

Introducing Environmental Policy at Augustana: A Comparative Study of Sustainability Practices at Small Liberal Arts Colleges

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Elliott, Christian Steven Boussemaere; Gonzales, Thea; Evans, Kathryn; Ridley, Hunter Colleen; and Cygan, Erin. "Introducing Environmental Policy at Augustana: A Comparative Study of Sustainability Practices at Small Liberal Arts Colleges" (2018). *Celebration of Learning*.

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INTRODUCING ENVIRONMENTAL POLICY AT AUGUSTANA:
A COMPARATIVE STUDY OF SUSTAINABILITY PRACTICES
AT SMALL LIBERAL ARTS COLLEGES

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ABSTRACT

This study analyzes environmental practices and policy at higher education institutions and examines the process it takes to implement them from student advocacy to administrative recognition that results in the implementation of sustainable plans, programs, and structures for the college in order to produce a feasible proposal for sustainable development at Augustana College. The authors conducted interviews with five colleges that have achieved sustainability in various ways and are largely similar to Augustana in religious affiliation, cultural background, and location: Kenyon, Knox, Luther, Moraine Valley Community College, and Oberlin. The goal from these interviews was to generate ideas from colleges like Augustana to show that Augustana is also capable of sustainable change. At the end of the study, the authors developed a sustainable policy proposal tailored for Augustana that was based on common trends identified from the five colleges, including college sustainability programs, informal and formal organization, ratings and certifications, and sustainable structures.

INTRODUCTION

We have chosen to operationally define sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission, 1987). This encompasses structures such as wind turbines and solar panels, practices like composting and recycling, and organizations such as sustainability focused clubs and committees.

The Oxford English Dictionary defines policy as "a course or principle of action adopted or proposed by an organization or individual." (Policy, n.d.). We have chosen to operationally define sustainable policy as policy that meets the aforementioned definition of sustainability.

Augustana College's closest plans related to sustainable development are solar panels leased out from an outside company within the next 25 years. According to Kirk Anderson, Vice

President of Administration and Chief Financial Officer of Augustana College, the cost of electricity for one school year is approximate to \$1 million. Because of these costs, the college has recently become more receptive to sustainable development than in past years. However, sustainable policy and goals for the future have much debate and thorough financial and logistical consideration to pass before they are implemented. Cautious with its financial endeavors, the college is weary of investing in environmental technology and structures that may be ephemeral. According to Anderson, any sustainable ventures in the future must be proven to be financially feasible and socially conscious for a long time (K. Anderson, personal communication, Feb. 8, 2018). Because the student view is shorter in timespan than administrators or faculty, it is in any sustainability initiative's best interest to be able to prove the affirmative answer to the question that supports all environmental sustainability: is investing in sustainability the right decision for the longevity of the college?

With the knowledge of possible approaches to dismantle environmental issues accumulated in ENVR-200, we have conducted research and interviews with five comparable educational institutions that have achieved sustainable development on their campuses in order to present environmental policy as a choice that is not only financially, socially, and ecologically reasonable but advantageous to the college and its surrounding community.

METHODS

We conducted phone interviews with managers/directors of sustainability offices at five higher education institutions comparable to Augustana as relatively small, liberal arts colleges in the midwest.

INSTITUTION AND CONTACT INFORMATION

- 1. Kenyon College** (Kenyon College, n.d.)
Contact: David Heithaus, Director, Office of Green Initiatives
Size: 1,662
Location: Gambier, OH
- 2. Knox College** (Knox College, n.d.)
Contact: Deborah Steinberg, Chair, Office of Sustainability Initiatives
Size: 1,400
Location: Galesburg, IL
- 3. Luther College** (Luther College, n.d.)
Contact: Jon Jensen, Director, Center for Sustainable Communities
Size: 2,014
Location: Decorah, IA
- 4. Moraine Valley Community College** (Moraine Valley Community College, n.d.)
Contact: Stephenie Presseller, Manager, Center for Sustainability
Size: 15,021
Location: Palos Hills, IL
- 5. Oberlin College** (Oberlin College, n.d.)
Contact: Bridget Flynn, Manager, Office of Environmental Sustainability

Size: 2,815

Location: Oberlin, OH

PROCEDURES

Our group first made contact with the staffed leaders of their respective sustainable offices by finding their email addresses online, explaining the premise of this project, and emailing to request an interview over the phone. The template for sending out emails to our contacts was the same, and the questions asked followed a semi-formal interview schedule that varied based on specific policies or practices that the school had.

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COLLEGE SUSTAINABILITY PROGRAMS

A key attribute to achieving campus-wide sustainability at colleges and universities is through the creation of programs that engage students and generate awareness about sustainable alternatives. The most common sustainability program implemented on college and university campuses is a recycling program. Recycling programs decrease society's negative impact on the environment by reducing the amount of harmful chemicals and greenhouse gases released into the atmosphere from landfill sites ("Recycling is Important", n.d.). Recycling programs at Luther college save the college 60% each year in landfill dumping costs, and many tons of GHG emissions (1 ton of waste dumped causes 3 tons of emissions) (J. Jensen, personal communication, Feb. 3, 2018). In addition to the recycling of plastics, Moraine Valley's recycling program includes

designated areas for the disposal of batteries and cell-phones (“Your Experience-Sustainability,” n.d.). College and university recycling programs can even benefit surrounding communities. For instance, Moraine Valley’s Information Technology department donates decommissioned computer equipment to local schools and charities (“Your Experience-Sustainability,” n.d.).

Beyond recycling of plastics and electronics, Luther and Kenyon Colleges have introduced composting programs (Kenyon College, n.d.). College and universities generate a large amount of food wastes, and these programs can prove beneficial in educating students about environmental issues and as a method of fostering environmental stewardship (American Society for Horticultural Science,” 2016). Including students directly in recycling and composting programs through paid or volunteer positions can physically connect otherwise interested or uninformed students about the benefits on sustainability through hands-on learning. One student at Luther wrote a popular blog post about how good he felt contributing to sustainability through composting, as he hadn’t felt engaged with campus environmental efforts before (J. Jensen, personal communication, Feb. 3, 2018). Colleges can also utilize the composted material. For instance, Kenyon’s composting program distributes the material around campus as soil (“Recycling,” n.d.). The implementation of a campus-wide composting program at Augustana could assist in addressing the issue of soil erosion on campus.

Student-led programs can also take the form of student initiative. At Luther College, for example, students interested in geothermal power petitioned the administration to add geothermal heating and cooling to the new Baker Village residence complex in 2012. Interested students made such a compelling case to administration with research and data that the president insisted that any contractor’s offer had to include geothermal. That insistence paid off--geothermal power covers

all the heating and cool needs of the complex, saving the college thousands of dollars yearly (J. Jensen, personal communication, Feb. 3, 2018).

Promoting programs related to efficient transportation can also decrease a higher education institution's environmental footprint. These programs include ride shares and bike shares. Ride shares can decrease the amount of pollutants released into the atmosphere, as students will be sharing one car as opposed to using multiple cars to reach the same, or approximately the same, destination. Bike share programs, in addition to serving as an alternative transportation source, can promote skill development. In response to the bike share program at Knox, the college also established the Knox College Bike Shop, which maintains the bike share fleet and offers workshops on bike repair, safety, and specialty classes on bike building ("Bikes at Knox", n.d.). If college and universities implement bike share programs similar to Knox's, then these higher education institutions would be generating awareness about the importance of alternative forms of transportation and equipping students with the skills to maintain a healthy and environmentally friendly lifestyle. Oberlin also offers a transportation alternative, car sharing, through a partnership with Enterprise Rent-A-Car (Oberlin Communications Staff, 2013). These cars are available to students, faculty, staff, and the community and are cost-effective (Oberlin Communications Staff, 2013). Ride sharing and car sharing can save money and gas and reduce carbon emissions, while simultaneously providing convenient transportation at lower for shorter periods of time and at lower rates than traditional car rental companies (Flaccavento, 2016). Most car-rental companies require drivers to be at least 21 years old, but car sharing programs on college and university campuses make vehicles accessible to younger students. Additionally, the implementation of alternative transportation programs benefits students who cannot afford to invest in parking passes or a car. Additionally, these programs can reduce the number of cars on campus and, therefore,

decrease the demand for parking spaces. Alternative transportation initiatives could prove advantageous on small college or university campuses where construction of new parking spaces is not feasible.

Sustainability initiatives do not have to be limited to an institution's campus. Distributing resources to the nonprofit organizations in the surrounding community, or in some cases to disadvantaged students on campus, can generate awareness about social inequalities and foster humility in students. As described by Stephenie Presseller, the Sustainability Manager at Moraine Valley, the college hosts a Swap-a-Thon, in which items that people no longer want are collected and distributed for free to the campus community. Items leftover from the event are given to a nonprofit organization in the community, as Moraine Valley does not wish to donate the items to a business that will sell the items for profit. Subverting exploitive, capitalist practices is necessary in order to progress towards sustainability, and colleges and universities are uniquely situated to help combat hierarchy-enforcing practices centered on environmental degradation.

If a higher education institution is concerned about the viability of sustainability programs, in regards to student interest and participation, concerns can be easily addressed through high visibility posters, electronic communication, etc. Essentially, colleges and universities can pique student interest in sustainability programs through effective advertising. Oberlin provides a Sustainability Map, which is a guide to noteworthy, sustainability-related initiatives on campus ("OES Programs", n.d.). Clear articulation and distribution of information about sustainability on campus can prompt student action in order to contribute to the goals of the college.

INFORMAL ORGANIZATION

The most effective execution of informal organization – that is, organization that comes from students and even faculty before administrative policies are established – begins with fostering a culture where environmental sustainability is valued past the graduation dates of a few passionate students. Creating effective, long-term sustainability on college campuses requires not only the initial outcry from students and the investment from administrators but an intersectional, holistic understanding of how everyone is a stakeholder and contributor to the community: students, faculty, staff, administrators, residents, business people, government around the college, and many more.

At Oberlin College’s Office of Environmental Sustainability, coordinator Bridget Flynn said implementing environmental policy was never met with adversity because sustainability was one of Oberlin’s pre-existing values.

It’s kind of our culture. I can’t really say there was ever a time that it wasn’t a part of what Oberlin wants to do. Even before we were using the term ‘sustainability, there were hippies or environmental activists here. It’s always mattered to people at Oberlin. For plenty of people, it’s part of a larger sense of community and belonging (B. Flynn, Personal Communication, Feb. 11, 2018).

Oberlin has been a historic leader in progressive practices as a midwestern college since its founding in 1850. It was the first college to invite women to apply, have a policy of race-blind admissions, and grant a degree to an African-American woman (Oberlin History Frequently Asked Questions and Timeline). Its Office of Environmental Sustainability has even been hailed as “the mecca” of higher education sustainability from Kenyon, Moraine Valley, Knox College, and many

others across the country. However, though their sustainable policies have regularly exceeded expectations, they are only one example of a growing trend of small liberal arts colleges within the midwest that are constantly pushing to use campus culture to start sustainability initiatives. At Kenyon College, adopting sustainability as a community value in its practices, website, administrative speeches, and student groups have given it an edge in recruiting prospective students (D. Heithaus, personal communication, Feb. 8, 2018).

Student clubs and environmental programs are the backbone of informal organization for sustainability. In many cases, awareness of and community value for sustainability have increased due to new sustainability programs thought up by student clubs, programs that sometimes result in the creation of new clubs. At Augustana, Green Week targets goals like campus clean-up of pollution and land management for seven days. However, at other schools, these programs are longer term and invite administrative collaboration with students. At Knox College, students hold regular “listening meetings” where administration is asked to directly inform students of what they need to do or what it will take to begin a sustainability project. From these meetings come proposals for future initiatives and ideas like the “Student Sustainability Fund.” In 2008, Knox students partnered with the Student Senate’s Sustainability Committee to create a fund that provides subsidies for sustainable projects students want to pursue. Though the fund relies on a fee from student activities, sustainable development on the Knox College campus has increased as a result of the fund; this policy came from students and has proved a secure method of providing financial support for sustainable ventures without leaving students scrambling for money (D. Steinberg, personal communication, Jan. 31, 2018).

The most effective sustainability policies consider the college’s global impact on a social as well as environmental level. Colleges like Kenyon, Knox, and Oberlin have sent their students

to summits and conferences that encourage networking, brainstorming, and team-building, which only strengthens the student-centered infrastructure behind sustainable development. It also has proved particularly pragmatic to make a space for the surrounding community's voice in decision-making meetings. At Luther College, the school held public hearings and met with neighbors before installing wind turbines. Similarly, Luther's solar projects necessitated productive discussions with the city. Both projects raised awareness about renewable energy and efficiency, serving both the college and its surrounding community. Now, the school does public tours and presentations of their projects, and the community is working toward a municipal electric utility (J. Jensen, personal communication, Feb. 3, 2018).

Student zeal and dedication for sustainable development is paramount to achieving environmental policy at higher education institutions. At four of the five schools that were interviewed, the push for sustainable development came from a solid foundation of student passion and motivation to instill change through clubs or programs, which later was supported by faculty advocacy and recognized by administration. Once student determination creates an environment where those in power must listen, formal organization can occur, which makes the push for sustainable development last longer than one graduation class.

FORMAL ORGANIZATION

The development and implementation of sustainability initiatives by colleges and universities can reduce the environmental impact of these institutions. Sustainability initiatives and practices include small-scale energy efficiency, large-scale energy efficiency, renewable energy, transportation, food, environmental procurement, waste, green building design, water and ecological design, education and outreach, and innovative sustainability financing options (Sofer and Pottern, 2008). Campuses can increase environmental and energy awareness by incorporating

sustainability into curriculum (Sofer and Pottern, 2008). Having formal sustainability organizations that are recognized by administration and that work within the system of the college is vital to getting these types of new policies implemented. A formal structure helps these groups to be less transient and stay active from year to year.

Augustana has never had a formal sustainability office (i.e. a version of the Office of Student Life that is focused on campus sustainability), but the college has tried more informal organization like a sustainability council. The council is considered to be responsible to the administration. It consists of permanent, elected, and appointed members. The permanent members are Dean of the College (in this case, a designee), Chief Business & Financial Officer, Director of Facilities Services, Director of Food Services, Director of Residential Life, and a Faculty Member Designated by the Dean as Sustainability Coordinator. The elected members are four professors from a variety of academic departments that get two year terms. Two students are included in the council as members appointed by various on-campus environmental groups. The council has vague goals such as analyzing sustainability issues, facilitating campus input and awareness, providing recommendations to administration, and leadership within the community, among other goals (Augustana College, 2017). Having a formal office that paid at least one full time staff member and perhaps students as well would create consistency in membership.

All five of the small, liberal arts colleges we looked at had formal offices of sustainability. For example, Kenyon has the Office of Green Initiatives. The office is part of the academic division of the school, which gives them access to the provost. The Office has one full time employee, David Heithaus, and several paid student interns. Having paid positions with specific work hours helps the Office to have student and faculty support from year to year. They have worked on a number of different projects, like getting solar panels installed in the school and starting a recycling

initiative in the dorms. (D. Heithaus, personal communication, Feb. 8, 2018). Luther has a Center for Sustainability with subcommittees for energy and water, food and waste, student learning, and land use all made up of faculty and students. These subcommittees draft policy and send ideas on to the Center's Sustainability Council of faculty, staff, and students for a vetting process before ideas are recommended to the administration for adoption (J. Jensen, personal communication, Feb. 3, 2018).

Establishing formal organizations like this usually does not start with administration. It must come from people who care a lot about the environment, informal organizations that can become formal organizations with a concerted effort. Kenyon's Office of Green Initiatives began with students working on a research project not unlike this one. They proposed a climate action plan to the school four years ago and not long after that, the Office began. David Heithaus already worked for the school managing their environmental facilities and his duties were transferred to working for the Office instead (D. Heithaus, personal communication, Feb. 8, 2018). Knox College's Office of Sustainability Initiatives also formed due to student actions. The college had a Students for Sustainability Group with faculty advocates, which caught the attention of their environmentally conscious President. The President then made it a task force called the President's Council on Sustainability that was made up of students, faculty, and administration, which later became the Office of Sustainability Initiatives (D. Heithaus, personal communication, Feb. 8, 2018). Oberlin College's Sustainability Board began with students and faculty pushing for better sustainability practices. The president took notice and created an advisory council. This council included general faculty, staff, two students elected by the student senate, and a representative from the local city government. This council was the forerunner to the Sustainability Board (B. Flynn, Personal Communication, Feb. 11, 2018).

An important trend that appears is that formal organization happens when the school's community shows administration that sustainability is something they care about. It seems that administration will listen to students more than any other group. All of these formal offices began with small student organizations that demanded more attention from people in leadership positions at their school. David Heithaus of Kenyon College said that students were most effective in getting administration to create new policy, they like to see that the students care about these topics since the school is really for them anyway (D. Heithaus, personal communication, Feb. 8, 2018). According to Heithaus, students have more power than they think; tuition dollars can speak loudly.

Creating an office or board for sustainability is not the only type of formal organization schools can have. Campuses can increase environmental and energy awareness by incorporating sustainability into curriculum (Sofer and Pottern, 2008). For instance, Moraine Valley Community College has a professional development program for faculty. The goal of this program is to "infuse sustainability-related content throughout and across disciplines" ("Sustainability", n.d.). Moraine Valley Community College's website says of the program: "The college's Center for Sustainability provides support by coordinating initiatives/activities, establishing a resource library, making connections to student organizations, bringing sustainability education to the greater community, and seeking/managing external funding to support the faculty committing to the program" ("Sustainability", n.d.). At Kenyon, the Office of Green Initiatives is part of the academic division of the college. They have gotten several important changes through, like getting solar panels installed at the school, by tying the projects to academics. They had the solar panels paid for by creating a class about solar panels and getting a certain amount of money from the school for a new panel each time the class runs (Kenyon College, n.d.). Luther College, similarly to Kenyon, has classes in several disciplines that focus on certain environmental issues like food waste and

efficiency. These semester long classes sometimes produce new ideas that administration implements. Luther, like Augustana, also tried a biofuel initiative that was more a learning opportunity than anything else. The school invested in a bio-digester, but facilities staff found it burdensome and dangerous, and when the machine broke, there was not enough interest or money to fix it. Instead, the digester was given to a third party who uses Luther's oil to make fuel and sell back to the school. Unlike Augustana, Luther doesn't view the biofuel program as a failure because education is the primary goal of any college, and though the program did not last long term, students and faculty learned a lot about biofuel and sustainability, and benefitted from the project (J. Jensen, personal communication, Feb. 3, 2018). Thus, all sustainability projects have intrinsic value because--as long as students are actively involved--environmental efforts advance the primary goal of the institution.

RATINGS AND CERTIFICATIONS

As colleges become more acquainted with sustainability programs, a plausible next step is to become involved in a rating or certification program. Not only do these certifications serve as an accountability measure for colleges, but also as a competitive and marketable aspect for prospective students. Across the five colleges interviewed, four hold ratings from the Association for the Advancement of Sustainability in Higher Education's (AASHE) Sustainability Tracking, Assessment & Rating System (STARS) program. Oberlin College earned 6th place in the overall top performers category for the baccalaureate institutions section of AASHE's 2017 Sustainable Campus Index. Knox and Luther College both hold a Silver rating, and Moraine Valley holds a Bronze rating. Inclusive of the STARS system, the AASHE's program comes with a multitude of benefits for participating members.

Along with receiving a rating, ranging from ‘reporter’ to ‘platinum’, members can also use AASHE’s resources to create a plan for continuous improvement and implementation of sustainability efforts. Many colleges are using the STARS rating system as a form of incentivised faculty/student engagement, in the pursuit to “build a culture of sustainability” (aashe.org, n.d.). In order to receive a STARS rating, institutions must report to AASHE using customized criteria and reporting techniques. This serves as a great educational opportunity for students and faculty who can dedicate class based projects and lectures to obtaining data to report to AASHE. The task of reporting can also foster the need for more formal organization in the form of a sustainability task force, committee or office.

For environmentally conscious students and faculty at Augustana, the institution’s current involvement in AASHE and STARS leaves something to be desired.

A report by Morgan Anderson, Abigail Carus, Erin Cygan, Sarah Lisak, and Abbey Ward examining sustainability and soil erosion on Augustana’s campus indicates the following:

According to the information reported in *Assessing Sustainability at Augustana College*, with data obtained using the self-reporting Sustainability Tracking Assessment and Rating System (STARS), Augustana is on the lower end of the spectrum in terms of sustainability practices. Augustana is lacking in the areas of climate, energy, and human resources. In order to reach the requirements for the lowest category of the STARS assessment, institutions have to achieve an average score of 25 points. Augustana just managed to meet the requirement for bronze the bronze level with an average score of 25.11, which means Augustana is a significant ways away from reaching the most sustainable category, which requires at least 85 points. Although Augustana’s score is lacking, the faculty and students

should not be discouraged as we have a lot of room to grow and can only go up from here (Bandman, 2013).

The AASHE website truly holds a wealth of knowledge and resources for colleges to aid in efforts to function more sustainably. Sustainability reports from all other AASHE members are available online, many directly outlining their sustainability goals, plans, and initiatives. This serves as a source of comparison and a way to identify new ideas and methods that can be successfully applied to one's local campus. For students working within their institution's sustainability movement, the AASHE 'Campus Sustainability Hub' is a fantastic resource for accessing resource collections and toolkits for all aspects of campus sustainability, from Investment and Finance to Public Engagement and Curriculum.

All but one of the top ten baccalaureate institutions rated as Gold by STARS in 2017 is an institution with under 3,000 students. This is great news for Augustana. If similarly sized higher education institutions are able to perform successfully in sustainability programs, surely Augustana has a chance to also place itself among this list of top performers.

SUSTAINABLE STRUCTURES

As institutions continue enrollment in various environmental programs and become more acquainted with sustainability practices, the next logical step is to begin making long term investments aimed at improving campus sustainability. This comes in the form of physical structures which support sustainability. Such structures are often well received by the student/faculty body and can often times offer monetary benefit to the college or university and be subsidized by various programs. Sustainable structures range from implementing student-led class

projects to large-scale collaborative efforts between the community and the institution. Of course, some projects are more feasible than others within a relatively short timespan. Among the five colleges we interviewed, the average sustainability project takes anywhere from 6 months to 2 years to complete. The following is a general overview of sustainability structure projects popular across five campuses we interviewed. Augustana has already implemented a few of these sustainable structures, therefore, broadening our campus sustainability effort involves being open to some of the more complex sustainability structure projects.

Small scale sustainability structure projects are what Knox College's Chair at the Office of Sustainability Initiatives, Deborah Steinberg, likes to call "low hanging fruit" options (D. Steinberg, personal communication, Jan. 31, 2018). These are projects which require less resources and funding compared to more complex projects like constructing a wind turbine. 'Low hanging fruit' options are a great way for institutions to introduce more permanent sustainability efforts to their campuses, often with benefits which outweigh the cost of the project. For example, a campus garden or greenhouse can act as a gateway for getting students involved in sustainable practices. Food grown in these gardens can be donated to an on campus dining center, local food pantry, or sold to students and faculty to further support the garden. A composting site goes hand in hand with the implementation of a campus garden. Composting can reduce food waste and the costs associated with discarding such waste. At Augustana, the student group Augie Acres runs its very own campus garden. They grow a wide range of fresh produce, a majority of which is sold in the fall and spring terms to raise money for the club. Seasonal produce is grown in the summer months as well. Leftover produce is distributed to the club members. However, Augie Acres has expressed great interest in donating some of its produce to the CSL dining services. Augie Acres is currently in the process of raising money to purchase a flash freezer so that surplus produce can be saved

for use during the school year. The Augie Acres garden also has a composting bin which produces fertilizer for the garden. Augie Acres picks up waste from the CSL every Monday, Wednesday, and Friday (Clayton Wassilak, personal communication, Feb. 9, 2018). Augie Acres and the CSL dining services already have an effective relationship; this is advantageous and should be built upon in the effort to improving current, and introducing new sustainable practices campus-wide.

EcoHouses are also popular across a number of campuses including Knox College, Oberlin, Kenyon, Luther, and Augustana. EcoHouses are a fantastic way to allow environmentally conscious students to begin living their values, and also give the college a chance to gain a return on investments from the installation of low flow faucets and energy efficient lighting. Using these monetary benefits to retrofit other campus housing is an effective way to spread sustainability culture and create a sustainability standard campus-wide. Additionally, on a campus-wide scale, the installation of low flow faucets can save higher education institutions a significant amount of money. For instance, Moraine Valley updated faucets and toilet flappers across campus, effectively saving approximately \$30,0000 a year. One step up from installing LED lights and low flow water systems is upgrading buildings to Leadership in Energy and Environmental Design (LEED) certification. The LEED certification is the most widely used rating system and is applicable to almost every building. The goal of these building standards is not only to be more environmentally friendly, but to be financially beneficial as well (U.S. Green Building Council, n.d.). Knox College, Luther College, Kenyon College, Oberlin College, and Moraine Valley Community College all have at least one LEED certified building, and a majority have multiple buildings across campus. Other energy saving practices which many colleges have introduced include electric car ride-share programs, similar to Augustana's "ACES" service, and installing LED lighting in campus buildings.

Luther, Oberlin, Knox, and Kenyon colleges, all similar in size and enrollment to Augustana, have taken measures to run at least partially off renewable energy sources. Currently, one of the more affordable and effective ways to implement renewables is through the installation of solar panels. One of the most notable and successful examples of solar panel utilization come from Luther College in Decorah, Iowa.

Luther College's sustainability efforts provide a good case study for how renewable energy projects be implemented here to save Augustana money. To meet their goal of a 50% reduction in carbon footprint by 2015, in 2012 Luther administration decided to pursue photovoltaic (PV) solar power. The 1.18 million kWh the school's arrays generate each year avoids the release of 750 metric tons of CO₂ and lowers Luther's carbon footprint by over 5% (luther.edu). As Steven Chu, U.S. Secretary of Energy stated on the completion of Iowa's largest PV solar array at the college, "Luther is a perfect example of how colleges and universities can help drive America's clean energy economy and win jobs of the future" (luther.edu, n.d.).

Luther's solar projects include 2 large arrays and 3 residential scale arrays, totalling 1.14MW of power. Luther's first solar PV installations were small scale residential projects. In 2011, \$22,000 of donor money paid for a 4kW pole-mounted array college facilities workers installed as part of a "Sustainability House" for students interested in sustainability. The solar array generates more than than the house uses in a year, and the surplus powers neighboring homes. Through the state of Iowa net metering rule, Luther College receives the full retail value of the surplus solar the Sustainability House array produces. In 2013 and 2016 respectively, donor money from a past Luther president dedicated to sustainability paid for the installation of two separate solar projects on the president's home of 5.3 and 13.7kW, which also produce a surplus of power. Also in 2013, Luther installed a 20kW array at the Shirley Baker Commons to demonstrate how

the entire residence hall could be powered by the sun. The total cost of this project was \$82,500, which was paid 40-40-20 by a U.S. Department of Energy Grant for renewable energy, donors, and an Alliant Energy Rebate for renewable energy. The U.S. Department of Energy grant, available during the recession, allowed for a 30% direct cashback grant for solar energy investments. Extra costs are covered by Luther's Climate Action Fund set up by the college in the early 2000s with a \$1 million investment. Money earned by investments in efficiency and renewable energy projects are added to this fund to ensure future sustainability projects at the college (luther.edu, n.d.).

In addition to small scale systems, Luther invested in several large scale solar arrays more recently. The Baker Village residence complex is an energy-efficient village of four townhouses that use geothermal for heating and cooling. In 2012, Luther decided to install 280kW of solar PV on the site to power the entire complex at a cost of \$1.2 million. As a small liberal arts college like Augustana, Luther didn't have the funding to pay for the solar installation outright, even with donor money and grants. Instead, the college worked with local banker Larry Grimstad who's LLC Decorah Solar (J. Jensen, personal communication, Feb. 3, 2018). Luther signed a 7 year lease with Grimstad on the panels, which is paid partly by money the college saves by not buying power from MidAmerican, partly through donations for renewable energy, and partly from the sale of solar renewable energy certificates to Decorah Bank & Trust to reduce its own carbon footprint. In 2019 when the lease ends, Luther will own the solar installation and pay less for the rest of the system's 25 year life than it would have buying energy from the grid (luther.edu, n.d.).

This leasing system worked well for Luther's first large solar installation, but it's not always an ideal solution, as leasing the panels means the college is responsible for them and must pay to replace broken or faulty parts (Luther once ran into a problem with gophers chewing power

cables) (J. Jensen, personal communication, Feb. 3, 2018). In 2015, Luther pursued its largest solar power project (\$1.6 million, 821.76kW) in a different way. Following approval by the Decorah City council and assessment studies by Alliant energy in 2015, the college financed a 10 year power purchase agreement (PPA) with third party solar company, Oneota Solar, LLC. After the PPA ends, Luther acquires ownership of the solar arrays and will save \$1 million in electricity purchases from the grid over the system's 25 year life. This PPA system is much easier for colleges to support as it reduces risk--unlike in a lease agreement, in a PPA the solar company bears the risk of system damage and has incentive to keep panels in working order so they can sell power to the college (J. Jensen, personal communication, Feb. 3, 2018). A PPA allows colleges like Luther and Augustana to guarantee payback and reduce carbon emissions with no money down and virtually no risk until the PPA expires and the school gains ownership of the panels. A solar PPA agreement with a local company would be the ideal way for Augustana College to pursue solar in a socially, environmentally, and fiscally responsible way.

Luther College is also a good example of how energy efficiency projects can save institutions money and reduce GHG emissions. Before 2004, Luther consumed 18 million kWh of energy per year. Now, following 15 years of efficiency investments, the school consumes only 12 million kWh yearly, spending only \$1 million. When administration first targeted energy efficiency as a place for improvement following the new Action Plan, they paid for a pricey \$120,000 investor grade study by an outside engineering firm that assessed all areas of campus. Through a government rebate program, Luther received half of that investment back when it agreed to implement changes, and the rest after the changes were finished. The total cost of Luther's energy efficiency improvements (e.g. LED lights, occupancy sensors, better thermostats, smart electric meters, etc.) was over \$1.5 million, but that cost was paid back through energy savings in

7 years. The total system life for Luther's investments is 15 years, so the school has many years of energy savings to look forward to. Efficiency improvements don't only have to be in energy; Luther used to spend \$400,000 yearly for water and sewer from the city, but following the investor grade study and the installation of efficient toilets, water consumption is down by 20%, saving thousands of dollars yearly. The school also improved efficiency of its old central steam heating system, paying an outside company to install new pipe insulation with a 3.5 year payback. Though the school has invested a lot of money in efficiency projects over the last 15 years, Luther has recovered several orders of magnitude more in energy savings. Their projects help the environment, but also just make sense economically (J. Jensen, personal communication, Feb. 3, 2018).

RESULTS: SUSTAINABILITY PLANS/INITIATIVES

All five comparable institutions implemented formal action plans to guide their sustainability efforts. An official action plan typically includes a time target for carbon neutrality, other sustainability goals, and specific steps to become more sustainable. Environmental policy is an important first step in planning for long-term sustainability because it institutionalized sustainability as a guiding principle. Having goals set in official policy makes specific future efforts easier to design and improve. To be effective, however, transparency is key: administration needs to communicate the status of environmental efforts from campus and keep the door open to collaboration, thus keeping all members of the campus community accountable for policy promises made. Such transparency is achieved by publicly announcing schools' commitments, and maintaining a permanent web presence. Furthermore, official policy means school administration accepts that sustainability isn't just an add-on or way for the college to "look better" to potential

new students—it's a way to improve efficiency, save large amounts of money, and offer valuable co-curricular learning opportunities for students to improve habits, virtues, and important life skills. If student interest in pressuring administration for change wanes, sustainability efforts ingrained in school policy will continue to save the institution money.

Carbon neutrality is a defining principle for many schools' environmental policies. Luther College, for example, has such a plan. Approved by the Board of Regents in 2012, Luther's Climate Action Plan pledges a 50% reduction in carbon footprint by 2015 and carbon neutrality by 2030. Oberlin College's 2004 Environmental Policy Statement pledges the same by 2025. Beyond carbon neutrality plans, each school has a number of policies and initiatives defining other ways these institutions have decided to become more sustainable. As part of the Climate Action Plan, Luther pledged to build all new buildings and complete all renovations to LEED silver standards (though not to pursue a formal LEED certification, as the process is expensive), and purchase only energy star rated appliances. The school's energy conservation policy requires a 5% reduction of energy use each year, 3% through implementing new energy technologies (like movement sensors for lights, insulation, etc.), and 2% through behavioral changes (controlling building temperature when students are away, convincing students to turn off lights in residence halls, etc.). Luther's Climate Action Plan also includes a pledge to pursue local food purchases whenever possible and work to build a local food production system for the school's cafeterias. Though not specifically a part of policy, most schools plans include the guiding principle of reducing operation and management (O&M) costs whenever possible, which tends to happen naturally as efficiency projects are completed. Clearly, sustainable policy can take many forms and very widely define a college's commitment to the environment and to saving money.

Some schools without specific environmental action plans have still committed to sustainability in meaningful ways through more general strategic plans. Oberlin defines sustainability more broadly in its Oberlin Strategic Plan 2016-2021 Directions for the Future, which calls for the “necessary steps to achieve sustainability—education, financial, and environmental.” Knox College has a similar plan called Knox 2018 Strategic Plan that includes a sustainability pledge. Kenyon College has been taking inventory of its carbon emissions in order to move toward a carbon neutrality plan of its own. A draft of this plan is set to be completed in spring of 2018 (D. Heithaus, personal communication, Feb. 8, 2018).

Another option for implementing sustainability projects on college and university campuses is through a student green fund. Four of the five higher education institutions examined in this study, specifically Kenyon, Knox, Luther, and Oberlin, have implemented a student green fund, or a similar funding program. Collecting a student green fee can help colleges and universities overcome the barriers to implementing sustainability initiatives on campus. Fees can be allocated towards recycling programs, green construction projects, or supporting a campus sustainability office (Ozeki, 2010).

According to a report by Mieko Ozeki examining the national context, design, management, and application of student fees to on-campus sustainability projects, the steps to creating a student green fund are relatively simple.

While the steps will differ on a case-to-case basis, the general outline is as follows:

1. A group of students draft a proposal to implement a student green fund based on data obtained from other college and university campuses and surveys from the student body

2. Petitioning to the student government organization to include the student green fund idea on the ballot
3. Upon passage of the student green fee, senior administration and/or the Board of Trustees accept or reject the proposal to impose a student green fee

Success of a student green fund is dependent upon proper management and accountability. The role of student's is to ensure the green fund money is allocated towards projects fulfilling the fund's mission (Ozeki, 2010). The role of administrators and staff is to prevent the implementation of long-term projects with short-term appeal to students (Ozeki, 2010).

For higher education institutions with sustainability goals, but a lack of external funding, a student green fund is an ideal solution.

DISCUSSION

Through our case studies, we have observed that when higher education institutions begin their sustainability efforts, policy is an integral first step to creating a system of accountability for the school. Augustana is working towards the first step, but currently only has vague policy in place that makes it difficult to establish specific, concrete action plans.

Augustana College administration approved its own policy titled the "Action Plan to Implement the Recommendations of the Environmental Task Force" in 2007, and President Steve Bahls signed the Illinois Sustainable University Compact in 2010. Both of these efforts were admirable, but missed significant points. Neither plan was very transparent, which prevented either from achieving widespread success. The Illinois Green Government Coordinating Council

Compact that Augustana signed required certain sustainable achievements like building all new buildings/renovations to LEED standards, creating a rain garden, and acquiring 3% of energy from renewable sources. Since 2010, however, the school has failed to clearly communicate its successes (or lack thereof) with the campus community. Few members of that community are even aware the Compact or Action Plan exist. Furthermore, many requirements are vague, recommending action “whenever practical” or lacking specific requirements—“reduce carbon emissions on campus” isn’t a specific enough goal for the college to know how or when to pursue. The Action Plan created by the Augustana Environmental Task Force also lacked transparency. The plan had three base principles: to adopt practices to reduce environmental footprint, to get all members of the Augie community to commit to consuming less, and to provide all students with sustainability education programs. Two thirds of these points require active and constant communication with students, informing them about their consumption and educating them through required sustainability classes. For this policy to be successful, such transparency is necessary. The Action Plan promised both a public declaration of Augustana’s commitments to sustainability and a web portal for information about the school’s programs. Neither form of communication has materialized.

Issues of transparency and specificity within the current sustainability policy at Augustana College must be resolved before progress can be made in the overall effort to function as a sustainable institution. The implementation of more extensive and in-depth policy will present Augustana with the opportunity to take the next steps toward more comprehensive sustainability, which includes having a formal office dedicated to these efforts. Augustana has the ability to make this happen.

Most sustainability offices or boards at the aforementioned colleges only have one full-time employee, while the rest of the workers are paid student interns. A formal office of sustainability at Augustana does not need to be as involved and in-depth as the Office of Student Life here, but if they can spend enormous amounts of time and money on staff and equipment for activities such as karaoke and bingo, then surely they can find the resources for something as important as sustainability. Augustana has groups in place already that are similar to the other schools, such as Augie Acres, Sierra Club, Geography Club, and Students for Sustainability Group (SSG), which is a cooperation of all of the environmentally related groups on campus. If the Students for Sustainability Group became more organized and made an effort to pressure administration to make changes, a more structured group could come from one of the already existing clubs.

Moreover, having programs and formal organization at Augustana would increase its admissions selling points to prospective students. As environmentalism is becoming more mainstream and environmental studies classes are being offered on a high school level, there is a larger amount of students finding interest in sustainable programs at colleges. With emerging technology, careers in STEM being more widely marketed, and recent environmental choices in the political sphere, Augustana College could open itself up to a more diverse group of applicants as well as increasing its reputability as an institution with more comprehensive sustainable action.

However, for action to occur, sustainability can't be an "add on" tacked onto Augustana's existing strategic plans and goals. Instead, it has to be an integrated part of the school's policy seen as a way to make the college more efficient and financially secure, add valuable co-curricular learning opportunities, and enhance students' learning and lives, making them more frugal, responsible, and environmentally considerate citizens. Sustainability has to be a guiding principle,

furthering the institution's primary goal of education and improvement of mind, body, and spirit. Augustana needs change. We propose a 10 year plan to revive and reinvent sustainability at our school.

PROPOSAL FOR AUGUSTANA: A TEN-YEAR PLAN

Dear Friends and Colleagues,

We are very pleased to share a draft of *Augustana Sustainable*, a strategic 10-year plan that will improve the social, financial, and environmental sustainability of the college to meet those of other progressive, relatively small, midwestern, liberal arts institutions that are comparable to Augustana College.

We have identified three guiding principles that will be used to draft any sustainable development, policy, or action plans in the future: transparency and collaboration, financial feasibility, and environmental consideration.

1. **TRANSPARENCY AND COLLABORATION** involves the recognition that all of us – students, faculty, staff, and administration – have both a responsibility to increasing sustainable practices at Augustana and a role in contributing to the environmental stewardship of the college. This means that any decision-making processes made by administration are conducted in collaboration with “stakeholders,” or those who have a role to play in campus sustainability. This also means that everyone’s voice will be valued, no matter their position at the college, and avid communication between administration and the rest of the campus community will be upheld through email updates or assemblies regarding environmental progress and potential plans of action. Additionally, this guiding principle will include the input of the college’s surrounding community in recognition that Augustana is part of a larger body of people who are all affected by the way we choose to approach our environmental practices as an institution.

BENCHMARKS OF SUCCESS:

- I. Recognize sustainability in official Augie policy, and transparency about how that policy/those goals are being achieved
 - A. Sustainability can't be an “addon,” has to be seen as a way to make the college more efficient, save money, add valuable co-curricular learning opportunities, and enhance students' lives and futures with improved habits and virtues (thrift, conservation, responsibility, etc.)

- II. Be transparent - consistent updates to campus on a regular schedule, web portal with information about all efforts
 - A. Holding open “Listening Meetings” where students, faculty, and staff meet to discuss sustainability goals
 - B. Open communication between students and administration will explicitly outline what students need to do in order for specific policies or projects to be successful on an administrative standpoint
 - III. Active student-led sustainability programs that lead to the creation of a collaborative task force that is made of students, faculty, staff, administration, and representatives from the surrounding community
 - A. Sustainable development goals will be outlined by this task force, including an assessment of areas to target campus improvement and
 - IV. Environmental sustainability set as part of the college’s larger, institutional goal of education
 - A. Faculty and administration will consider the benefits of establishing sustainability programs in the classroom – ex. Learning communities focused on sustainable development – making sustainability a larger part of the established school curriculum
 - B. Providing opportunities for student growth and leadership in sustainable development
 - Ex. Sending students to environmental summits and conferences where they are encouraged to network, brainstorm, and learn new methods of increasing sustainable development at Augustana College
 - V. Investing in a permanent staffed position that will have a significant role advocating for student interests while communicating with administrators
 - A. Hiring a sustainability coordinator who will oversee sustainable development and environmental projects on campus
 - B. Creating an Office of Environmental Sustainability that represents the interests of all sustainable aspects of the college – much like the Office of Student Life and Office of Multicultural Student Life – and hires student interns who will gain experience in environmental leadership
2. **FINANCIAL FEASIBILITY** is a major imperative that must be addressed before any sort of action or planning can take place. With that necessary goal in consideration, this guiding principle means that any future sustainable development will examine the financial feasibility of all projects through thorough cost-benefit analysis. This also means that Augustana College will analyze the needs of the student and balance those not with immediate financial objectives but long-term financial stability.

BENCHMARKS OF SUCCESS:

- I. Investing in the long-term financial stability of sustainable development by reaching out past campus involvement
 - A. Marketing successful sustainability projects or sustainable campus resources (like the “Green Fund”) to prospective students through the admissions department
 - B. Encouraging outreach in the community surrounding Augustana College (the Quad Cities) with sustainable neighborhood projects to create a lasting partnership between the community and the college
- II. Establishing a “Green Fund” or budget for student sustainability projects
 - A. Running an analysis of the current budget and setting aside money from the student activities fund or any other fund that could spare some of its allocated financial resources to support sustainable development
 - B. Subsidizing the costs of student sustainability projects with this “Green Fund” after a board reviews student proposals, much in the way Augie Choice or internship/study away grants operate, increasing student access to resources
 - C. Growing and institutionalizing the “Green Fund” so money saved on efficiency projects can be reinvested within the fund
- III. Implementing programs that utilize social or cultural value of the campus community rather than monetary value
 - A. Utilizing volunteers or classes to conduct campus improvement studies rather than hiring outside workers to come and evaluate the college’s progress in sustainability for money
 - B. Assessing energy efficiency on large scale through students going building-to-building and talking to ppl, and official engineering firm studies
 - Ex. Students engagement with people from different departments to find out where areas are under or overlit (daylighting assessments), where temps are too high or too low (temperature control adjustments), etc. – this kind of study has no cost

3. **ENVIRONMENTAL CONSIDERATION** is a non-negotiable priority that supplies the need for sustainable development at Augustana College. This guiding principle is meant to outline the necessity for all future sustainability policies, strategies, action plans, projects, and development. With the importance of environmental consideration, Augustana College must recognize the imperative need to act soon and will make timely decisions to mitigate the effects the college has on the environment as soon as possible. The college will also evaluate how best to create long-term sustainability policies and practices that will live past tenure and graduation dates, viewing sustainability as a value independent of people.

BENCHMARKS OF SUCCESS:

- I. Creating comprehensive policy that considers most heavily the impact Augustana College has on the environment

- A. Signing commitments like a Carbon Neutrality action plan or other strategic plans that mitigate the college's environmental impact
- II. Building structures that will allow us to mitigate our carbon footprint and environmental impact
 - A. Planning the installation of solar panels or an arboretum
 - B. Achieving environmental efficiency certification of campus buildings through programs like LEED
- III. Changing fundamental, sometimes implicit behaviors and attitudes held about the environment through programs and practices
 - A. Encouraging diverse featured speakers at Symposium Day who have experience with sustainable development or environmental leadership to expose the campus community to methods of achieving sustainability in their own lives, as well as in relation to the college
 - B. Promoting the implementation of sustainable practices and marketing them so others know about them
 - Ex. Commoning, bike sharing, drinks at The Brew costing as much as a "tall" when customers bring their own reusable container, contests rewarding those who waste resources the least, etc.

GOALS YEAR BY YEAR

YEAR ONE:

- In the first year of this sustainability plan, we will achieve the establishment of a task force that reports to the president, created to push for sustainable development on campus and reflect the interests of the college on a united front
 - This task force will be made of students, faculty, staff, administrators, and representatives from the local community that will meet regularly with the president and update campus on new projects and progress made
 - The task force will outline yearly goals for the college
- There will also be regular meetings that are open for everyone on campus called "Listening Meetings."
 - These meetings will promote an open communication between students and administration and create a safe space for anyone on campus to engage in civil discourse about how the college should proceed in sustainable development plans
 - Administration will encourage student/faculty involvement and provide constructive feedback about how better to achieve the goals students have for the college
- At the end of the first year, students will also conduct a study of sustainability at Augustana and will assess areas of campus improvement as part of a class or the task force

- With the collaboration of the task force, a survey will be sent to all of campus to gauge how receptive the college community is to sustainable development and what they would be willing to do to increase it
- While this task force would do the initial research for free, administration would collaborate with them to begin a budget analysis to accommodate a “Green Fund” to subsidize sustainability projects in the future, created out of a cut in other funds like the student activities fund

YEAR TWO:

- In the second year of this sustainability plan, we will achieve environmental efficiency certifications and ratings of our buildings
- We will also begin discussions about making campus sustainability a co-curricular pursuit
- At the end of the second year, a “Green Fund” will be established that will operate much in the same way as internship, research, or study-away grants
 - The money will come from an area of the college budget that would not be of detriment to the campus community if it was reduced

YEAR THREE:

- In the third year of this sustainability plan, we will achieve a year-long Efficiency Assessment conducted by an outside party
 - This assessment will evaluate specifically which areas of Augustana infrastructure are most vulnerable and could improve on a sustainability standpoint – ex. The group may recommend solar panel installations on flat-roofed buildings facing southwest

YEAR FOUR:

- In the fourth year of this sustainability plan, we will establish policy and a college-wide statement for Augustana’s sustainability stance
 - This sustainability plan will be drafted with input from the task force and other campus community representatives. It will outline the goals of the college publicly and include a strategic plan for how Augustana will always remain committed to sustainable development.

YEAR FIVE:

- In the fifth year of this sustainability plan, we will achieve the staffing of a position that advocates for sustainability
 - The position of a Sustainability Coordinator, Manager, or Director will be permanently staffed and will be the bridge representing student interests with those of administration during board meetings, assemblies, and decision-making meetings

YEAR SIX:

- In the sixth year of this sustainability plan, we will achieve the implementation of small-scale programs and practices that are supported by administration
 - Some examples of such initiatives involve the return of old programs that shut down or the revamping of already-existing programs – ex. Bike Share, composting, campus farming
 - Other examples of potential initiatives will be thought of by the students, faculty, and administration with the help of the Sustainability Coordinator – ex. Local food initiatives and producing merchandise in the school store that is environmentally and ethically-sourced

YEAR SEVEN:

- In the seventh year of this sustainability plan, we will achieve the staffing of an office for environmental sustainability
 - The Sustainability Coordinator will have an office of 4-6 interns who will run programs, draft proposals, and represent sustainable interests on campus, much like the OSL or OMSL
- Admissions will market the new sustainability goals, projects, and plans to diverse, prospective students who are passionate about sustainable development to ensure the legacy of the office through students

YEAR EIGHT:

- In the eighth year of this sustainability plan, we will achieve establishing policy for co-curricular sustainability practices
 - The task force will partner with administration and faculty to create the opportunity for sustainable development both inside and out of the classroom – ex. Learning communities or perspectives on sustainability

YEAR NINE:

- In the ninth year of this sustainability plan, we will achieve the planning of big-scale structures like solar arrays, panels, and arboretums
- At the end of the ninth year, Augustana College will send groups of students to environmental summits and conferences where they are encouraged to network, brainstorm, and learn new methods of increasing sustainable development at Augustana

YEAR TEN:

- In the tenth year of this sustainability plan, we will achieve the building of big-scale structures like solar arrays, panels, and arboretums

- At the end of the tenth year, Augustana College will partner with the sustainable task force and outline a new strategic plan for the next 10 years, effectively solidifying the importance of sustainability as a campus value for as long as Augustana College exists

CONCLUSION AND FURTHER RESEARCH

We know that it isn't going to be easy for sustainable development to be established at this college. It is going to take years and years – past our own time at this school. Augustana College has its fair share of celebrations and areas of improvement, yet closest we have to sustainable development plans in the future are leased-out solar panels sometime within the next 25 years. To some extent, that is disheartening news for five 20 year-olds who recognize acutely the value of sustainability and the mitigation of our impact on climate change, particularly on this desperately aching planet. However, we also recognize that in order to truly be passionate about or love something – like a college or an idea of how to save it – we must be continuously and tirelessly question what we love and challenge it to do better. This proposal is our first act of love.

In the future, we hope to better understand the likelihood of implementing sustainable policies at Augustana by sending out surveys to the campus community to gauge the amount of desire there is for sustainability policy. We also hope to review this proposal and study at length so that we may not only submit it to the digital commons and present at Symposium Day but give it to administration and the Board of Trustees for review. May those who come after us continue to press this college to be better. For all of us.

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