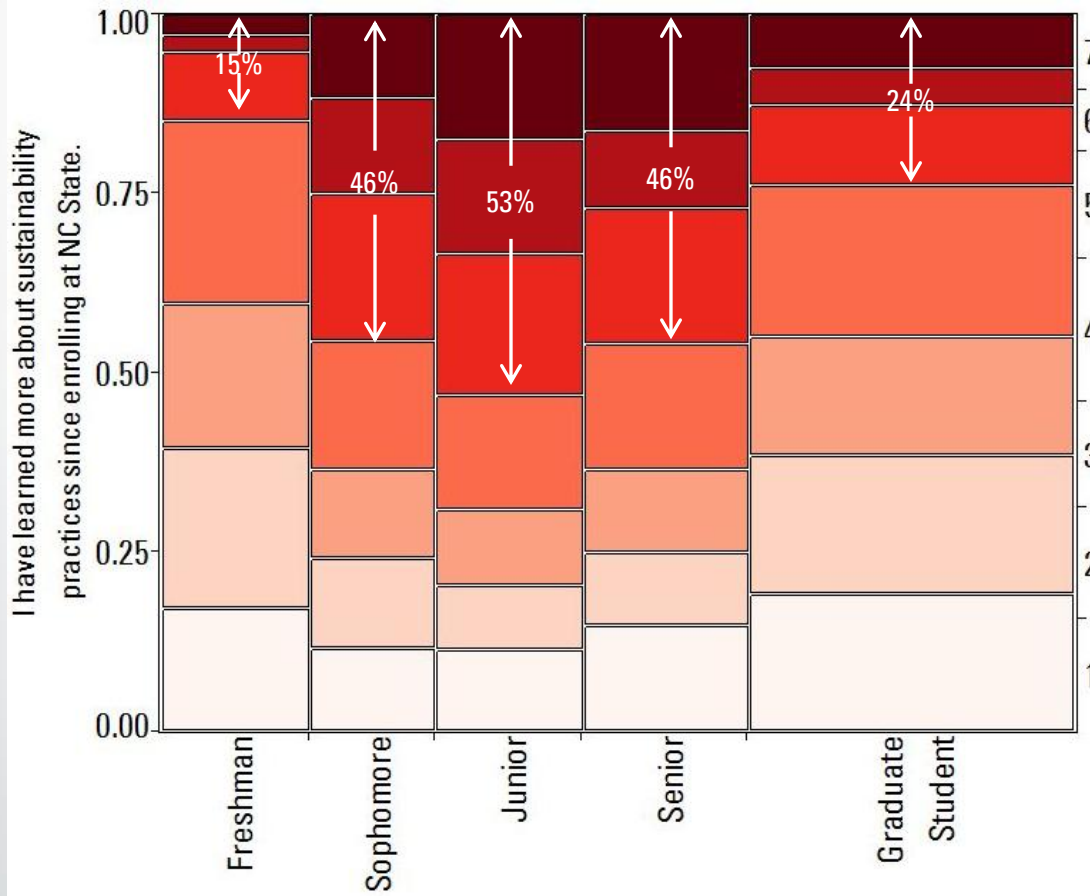
*Finding:* Freshman have the lowest percentage of respondents indicating that they have learned more about energy conservation while enrolled at NC State. This makes sense because when the survey was conducted in Nov. 2011 they had only been at State for about 3 months.

On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree," indicate if you agree with the following statement:  
 " I have learned more about energy conservation practices since enrolling at NC State."



**Finding:** The College of Natural Resources has the highest percentages of students that indicate they have learned more about energy conservation since enrolling at NC State, while PAMS, College of Humanities & Social Sciences, College of Education and the Poole College of Management, have lower percentages.

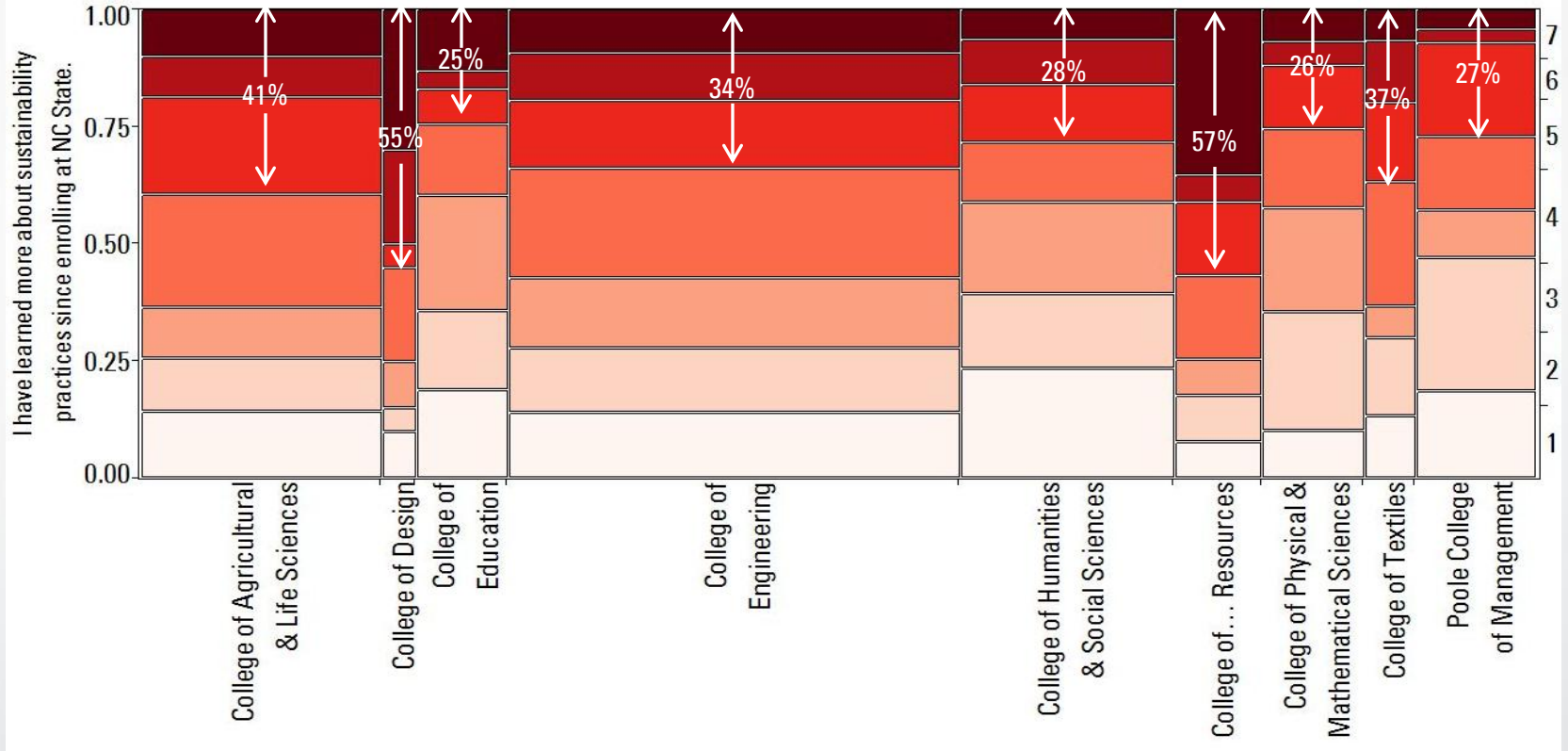
On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree," indicate if you agree with the following statement:  
 " I have learned more about sustainability practices since enrolling at NC State."



*Finding:* Freshman have the lowest percentage of respondents indicating that they have learned more about sustainability practices while enrolled at NC State. This makes sense because when the survey was conducted in Nov. 2011 they had only been at State for about 3 months.

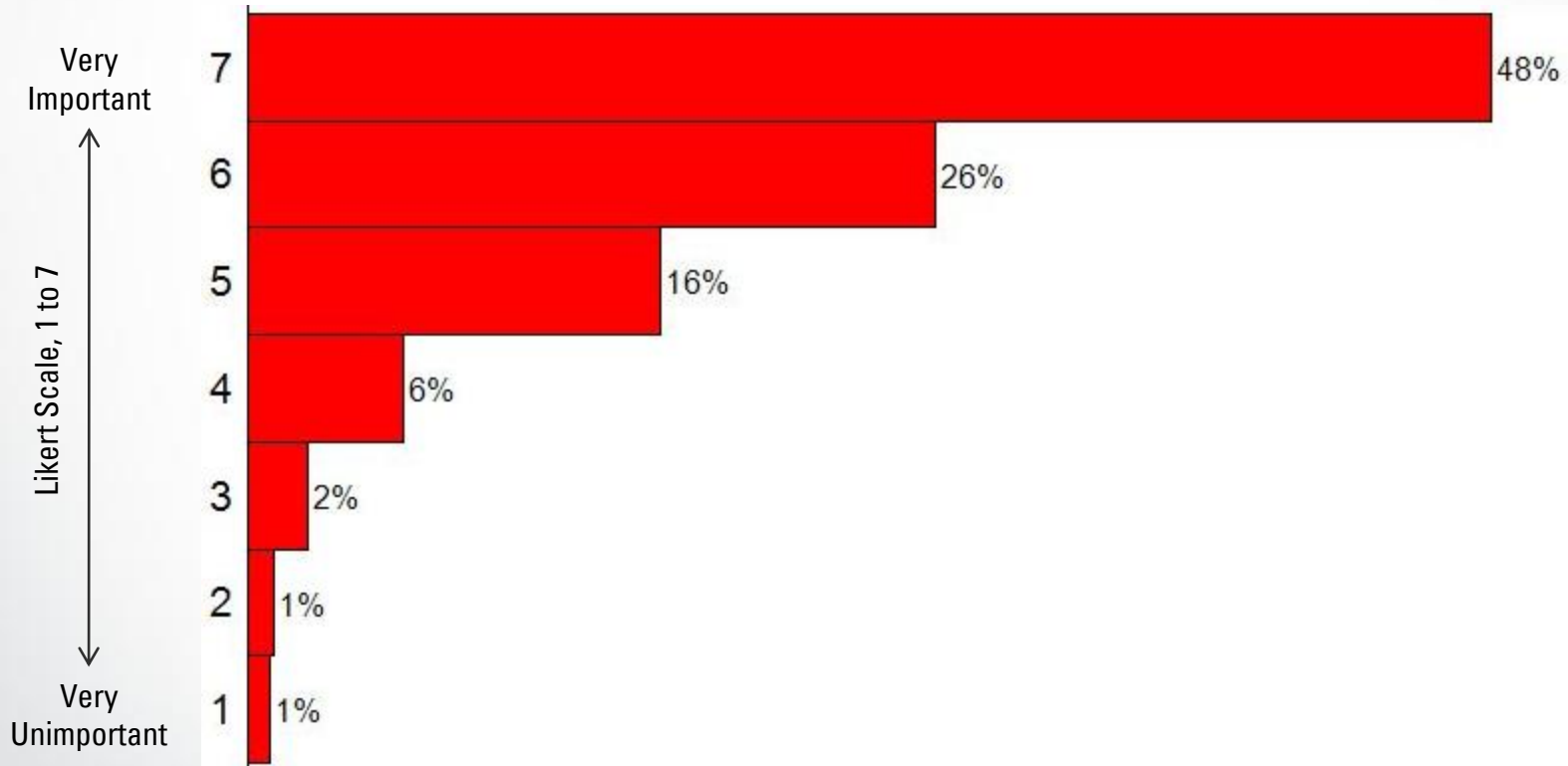
On a scale of 1 to 7, with 1 meaning "Strongly Disagree" and 7 meaning "Strongly Agree," indicate if you agree with the following statement:

**"I have learned more about sustainability practices since enrolling at NC State."**



**Finding:** College of Natural Resources, and College of Design have the highest percentages of students who indicate they have learned more about sustainable practices while at NC State, College of Education, PAMS, and Poole College of Management, have the lowest percentages.

NC State defines energy management as: "Ensuring judicious and effective use of campus energy, to reduce costs, as well as overall energy use." Using this definition, rank on a scale of 1 to 7, with 1 meaning "Very Unimportant" and 7 meaning "Very Important" how important you think it is that NC State practice good energy management?

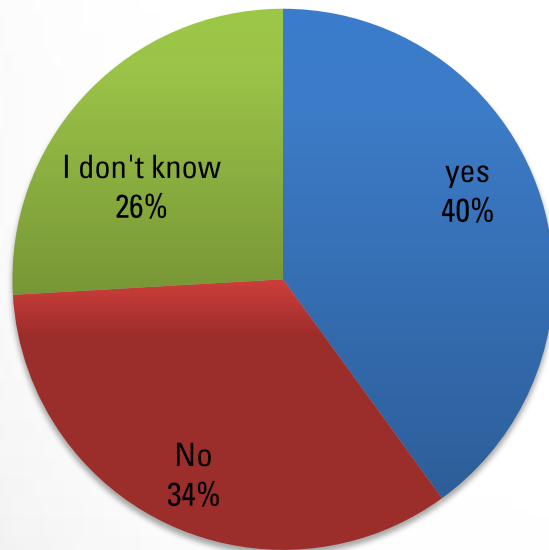


**Finding:** 90% of respondents think it is important for NC State to practice good energy management

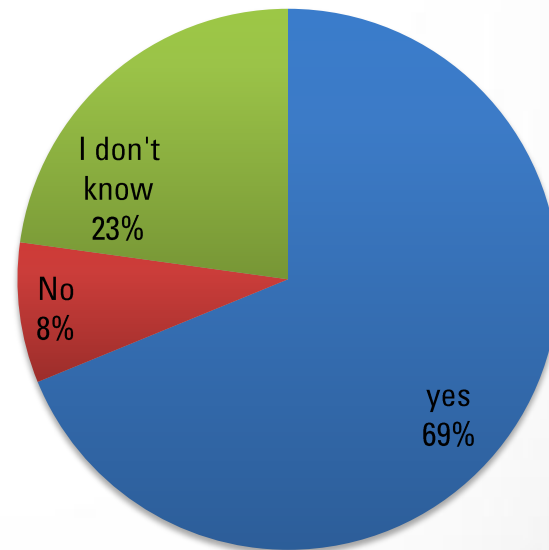


# Do you use either of the following energy saving light bulbs in your personal residence?

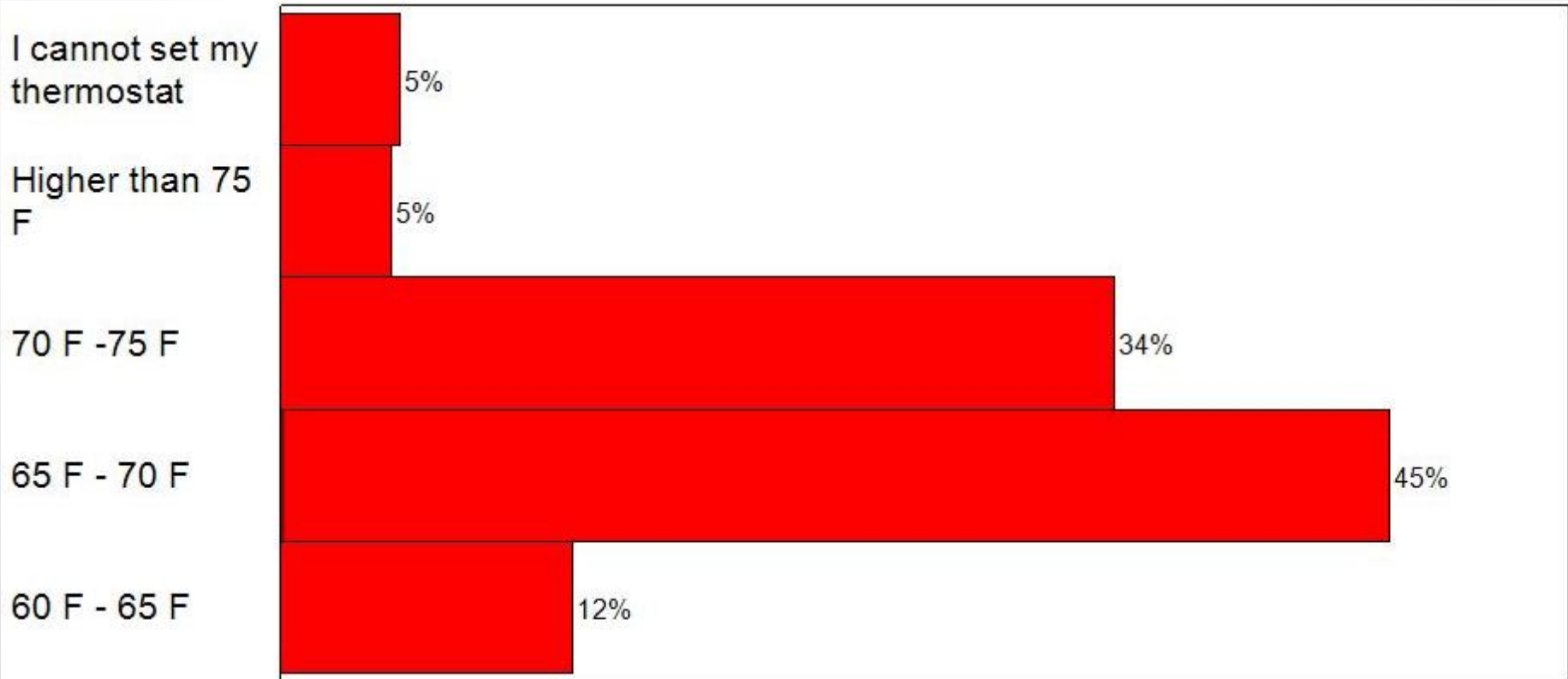
**Light Emitting Diode (LED)**



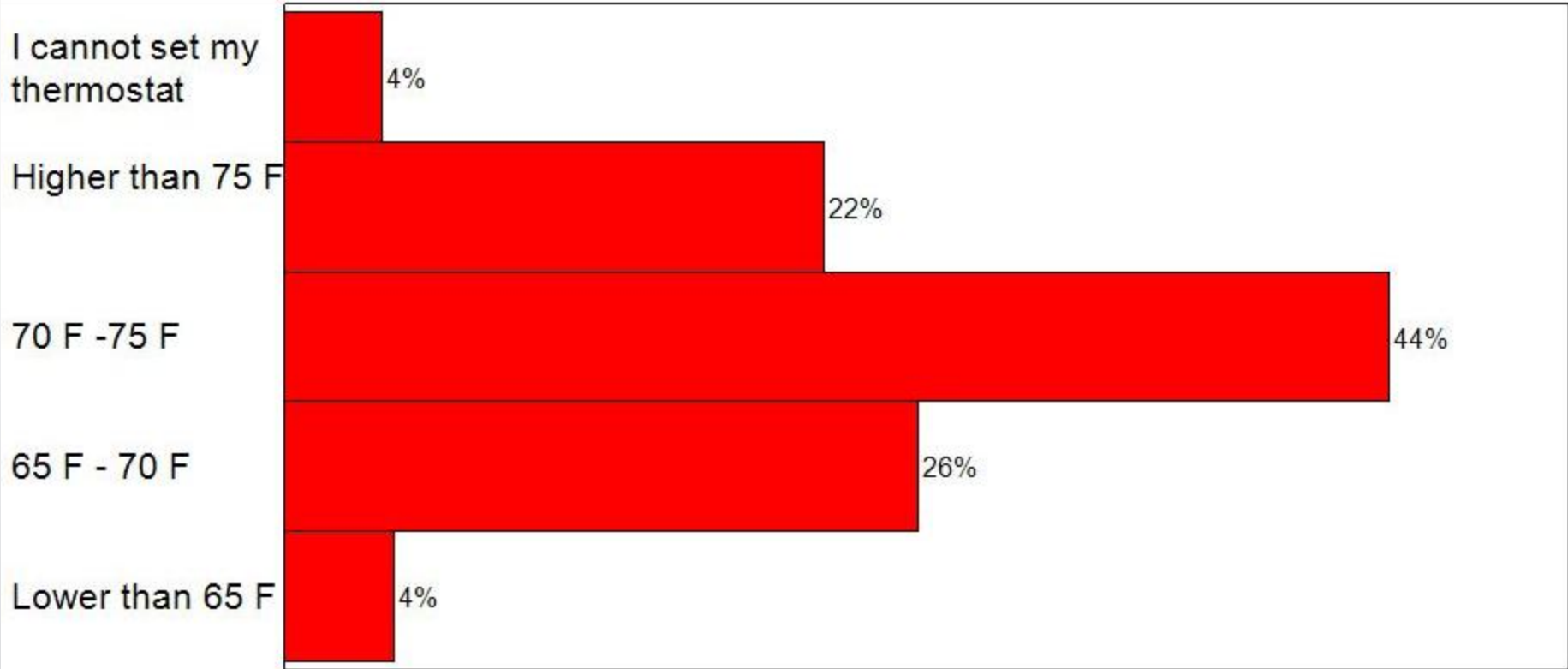
**Compact Fluorescent (CFL)**



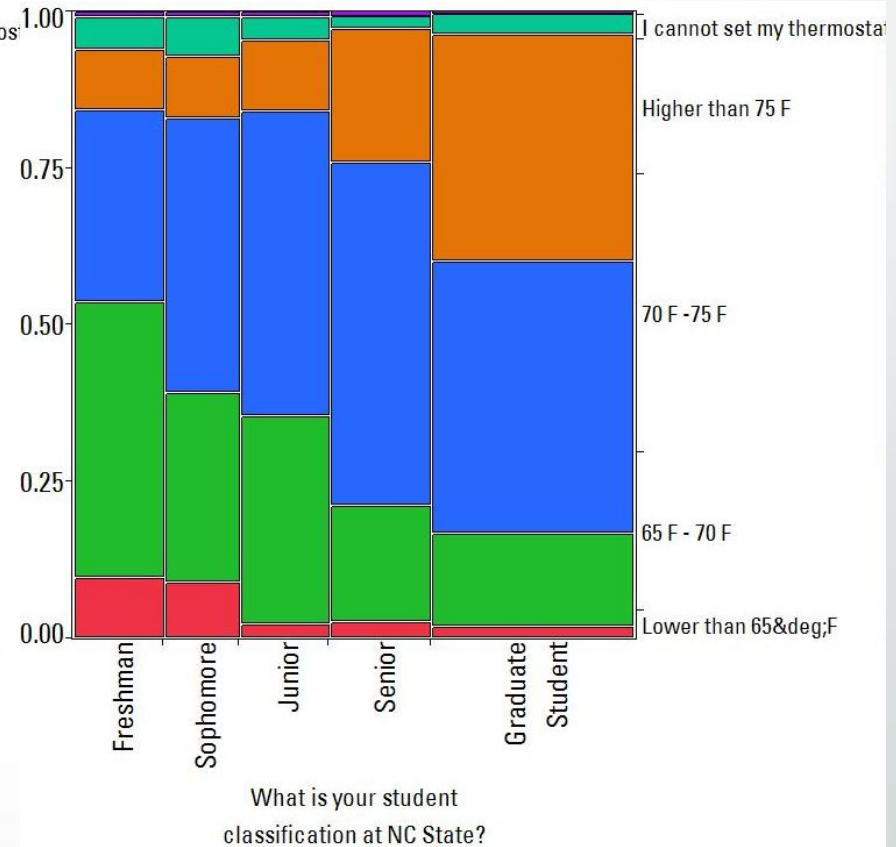
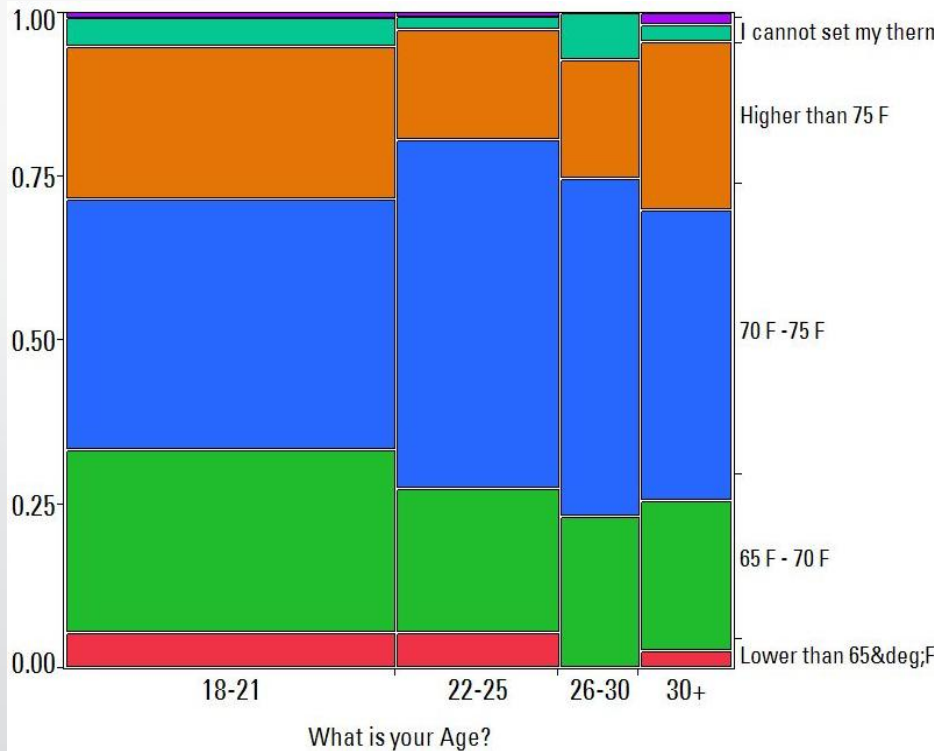
## At what temperature, do you typically set the thermostat in your home or dorm room, during the winter?



## At what temperature, do you typically set the thermostat in your home or dorm room, during the summer?



# At what temperature, do you typically set the thermostat in your home or dorm room, the summer?

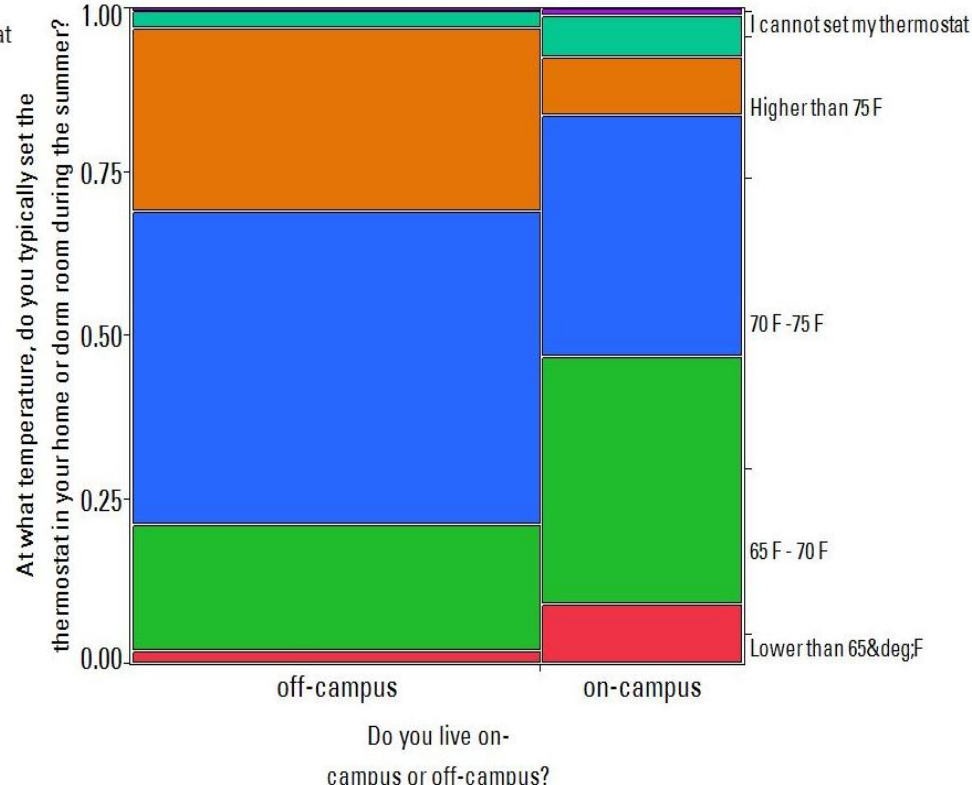
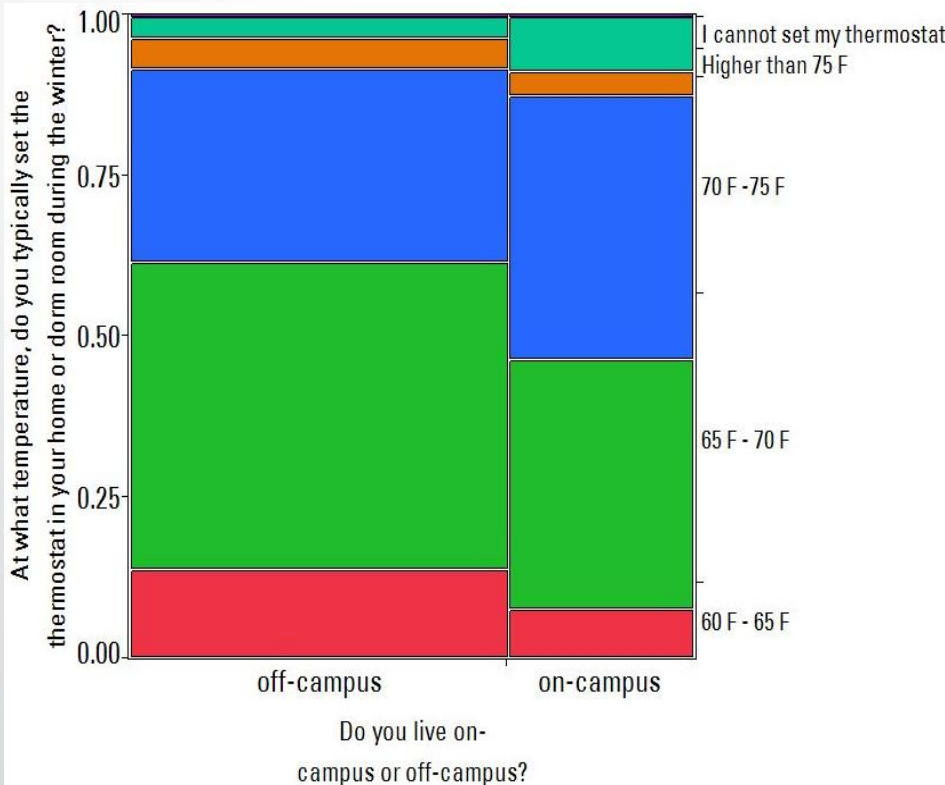


**Finding: as students get older they tend to set the thermostat temperature higher during the summer**

# At what temperature, do you typically set the thermostat in your home or dorm room:

In the winter?

In the summer?



**Finding:** Students who live on campus tend to set their thermostats lower in the winter and higher in the summer.