Bucknell University Author: Ricky Wang
Biogas in Pennsylvania and its Possible Development

This poster introduces biogas as a choice of renewable energy and way to reduce carbon emission. It briefly introduces methods to utilize biogas and the current biogas projects in the United States. Pennsylvania is chosen as an example to explore the spatial relationship between current biogas plants and "We Are Still In" cities' aim to reduce carbon emission. Along with introducing the current operational situation of PA biogas, the poster provides suggestions for future biogas plant site planning and designing.

Penn State University Author: Michael Allan
Co-Authors: Jeff Horst, Mannie Samuels, Angela Paul
Department of Energy Competition: Research Proposal for a 100 MW Wind Farm in Spring Run, PA

We are participating in the Department of Energy's Collegiate Wind Energy Competition to collaborate, design, and propose a 100MW wind farm in Springrun, PA. This project analyzes a predetermined site (with environmental considerations in mind), a layout of the wind farm for optimal energy output, and a detailed financial analysis. Through the use of professional software our team was able to simulate three potential wind farms. After analysis, the most optimal wind farm was delegated for further financial analysis and research.

Millersville University Author: Kathleen Schreiber
Co-Authors: Derek Boone, Audrey Esser, Cole Fitch, Christian Ott, YamilPerez, Morgan Phillips, Edward Schick, Jessica Soullaird, Cameron Strosser, & Nathaniel Sturgis
Drive or Walk? MU Cross-Campus Travel Time by Mode &Time of Day

The Millersville University Climate Action Plan challenges the campus to reduce absolute GHG emissions 65 percent by 2040. Substantial vehicle use can occur when moving between classes, increasing GHG emissions. The goal of this study was to determine whether vehicle use to traverse campus between classes resulted in significant savings in time compared to walking. Surveys showed although driving is usually statistically significantly shorter than walking, it may take longer during the morning rush hour on some routes. Choice of mode should consider any small absolute time savings (1-3 minutes), cost of gas, vehicle wear, excess traffic, missed opportunity for exercise, and CO2 emissions.

Millersville University Author: Kathleen Schreiber
Co-Authors: Kelsie Baxter, Arynn Cooper, Kayla Knorr, Gabby Kuster, Angel Pagan, Jason Reuter, Sabrina Rowe, Alex Wiltz, and Nichole Witte

Is MU Greening? Student Views and Learning Related to Campus Sustainability
The 2016 MU Climate Action Plan calls for the advancement of a culture of campus sustainability and university activities in support of sustainability education. At the 2-year anniversary of the campus commitment, students in the geography course, Sustainable Development, survey campus sustainability views, learning, and engagement. Among the results: 1) MU seniors report greater levels of awareness

of campus sustainability since arriving on campus than freshmen, but only to a small degree, 2) respondents report caring about the environment, 3) respondents feel it is very important to reduce MU's carbon footprint, 4) respondents believe there should be required sustainability training in freshman seminar, and 5) undergraduate participation in and knowledge gain about campus sustainability leaves room for improvement.

Bucknell University Author: Brian Babyak
Using Natural Spaces to Create a Community Asset: Developing a Walking Trail in Mt. Carmel Township

Mount Carmel Township, located in the mountains of Pennsylvania's lower anthracite coal region, lacks accessible walking trails thus depriving residents of the known health benefits of walking and spending time in natural areas. While an informal trail runs along a stream, developing this into a recognized, maintained, and expanded community asset will connect different parts of the community, providing a public natural space for individuals to spend quality time together, while engaging in important physical activities. This project employed a mixed methods approach to understand and address the lack of this community asset, as well as assist future development.

Pennsylvania State University Nathan Elser
Co-Authors: Dr. Judd Michael, Lydia Vandenbergh
Practices for Reducing and Managing Waste from Campus Dining: A Survey of Penn State Commonwealth Campuses

This poster presents results from a 2018 survey of Business Directors at Penn State Commonwealth Campuses regarding best practices for managing solid waste. The poster will focus on results related to campus dining, including methods for both reducing (ex. trayless dining) and managing (ex. composting) food waste. Results also address methods for reducing solid waste from food containers and servingware (ex. zero-waste events). The survey on which the poster is based was conducted as part of the Penn State Waste Stream Management Task Force. Recommendations for materials management and waste reduction will be presented.

Penn State University Janelle Thompson
Co-Author: Peter Buckland
Identifying and Improving Environmental Justice Efforts at Penn State

This project explores environmental justice efforts through an international, national, regional, and local lens shaped by Sustainable Development Goals 10 and 11 (reduced inequalities and sustainable communities). Further, the project investigates the disproportionate impact of climate change, food and water insecurity, and accessibility to affordable housing and safe energy. Literature review, case studies, and interviews will be conducted to establish how Penn State University and surrounding communities are addressing environmental justice. From here, the project will develop a University environmental

justice consensus statement, identify improvement and opportunity areas in core University segments, and propose feasible solutions.

Lehigh University Christopher Miller
Co-Authors: Katharine Targett
Implementing a Sustainable Living Program on Campus: Encouraging Students to Walk the Talk

At Lehigh, we wanted to develop a comprehensive program that would increase student engagement in environmentally conscious behaviors across the campus. The Sustainable Living Program (SLP) is voluntary, self-guided, and designed for students in residence halls and Greek houses to take the lead in making their living spaces and daily routines more sustainable. Through this program, we empower students to make an impact!

Lehigh University Katharine Targett
Let's Talk Trash and Recycling: How to Build a Comprehensive View of Campus Waste Management and Diversion Efforts

"Developing a comprehensive waste management plan, policy, and data tracking system can be a daunting, yet rewarding task for an institution. These materials not only provide information on existing campus waste and recycling streams, responsible parties and duties, data collection and reporting, and operational guidance, but they also detail waste diversion goals and provide recommendations for achieving those goals. By developing a waste management plan, policy, and data tracking system, an institution builds a comprehensive view of campus waste management and diversion efforts and is able to track progress both at a granular and high level. This allows the campus sustainability community to break down the silos between departments, make connections, and build bridges to further progress toward the institution's waste diversion goals.

But how do you get started? What is the path to develop these materials? In this poster, we chart Lehigh University's path to developing a comprehensive plan, policy, and data tracking system. Lehigh went from having no plan or policy and a very simple tracking system in 2016 to having a fully developed, comprehensive plan, policy, and data tracking system in 2017. Through efforts like this, institutions continue to enhance the culture of sustainability on their campus. Together we can reduce our campus' environmental footprint, be responsible stewards of our institution's resources, and contribute to our sustainability goals."

Pennsylvania State University Claire Talley
Sustainability at Corl Street Elementary School

Corl Street Elementary School is a public K-5 school in the State College Area School District. It is undergoing renovations to be LEED Gold Certified. The Innovation in Education LEED Credit is awarded if the school can credibly demonstrate 10 hours of relevant instruction per student, averaged across the school. Features with potential curricular tie-ins include a student designed and maintained rain garden and rooftop solar panels. Teacher and community buy-in through relationship building is essential to

satisfy requirements for environmental education instruction time. Curriculum audits and development were necessary steps towards earning the Innovation in Education credit.

Bucknell University Hannah Buckley
Co-Authors: "Shaunna Barnhart, Jake Betz, Charmaine Ryan"
“Growing Change”: Working to Build Community Capacity to Address Food Insecurity

The poster will document my service as an Americorps*VISTA as I am working to build community capacity to address food insecurity in the lower anthracite region of Northumberland County. Displayed will be data on the current food situation, the role of Bucknell University in community revitalization of this region through the Coal Region Field Station, and my involvement as a VISTA in various community food access projects, as I am working to create synergies between organizations and stakeholders in the communities of Mount Carmel and Shamokin.

Penn State Blaise Waligun
Co-Authors: Jonathan Wong, Puja Bhagat, Sarah Klinetob Lowe
Penn State's Involvement with the Solar Decathlon Competition: 2007-present

This poster showcases Penn State's involvement with the Solar Decathlon competition since 2007, including two showcase builds (2007 & 2009) and seven high performance paper-based design submissions (2014-2019). Each year since 2014 Penn State has partnered with local affordable housing agencies and PA home builders to explore contextual high performance housing solutions that work for the specific climate and place, including with the Columbia County Housing Authority (2014), State College Community Land Trust (2015), Union County Housing Authority (2016), Centre County Housing & Land Trust/Ferguson Township (2017), S&A Homes (2018), and Habitat for Humanity of Greater Centre County (2019).

Penn State Jonathan Wong
Co-Authors: Blaise Waligun, Puja Bhagat, Sarah Klinetob Lowe, and the full 2019 Penn State Solar Decathlon team
2019 Penn State Solar Decathlon: Zero Energy Ready Home design for Habitat for Humanity of Greater Centre County

This poster outlines the details of Penn State's 2019 Solar Decathlon design competition entry - an affordable, easy to construct, net-zero energy, Zero Energy Ready Home (ZERH) design for Habitat for Humanity of Greater Centre County (HFHGCC). The team was chosen as one of eight finalists for the Suburban Single Family contest category and will present their work at the National Renewable Energy Laboratory in Golden, CO on April 13, 2019. The team won first place in the Suburban Single Family contest in the 2018 competition.

Bucknell University Abbie Winter
Co-Author: Dalton Stewart

Exploring Sustainability Through Campus Landscapes

"Having a positive sense of place, or respect and appreciation for one's surroundings, can foster a stewardship role necessary to combat current social and environmental issues. Individuals with a positive perception of their environment and community will more likely develop an interest in protecting its assets and improving its shortcomings. Our project focuses on Bucknell's landscapes to encourage engagement between the audience and the outside environment, with the hopes of building this sense of stewardship while simultaneously discussing sustainability and avenues for positive change.

The objective of this project is to create a walking tour to promote teaching and learning about sustainability through the experience of Bucknell's campus landscapes. The tour is meant to educate faculty, students, and community members about the complex histories of campus locations by encouraging them to visit the selected sites in person, and reflect upon their degrees of sustainability."