

# Student Sustainability Survey Report

Department of Agricultural Economics AEC 580 Class



**STUDENT SUSTAINABILITY COUNCIL**

**May 2012**

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# Student Sustainability Survey Report

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Department of Agricultural Economics AEC 580 Class

## Executive Summary

The Agricultural Economics AEC 580 course created a sustainability survey for the University of Kentucky Student Sustainability Council. The purpose of this survey was to discover the student body's collective view towards sustainability on campus, in the Lexington community and across the bluegrass. The survey was created and distributed in the spring of 2012, reaching a significant portion of the student population. A total of 917 students, with a mean age of twenty-one, completed the survey, representing all 16 colleges present on campus. A majority of respondents were from the college of agriculture, arts and sciences and engineering. Overall, results indicated that students on campus not only understood the concept of sustainability, but were overwhelmingly in favor of creating/increasing sustainable solutions to a variety of economic, social and environmental problems. Students even voiced that they would support an average \$8 increase in tuition to support these causes. As the AEC 580 class, we feel that the results of this survey indicate that the University of Kentucky is ready for student led changes to policy, reflecting a growing desire for this land grant university to be a model of sustainability within the state of Kentucky.

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## Introduction

With the price of oil rising dramatically, human populations rising globally, the extinction of species increasing and the threat of global warming looming overhead, all of humanity is looking for ways to make our lifestyle sustainable. A large portion of the population is beginning to believe that their individual actions are having ramifications on the environment. This study was created to gauge students' sustainability awareness and concerns on the campus of the University of Kentucky. Understanding how students view sustainability is pertinent in creating long term, student led, sustainable solutions within the University of Kentucky community. It is critical that students lead these changes, with the support of UK administration, faculty and staff. UK is the Commonwealth's flagship university and, with the help of its students, can be the model for sustainability in the state by leading the region in waste reduction, alternative energy production and ecological impact reduction. These initiatives are contingent on student backing so discovering how students view sustainability is critical. By distributing an online survey across the UK campus, the Agricultural Economics AEC 580 course, with the backing of the Student Sustainability Council, was able to measure almost one thousand students' views towards these issues.

The survey instrument was first created by reviewing existing university campus sustainability surveys across the U.S. Secondly, both generic questions and unique questions were included in the survey. This was to tailor design the questionnaire to fit the specific needs and characteristics of the University of Kentucky. The survey process was fully approved by the UK Office of Research Integrity. Members of the UK community were gathered to form a focus group to test the instrument. Focus group members included students and staff members from a

variety of disciplines/backgrounds. The actual survey was administered online. Multiple rounds of email invitations were sent to all UK students. The survey was launched on April 6 and closed on April 17, 2012.

The following graph describes the distribution of students responded to the survey.

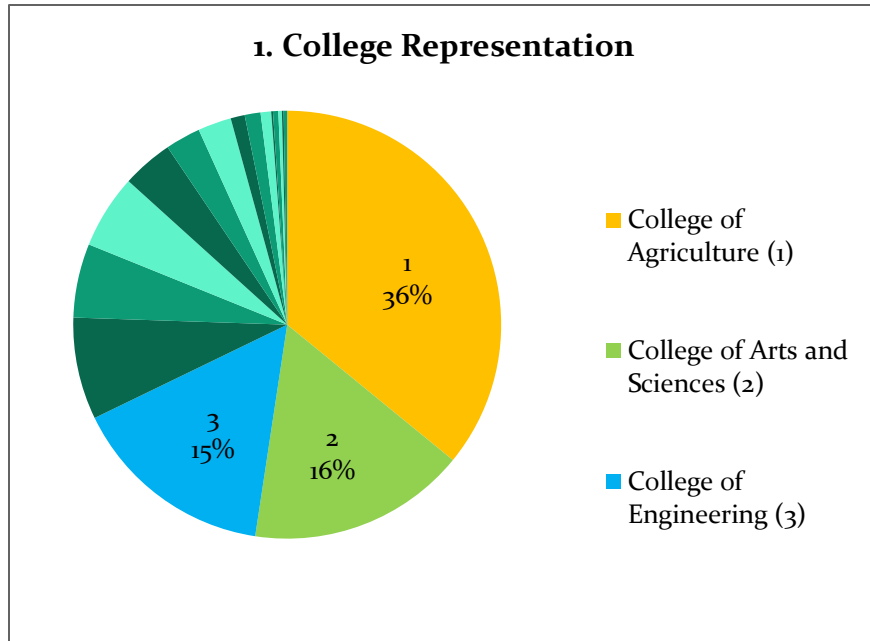


FIGURE 1

One third of all students polled were from the University of Kentucky College Of Agriculture while around sixteen percent were from the school of arts and sciences and fifteen percent were from the engineering school. Other schools that made up considerable percentages were the Gatton School of Business and the University Studies Program.

## Results: Demographics

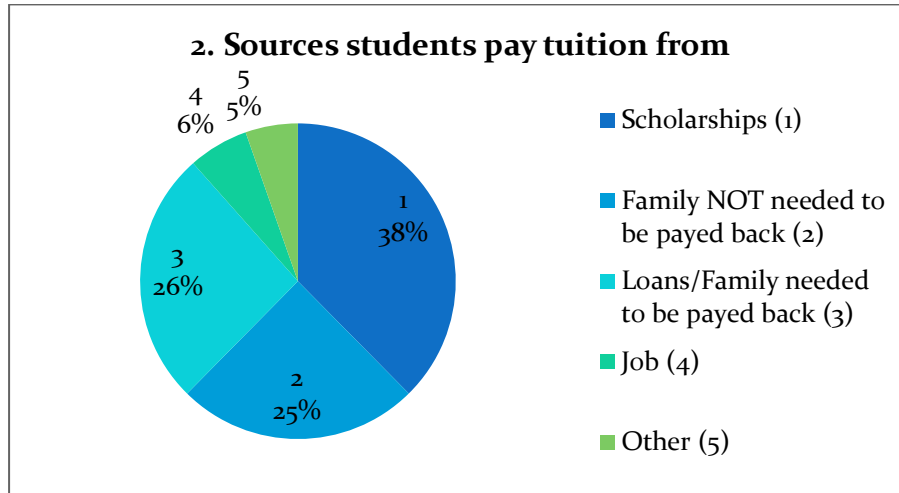


FIGURE 2

Over sixty percent of the tuition of the students polled is funded from sources with no obligation for the students to pay back such as scholarships and family members, which might have a significant effect on a student's willingness to increase tuition or fees.

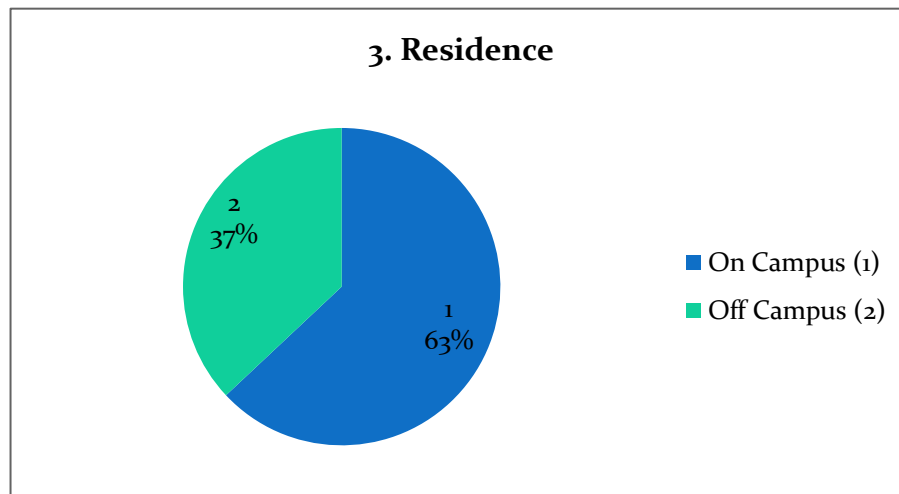


FIGURE 3

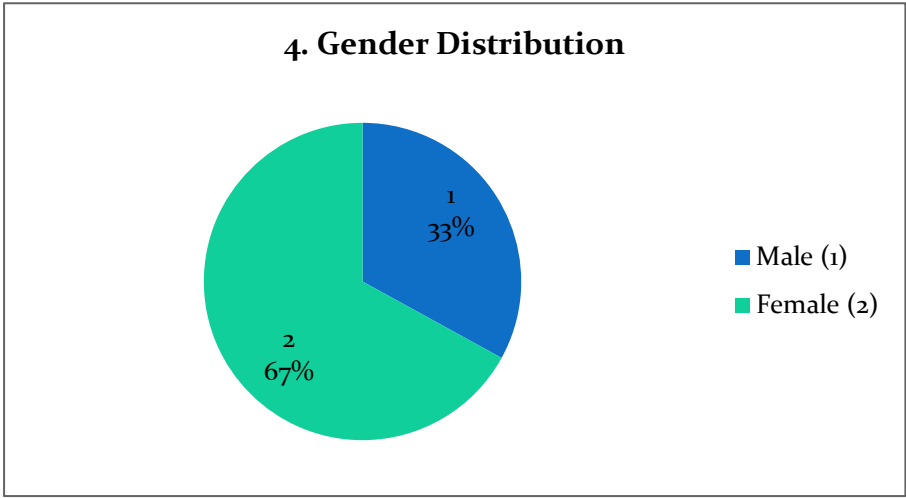


Figure 4

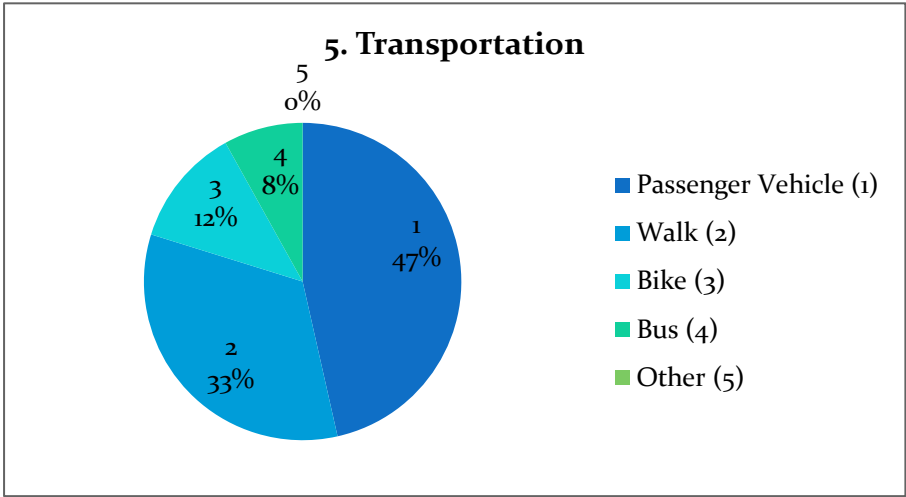


FIGURE 5

Almost half of the students polled that live off of campus drive a passenger vehicle to their classes every day, while only eight percent took the bus. With an average daily commute of around seven miles and a considerable percentage of students driving to class, the environmental impact of those driving is significantly greater than the thirty-three percent who walk.

## Results: Attitudes and Perceptions

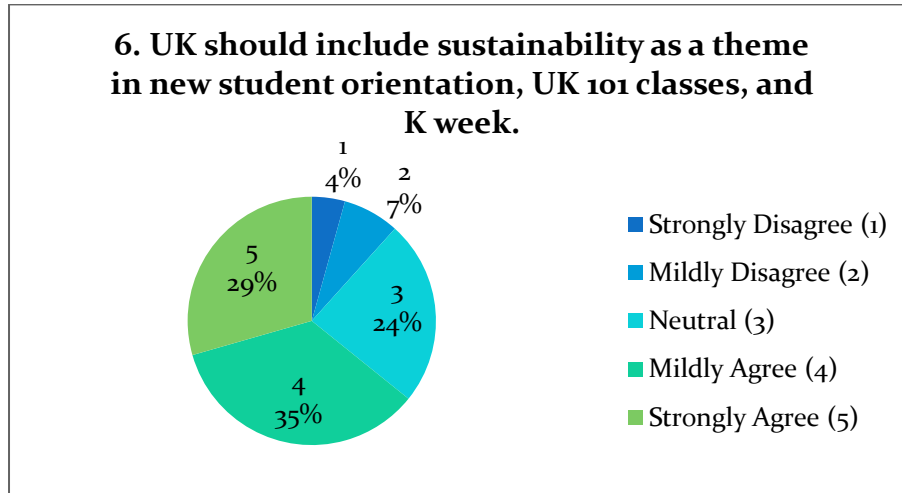


FIGURE 6

All new students are encouraged to take student orientation classes, such as UK 101, in their first semester. Surveyed students were asked if they thought sustainability was important enough of an issue in the campus environment to be incorporated as a theme in these courses. The majority of the students agreed, either strongly or mildly, that UK should incorporate sustainability into these classes to better prepare new students to be economically, socially and environmentally mindful in the campus community.

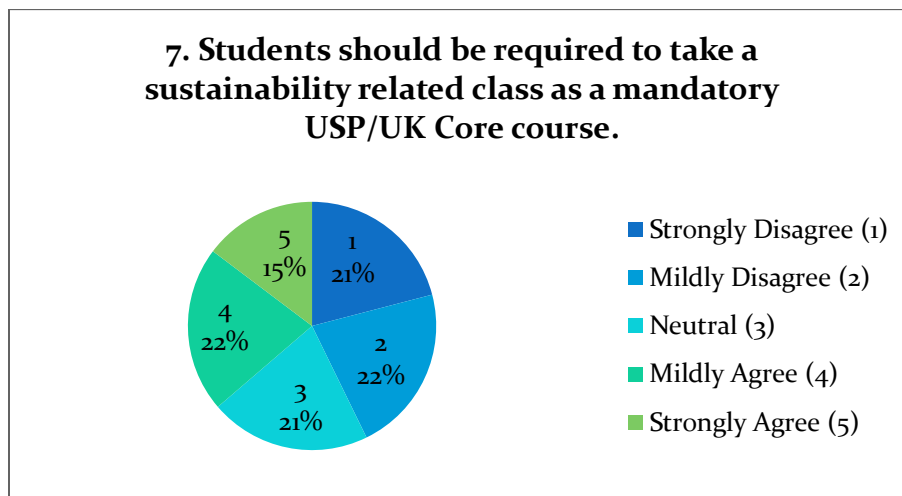


FIGURE 7

When asked if a required USP or UK core course focused entirely on sustainability issues should be mandated to all UK students, over one third of those polled agreed. However, the responses show that students are, on average, fairly indifferent towards having a required sustainability course for all majors. Equal numbers of students agreed as disagreed and a large portion polled were indifferent.



**8. Professors should take development workshops focused on sustainability awareness.**

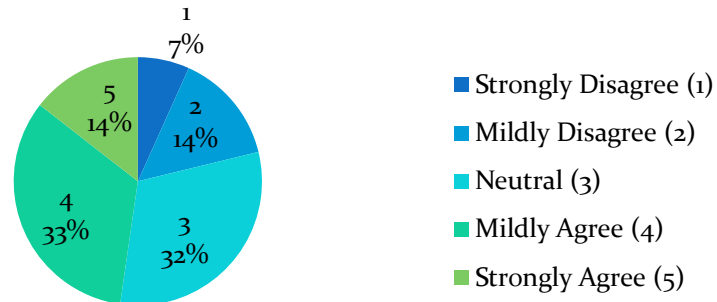


FIGURE 8

When asked if faculty members should be required to attend sustainability awareness workshops, less than twenty-five percent of students were opposed and almost half agree it should be a requirement. A comparatively large portion was indifferent to professors receiving further education on sustainability.

**9. UK should conduct campus-wide annual audits focused on energy usage and waste.**

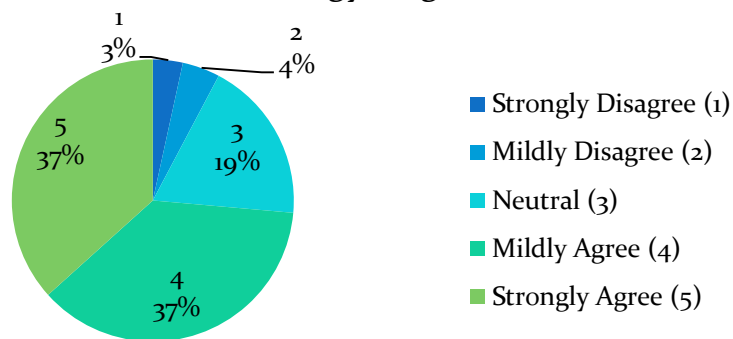


FIGURE 9

This figure provides perhaps the most evidence that UK students want to see their university headed in a more sustainable direction. Nearly 75 percent of those polled were in support of campus-wide annual audits focused on energy usage and waste. Less than 10% of the students polled were against UK's energy consumption being audited and monitored. This shows that the student community is concerned with the amount of energy currently consumed on campus.

**10. UK should work to replace exotic plants on campus with native ones.**

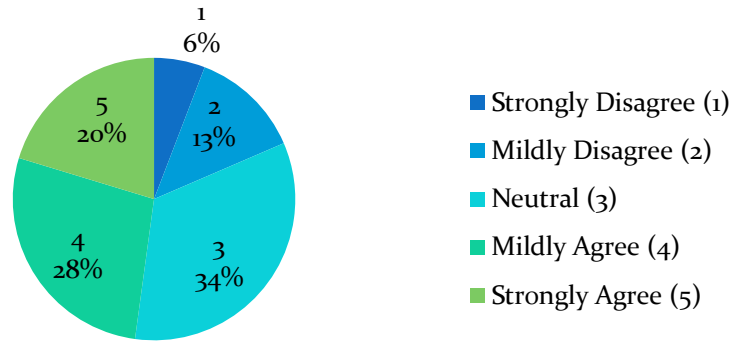


FIGURE 10

Over a third of respondents expressed a neutral opinion while nearly half were in favor of UK working to replace exotic plant species on campus with native ones. Less than a quarter polled disagreed with removing exotic plants from campus grounds.

**11. UK should host an annual essay or arts competition on sustainability and offer financial incentives to participants.**

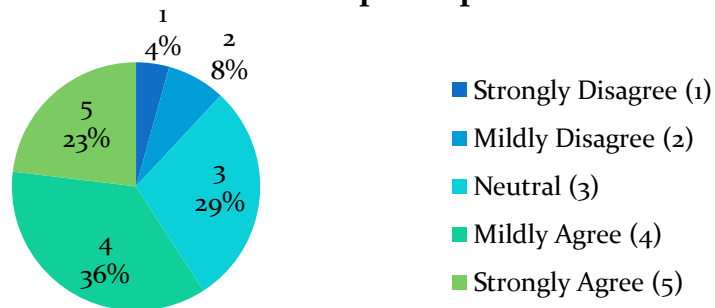


FIGURE 11

When asked if UK should promote sustainability on campus through an annual essay or arts competition with financial incentives, well over half of those polled agreed this would be beneficial to the university while a very small portion disagreed. About a quarter of the respondents were indifferent to such a competition.

**12. As a land grant university, UK should be a model for sustainability in the state.**

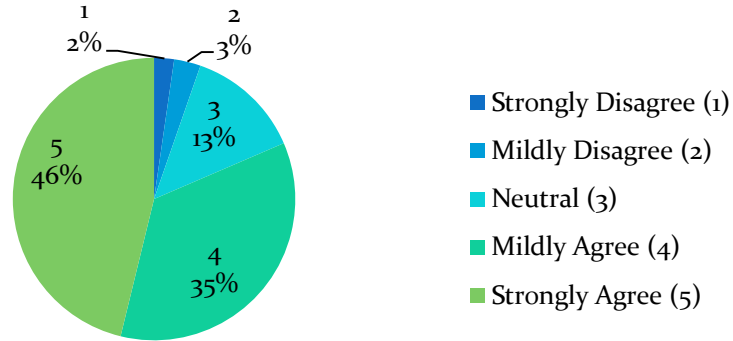


FIGURE 12

This pie figure shows that an overwhelming majority of students believe that the University of Kentucky, as a land grant institution, should be a model for the state of Kentucky on sustainability. Nearly half of those polled agreed strongly with this statement while less than 10% disagreed, either strongly or mildly. This shows that, as a collective student body, University of Kentucky students want to see their university guide the state towards a more sustainable future.

**13. UK has a moral responsibility to care for the environment.**

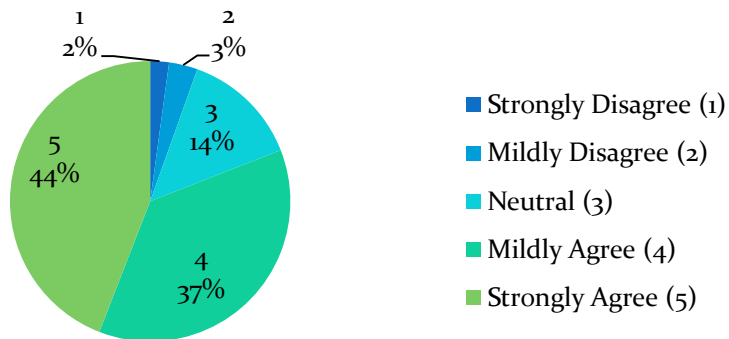


FIGURE 13

When asked if UK has a moral responsibility to care for the environment, students had the same reaction as they did to question eight, with an overwhelming majority of those polled agreeing that UK is morally responsible for the well being of the environment. These two questions and their responses show that an incontestable number of students see the university as a driving force for sustainability across the state because it is morally obligated to do so as a part of the land grant system.

**14. UK should actively participate in activities beyond the campus to promote renewable energy usage.**

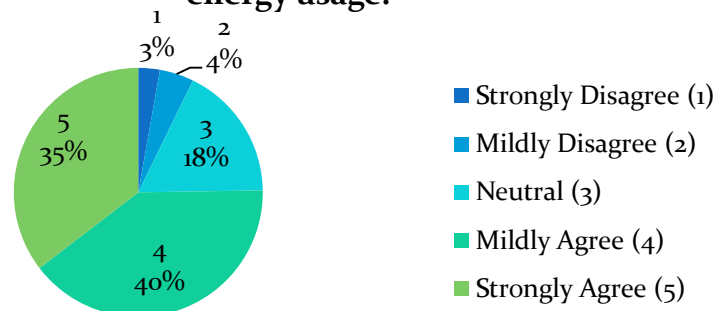


FIGURE 14

In this figure, around seventy five percent of those polled believe that UK should actively participate in activities beyond the campus to promote renewable energy usage. This shows that, even in a state deeply tied to the coal industry, students realize the importance of introducing sustainable forms of energy production and believe that UK has a responsibility to promote such forms of energy, even outside of its own campus.

**15. UK should maintain a more fuel-efficient vehicle fleet.**

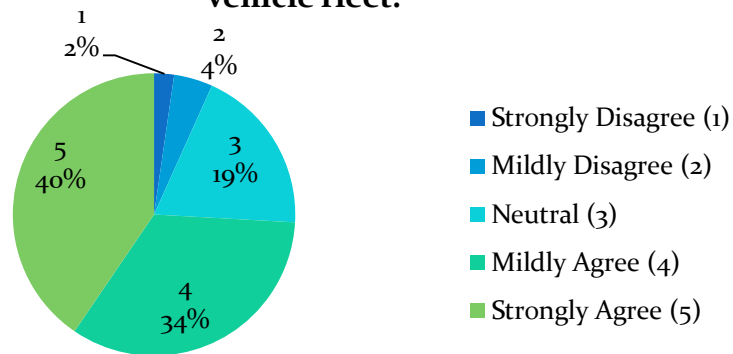


FIGURE 15

When asked about UK’s car fleet, around seventy five percent of students agreed, either strongly or mildly, that UK should strive to keep energy efficiency a priority. Less than ten percent disagreed and thought that UK’s current vehicle fleet’s efficiency does not need to change.

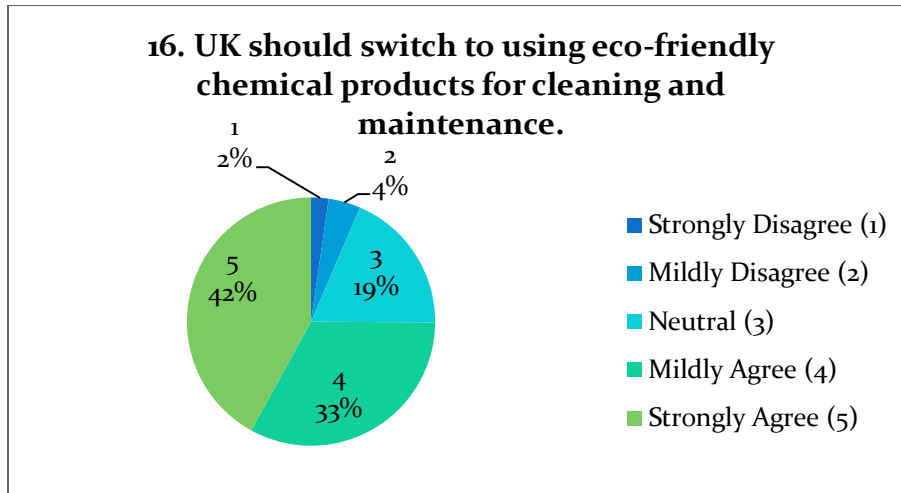


FIGURE 16

An overwhelming majority of students agree, either mildly or strongly, that the use of eco-friendly chemical products should be applied across campus in order to reduce the campus’ impact on the environment. Less than ten percent thought UK should continue to use conventional chemicals for cleaning and maintenance.

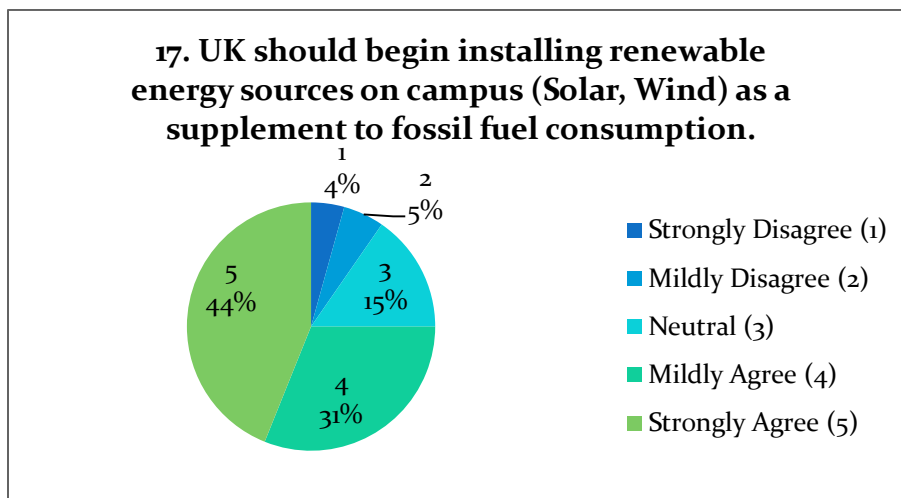


FIGURE 17

In this figure, it is shown that around seventy-five percent of students polled believe UK should begin installing renewable energy sources on campus, such as solar and wind, as a supplement to fossil fuel consumption. Less than fifteen percent disagreed with this statement. This response goes hand-in-hand with the information from figures thirteen and fourteen as evidence that students want their university to be a leader in sustainable energy production.

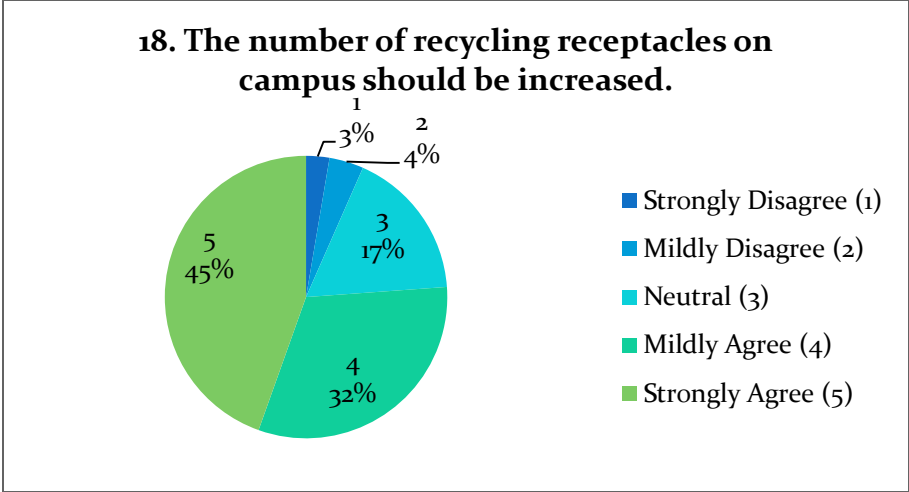


FIGURE 28

This figure, once again, shows an overwhelming majority of students are in support of UK moving towards a more sustainable future. Less than ten percent disagreed; seventeen percent were neutral and the remaining majority was in favor of increasing the number of recycling receptacles on campus.

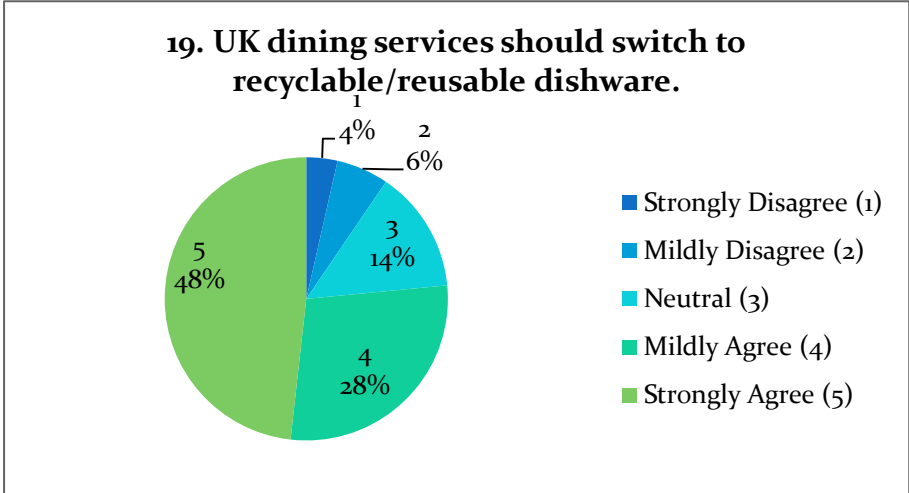


FIGURE 39

When asked if the UK dining services should switch to recyclable or reusable dishware to cut down on garbage generated by the university, a majority of those polled, agreed that this switch was necessary. The responses show that students are, by and large, willing and ready to make this switch to a more ecologically sustainable way of serving food on campus.

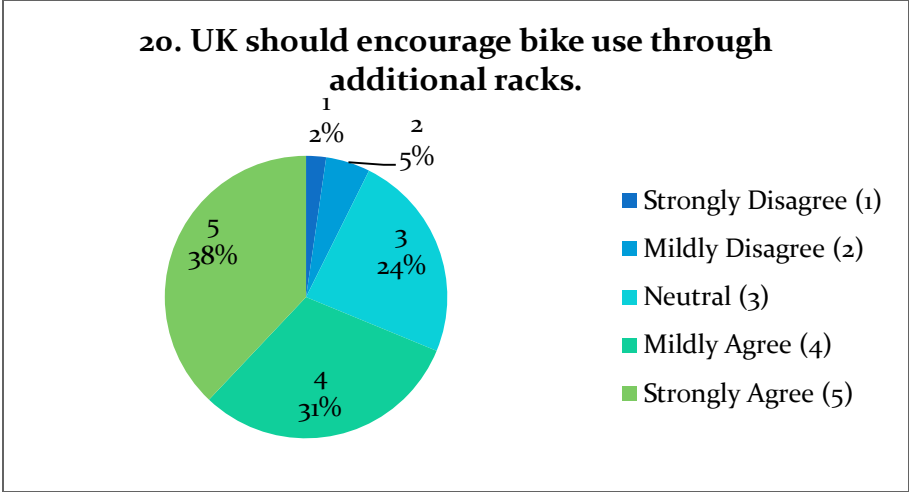


FIGURE 20

When asked about the number of bike racks on campus, most students presented a desire for more bike racks on campus to aid students in cutting their dependence on transportation fueled by fossil fuels.

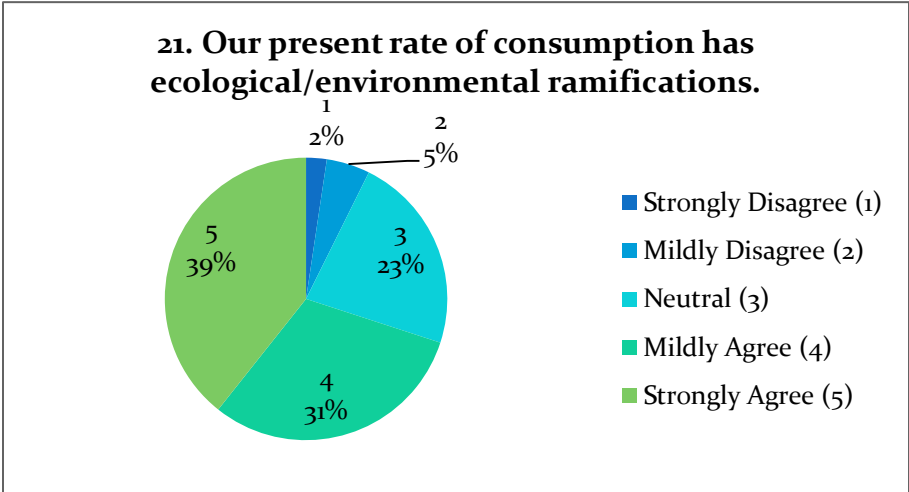


FIGURE 21

Figures twenty-one and twenty-two show that around three out of every four students polled believe that our present rate of consumption has ecological/environmental ramifications and they, as individuals, would be willing to reduce their consumption to protect the environment. Only around ten percent of those polled disagreed with both statements.

**22. I would be willing to reduce my consumption to protect the environment.**

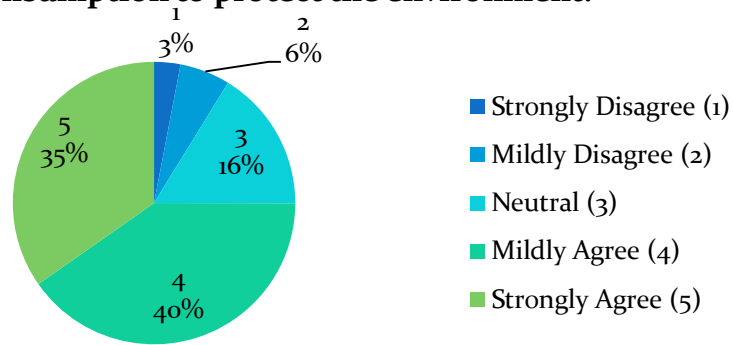


FIGURE 22

**23. It is too difficult for someone in my position to have an impact protecting the environment.**

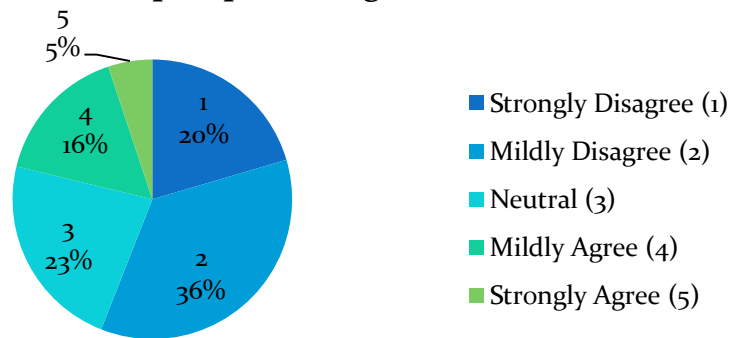


FIGURE 23

When asked if it is too difficult for someone in their position to have an impact protecting the environment, over half of the students disagreed, meaning they believe they have an impact on the environment, while about a quarter were neutral and less than a quarter agreed that they, as individuals, have no impact on protecting the environment.



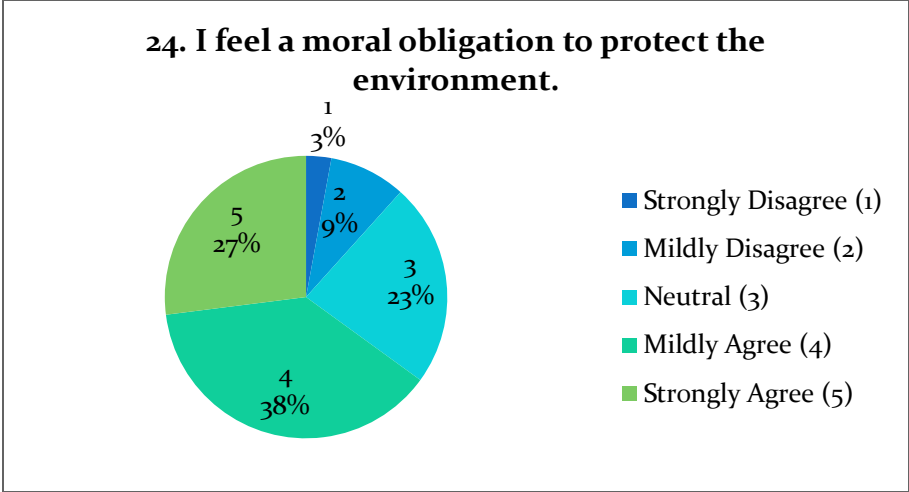


FIGURE 24

In figure twenty-four, about two thirds of students agreed that they feel a moral obligation to protect the environment. Of those in support of this statement, about half of the students strongly agreed they are morally bound to help protect the environment. Around ten percent disagreed with feeling such obligations.

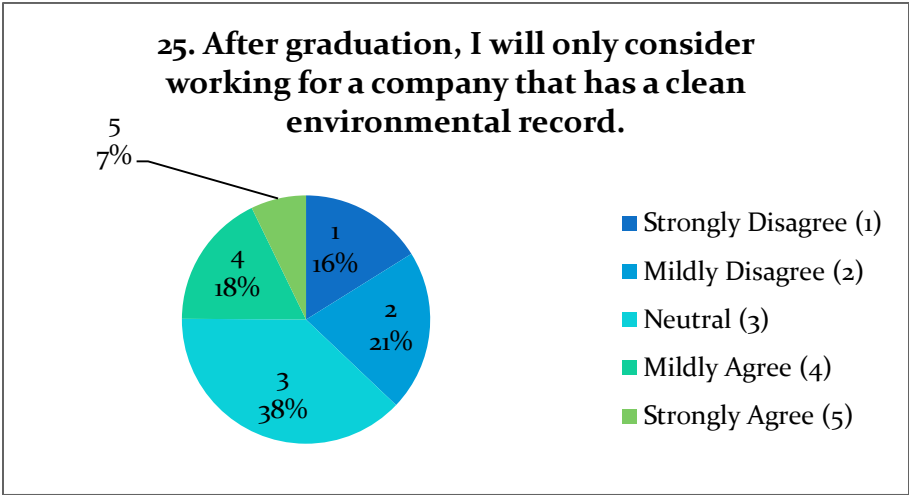


FIGURE 25

Figure twenty-five shows that at least a quarter of students polled will only consider working for firms that are environmentally responsible, while a little over a third disagreed with the statement, implying that they would work for a firm regardless of their environmental record. Over a third of the respondents felt neutral to this statement.

**26. When choosing between similar products, I will always choose the one from the company that contributes to building a more sustainable society.**

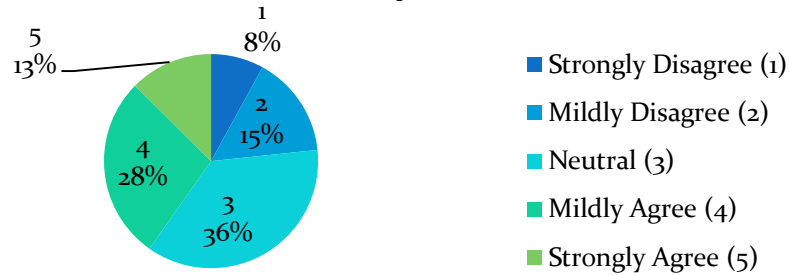


FIGURE 26

Nearly one third of students polled agreed, either strongly or mildly, that when choosing between two products, they would always choose the one from the most sustainable company. A large portion of those polled felt neutral towards this statement.

**27. I prefer to buy products from companies that protect the rights of their employees.**

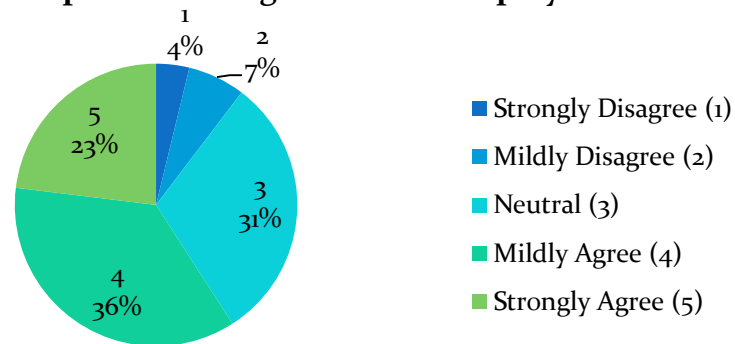


FIGURE 47

A majority of students polled reported they would prefer to buy products from companies that protect the rights of their employees. Around ten percent disagreed with this statement with a large number of respondents being neutral.

**28. Recycle plastic, aluminum, paper, glass, and cardboard**

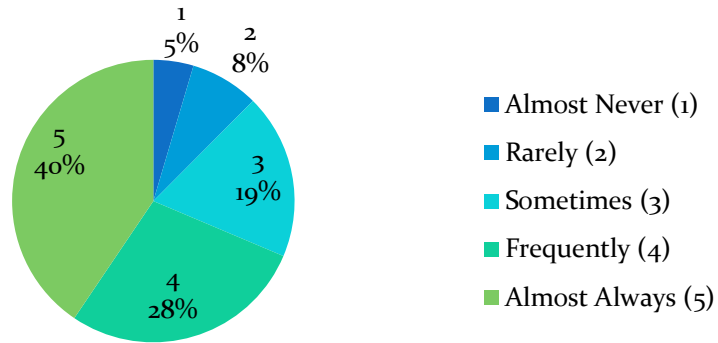


FIGURE 58

Figure twenty-eight shows that an overwhelming majority of students, either always or almost always, recycle plastic, aluminum, paper, glass, and cardboard. Only around fifteen percent reported infrequent recycling habits. This reinforces the students’ wants, as previously shown, for more recycling receptacles on campus to give the students ample opportunity to be sustainable in daily life on campus.

**29. Use your own bags when shopping**

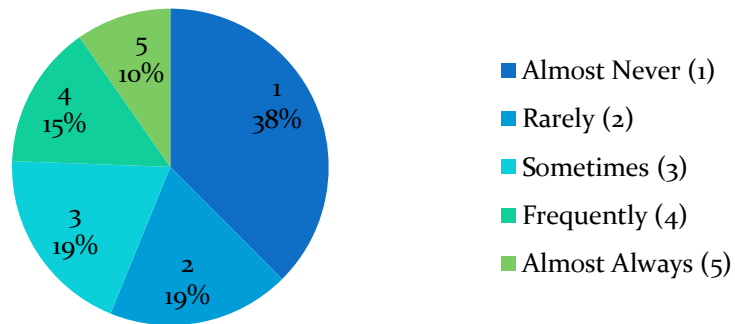


FIGURE 29

While a large portion of students polled reported infrequent use of reusable shopping bags, almost a quarter did agree to frequently using their own bags when shopping. This shows that, even in a demographic thought to be controlled by convenience, a substantial number of individuals still perform simple daily tasks to reduce their impact on the environment.

### 30. Use re-usable bottles for water, coffee, or other drinks

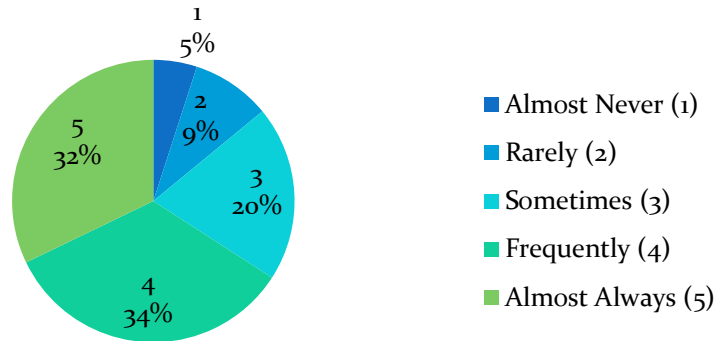


FIGURE 30

Figure thirty shows a majority of students use reusable bottles on a frequent basis for their beverages. Less than a quarter of students polled reported infrequent use of reusable bottles and cups.

### 31. Buy recycled products or goods made from recycled material

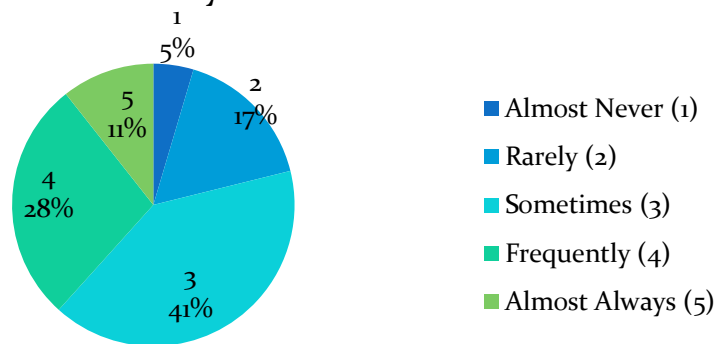


FIGURE 31

While a large portion of students reported intermittent purchases of goods made from recycled goods, well over a quarter of the students responded that they buy recycled goods on a regular basis. Less than a quarter of respondents showed infrequent purchases of recycled goods.

### 32. Buy locally-grown or locally-produced food

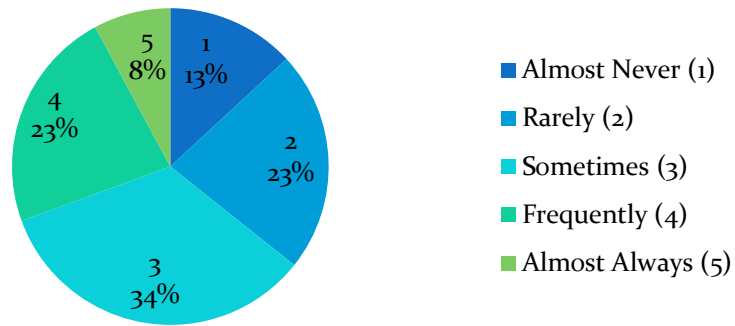


FIGURE 32

While most students only sometimes, or rarely, buy locally grown or produced foods, over twenty-five percent reported frequent purchases of local foods. Less than ten percent polled never buy locally produced foods.

### 33. Use the recycling receptacles located on campus

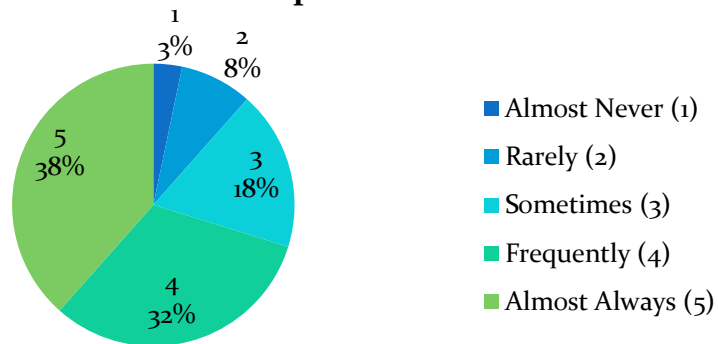


FIGURE 33

Use of the recycling receptacles located on campus is reported as frequent or almost always by around seventy percent of the student's polled. This shows that additional recycling receptacles will not only be welcomed, but probably very warranted as well, considering that a majority of students recycle on a frequent basis, as shown in pie figure twenty-eight, and that around three quarters of students want to see an increase in the number of campus recycling receptacles, as previously shown in figure eighteen.

## Results: Student Willingness to Pay for Sustainable Improvements

Knowing student perceptions and attitudes toward sustainability is crucial; however, significant sustainable improvements do not come free of cost. Previous campus sustainability studies often ignore this critical component. In this study we explicitly targeted an understanding of this issue by including questions regarding the financial side of sustainability. To implement changes in favor of sustainability, university or institutional financial support is crucial; nevertheless, understanding student financial commitments to support creating sustainable solutions at the University of Kentucky is also essential for developing and implementing student initiated improvements. In order to gauge this information, three willingness to pay questions, directly linked to improvements and costs in the form of tuition increases, were created within our survey.

The three questions were:

1. Currently 3% of UK's energy supply comes from renewable sources. Would you be willing to pay the following amount per year as tuition/fees to help UK double its current effort?
2. Currently there are about 2,500 recycling receptacles on UK campus. Would you be willing to pay the following amount per year as tuition/fees to help UK double the number of recycling receptacles on campus?
3. Recyclable/reusable/washable dishware is used less than 50% of the time in UK dining facilities. Would you be willing to pay the following amount per year as tuition/fees to help UK switch completely to recyclable/reusable/washable dishware?

Following each question, the survey randomly displayed a value out of \$6, \$8, \$10 and \$12; if the respondent said "yes", a follow up question was asked where \$5 in addition to the

initial amount was offered and the respondent was asked the yes/no question again; if the respondent said “no” to the initial question, a follow up question was asked where \$5 was subtracted from the initial amount and the respondent was asked the yes/no question again.

Take the initial offered value \$6 as an example, if a respondent indicated yes to both the original and the follow up questions, we assume the respondent was willing to pay at least \$11. The reason that \$11 was the minimum willingness to pay was because as researchers, we would not know whether the same individual would be willing to pay more than \$11; if the respondent answered yes and no to the original and the follow up question respectively, we assumed the minimum willingness to pay for the respondent was \$6; if the answers were no and yes to the two questions respectively, the minimum willingness to pay was assumed to be \$1; finally, if the respondent indicated no’s to both questions, the minimum willingness to pay was treated as \$0. The same set of reasoning applies to the other values given in the initial question. The following graphs explain the distribution of these willingness to pay values. These values are the lower bound or conservative measure of the actual willingness to pay.

**34. Currently 3% of UK's energy supply comes from renewable sources. Would you be willing to pay the following amount per year as tuition/fees to help UK double its current effort?**

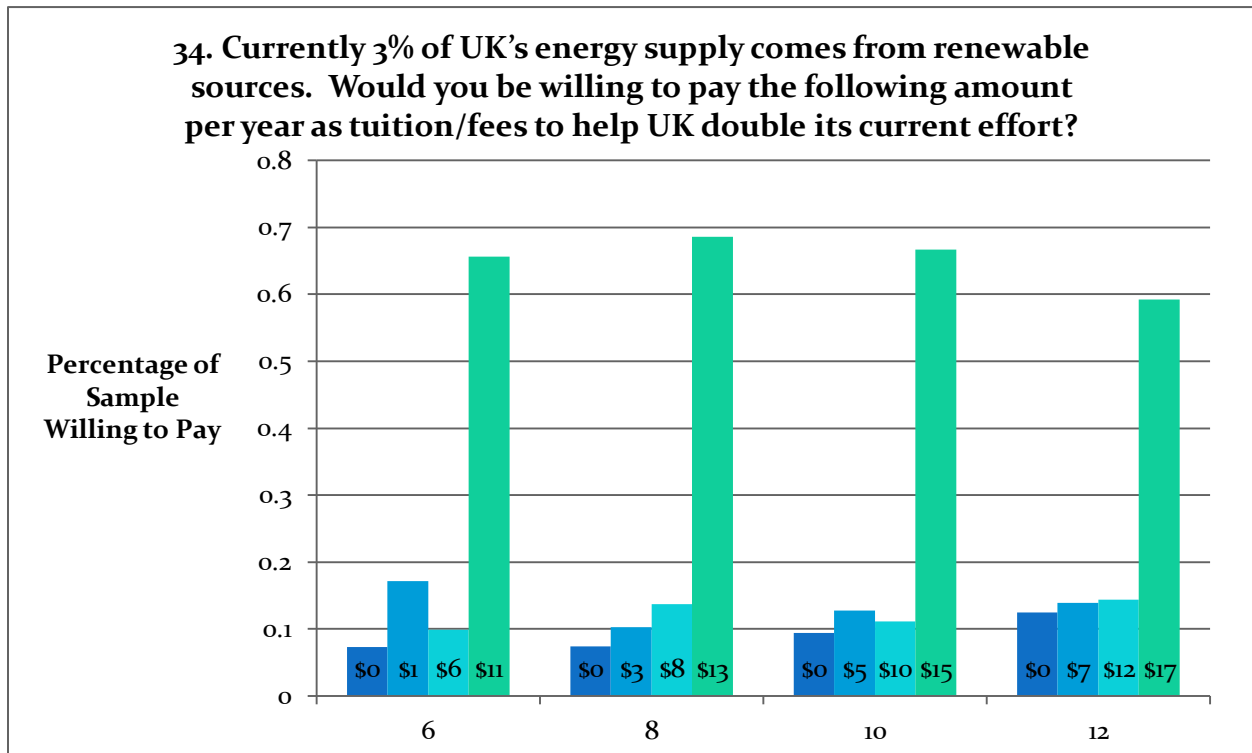


FIGURE 34

Students were given different intervals of tuition increases and asked to report at which level(s) they would be willing to pay to see increases in UK's renewable energy production. This figure shows that the overwhelming majority of students from across all these interval ranges always agreed to pay the highest level of tuition increase in order to see renewable energy production increase on campus. This shows that UK students overwhelmingly support increases in sustainability and renewable energy on campus, even if it costs them to see this happen.



**35. Currently there are about 2,500 recycling receptacles on UK campus. Would you be willing to pay the following amount per year as tuition/fees to help UK double the number of recycling receptacles on campus?**

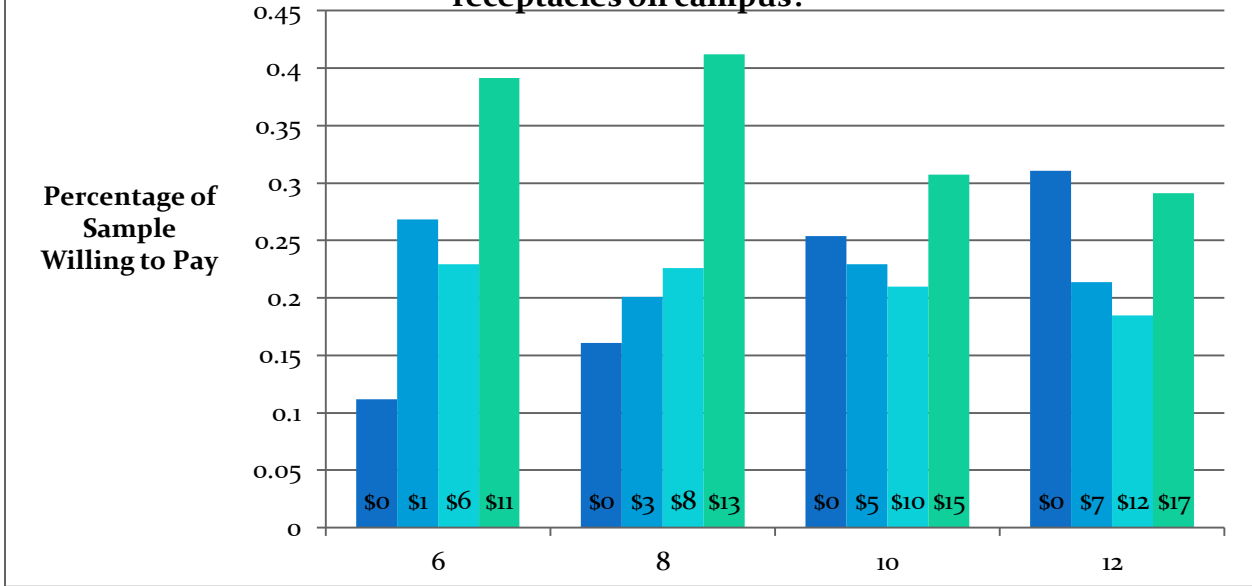


FIGURE 35

When asked how much they would be willing to increase their tuition in order to increase the number of recycling receptacles on campus, students responded with overwhelmingly high numbers. This reaffirms the responses from figures eighteen, twenty-eight and thirty-three that students want to see more recycling receptacles on campus to better serve their desire to recycle as much as possible.

**36. Recyclable/reusable/washable dishware is used less than 50% of the time in UK dining facilities. Would you be willing to pay the following amount per year as tuition/fees to help UK switch completely to recyclable/reusable/washable dishware?**

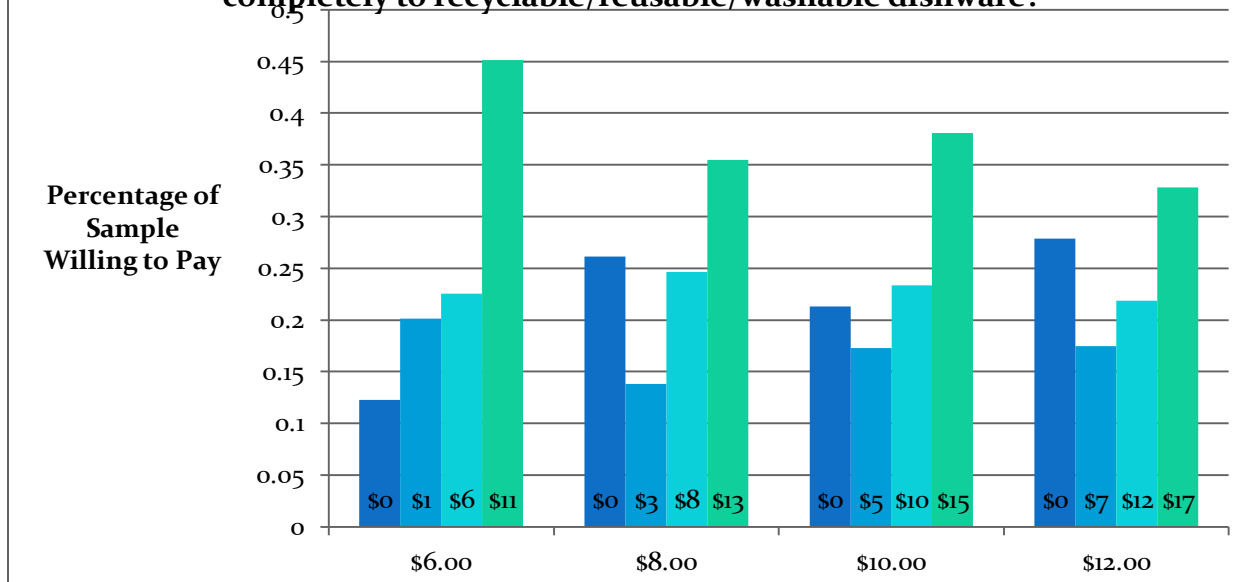


FIGURE 36

Overall students are willing to increase their tuition/Fees in order to see the mentioned changes on campus. As shown above Students are on average willing to pay a substantial increase in their tuition to see UK reduce the amount of trash it produces.

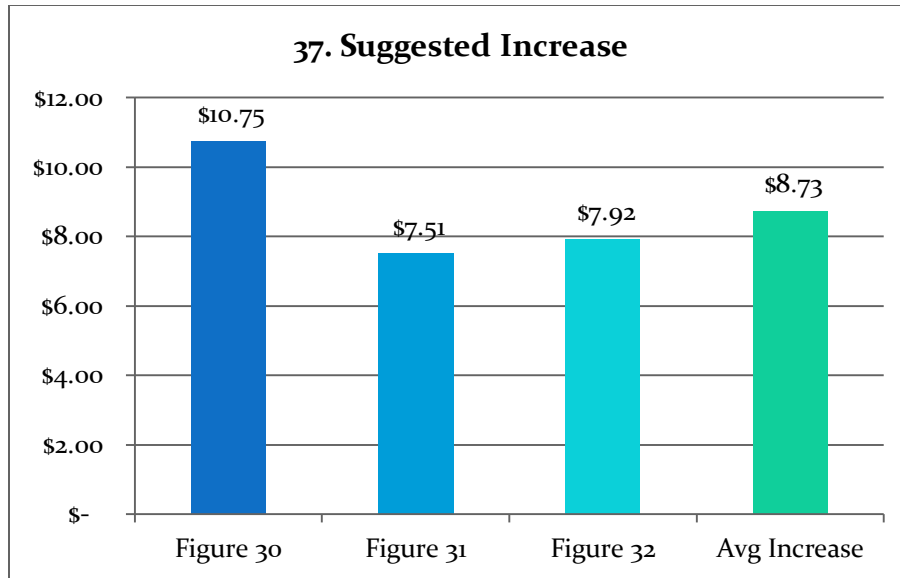


FIGURE 37

The suggested increases for each of the three questions are shown in the above graph. The average for these three, as each is mutually exclusive, is shown to serve as a benchmark as the overall suggested increase in tuition to help accommodate student’s wishes to see the university invest in more sustainable endeavors on campus.

### Discussion

Overall, the data collected within this survey indicates that students at the University of Kentucky are aware of sustainability based issues at the state, national and international levels. A majority of the respondents to our survey recognized sustainability as a multidisciplinary subject that included economic, environmental and social issues. The student body overwhelmingly voiced that they desire for the University to be a role model for sustainability within Kentucky and the nation. As a result of these desires, and the subsequent responses to the questions in our survey, the Agricultural Economics AEC 580 class has created some recommendations for the Student Sustainability Council to follow in order to enact student driven sustainability improvements on campus. The recommendations are listed in order of importance and are as follows;

1. Make public and easily accessible reports on sustainability audits conducted at the university level.
2. Work with dining services to change all disposable dishware into either reusable china or recyclable dishware.
3. Increase the number of recycling receptacles on campus, distributing them evenly throughout all colleges.
4. Increase the number and accessibility of bike racks across campus.
5. Increase the support for, and production of, renewable forms of energy, both on campus and across the commonwealth. This change would include the remodeling of old buildings, installing renewable sources of energy such as geothermal and/or solar.
6. Increase the students' stewardship fee by approximately \$8, giving the SSC additional financial backing to make these changes across campus.
7. Continue surveys like this, monitor student trends to accurately make decisions that reflect the student bodies' voice. Adapt this survey to include staff and faculty in the future.

Finally, we would also like to offer a word of warning. Although we have paid close attention during the entire research process to draw a sample of students as representative as possible to the UK general student population, any survey may introduce bias. Students cared more about sustainability might be more likely to respond to the survey creating a selection bias.

## **Conclusion**

Overall, this survey proved to be a success, providing valuable data on student sustainability opinions on campus. Based on our survey results, we, as the AEC 580 class, see the University of Kentucky moving towards a more sustainable future. At the end of this survey we

welcomed students to provide additional feedback on the survey and on the future of sustainability in Kentucky. A few selected comments from these responses are included below:

1. "This is an AWESOME survey!! I am so glad sustainability is showing up on the radar and that the university is addressing the issue."
2. "Good survey. I took one a few weeks ago that was obviously completely biased in one direction. You remained neutral (it appeared) and I appreciate that."
3. "Nice foot-in-the-door manipulation on the "would you be willing to pay?" section- very clever."

### Acknowledgements

First and foremost, we would like to thank the Student Sustainability Council for encouraging and supporting the creation of this survey. Without their support, surveys like this one and sustainable programs throughout campus would not be possible. We would also like to extend our gratitude to the Dean of the College of Agriculture, Dr. Larry Grabau, and the director of residence life, Tony Ralph, for making an enormous effort to send our survey out to the student body. Finally our thanks go out to the entire Agricultural Economics Department and department chair, Dr. Leigh Maynard, for their support and encouragement. None of this work would have come to fruition without the combined support of these individuals and departments.