



# Eastern Connecticut State University

## 2020 Climate Action Plan

A comprehensive ten-year  
guide to carbon neutrality  
for Eastern

August 10, 2020



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# DEFINITIONS

## TIMELINES

**Short term** – Spring 2021

**Intermediate term** – Summer 2021 – Spring 2023

**Long term** – Summer 2023 – Spring 2030

## ACRONYMS

**A/E/C Firms** – Architecture, Engineering, and Construction

**AASHE** – The Association for the Advancement of Sustainability in Higher Education

**AHU** – Air Handling Unit

**CCE** – Center for Community Engagement

**CHP** – Combined Heat and Power

**CSCU** – Connecticut State Colleges and Universities

**DAS** – Department of Administrative Services

**Eastern** – Eastern Connecticut State University

**EBCx** – Existing Building Commissioning Services

**EPEAT** – Electronic Product Environmental Assessment Tool

**EUI** – Energy Use Index

**EV** – Electric Vehicle

**GHG** – Greenhouse Gas

**GSHP** – Ground Source Heat Pump

**HTHW** – High Temperature Hot Water

**HVAC** – Heating, Ventilation and Air Conditioning

**IECC** – International Energy Conservation Code

**ISE** – Institute for Sustainable Energy

**LAC** – Liberal Arts Core

**LEED** – Leadership in Energy and Environmental Design

**PPA** – Power Purchase Agreement

**PV** – Photovoltaics (Solar Panels)

**RFP** – Request for Proposal

**SGA** – Student Government Association

**SOAR** – Student Orientation, Advising, and Registration

**STARS** – Sustainability Tracking, Assessment and Rating System

**TA** – Travel Authorization

**VAV** – Variable Air Volume

**VFD** – Variable Frequency Drive

**W/E CAN** – Windham/Eastern Community Action Network

*Special thanks to University Assistants Sydney Clements and Joseph Marsalisi  
for spearheading the development of this plan.*

# EASTERN'S CLIMATE LEADERSHIP COMMITMENT

Eastern Connecticut State University, located in Willimantic, Connecticut, was founded in 1889. The University is a member of the Connecticut State Colleges and Universities system (CSCU) and is the only public liberal arts school in the state. Eastern is a residential campus with 5,300 students and 184 acres.

Eastern's approach to sustainability is reflected in a commitment to increase the efficiency and lower the carbon footprint of campus operations, teach students about sustainability, and prepare them for the clean energy workforce, and to support sustainability beyond Eastern's borders in communities throughout Connecticut. This comprehensive approach is led by Eastern's "three-legged stool" of sustainability: the Office of Facilities Management and Planning which manages campus buildings and operations, the Center for Sustainable Energy Studies which offers academic courses, and the Institute for Sustainable Energy which serves as a statewide resource and runs a sustainability certification program for Connecticut towns.

In 2007, President Elsa Núñez became one of the first university presidents to sign the American College and University Presidents' Climate Commitment on behalf of Eastern Connecticut State University, pledging to become carbon neutral by 2050. In 2009, Eastern released their first Climate Action Plan as a guide to reaching this ambitious goal. The interim goals set forth in the 2009 plan are listed below.

- Reduce carbon dioxide equivalent emissions by 3.2 thousand metric tons every ten years.
- Focus on increasing education and research on sustainability topics for Eastern students, faculty, and staff.
- Develop the appropriate tracking mechanisms to monitor our greenhouse gas emissions.

In 2015, President Núñez renewed Eastern's resolve by signing Second Nature's Climate Leadership Commitment, which includes a pledge to address climate resilience in addition to achieving climate neutrality. The university initiated our work on climate adaptation by collaborating with Town of Windham on a resilience building workshop that was supported by The Nature Conservancy and Second Nature. This workshop resulted in a climate resiliency report, "*Eastern Connecticut State University Town of Windham Community Resilience Building Workshop Summary of Findings, May 2017*," that identifies the resources, weaknesses, and

procedures for Eastern and Windham to work together to plan for and address natural disasters and climate impacts in the area.

The Eastern Green Campus Committee coordinates sustainability initiatives on campus and tracks and reports progress towards meeting our climate commitments. The Green Campus Committee is made up of a diverse group of faculty, staff, and students representing a multitude of departments across campus. The committee, chaired by the Executive Director of the Institute for Sustainable Energy, meets monthly to discuss the progress of environmental initiatives on campus and has helped guide the development of this plan. The Green Campus Committee and the Institute for Sustainable Energy prepare Eastern's greenhouse gas emissions inventories; gather and submit information on campus sustainability accomplishments to the Sustainability Tracking, Assessment and Rating System (STARS, administered by the Association for the Advancement of Sustainability in Higher Education); and prepare and submit plans and reports required by the Climate Leadership Commitment. Eastern's greenhouse gas emissions profile and our sustainability achievements are detailed in this report. In addition, the appendix provides a timeline overview of Eastern's sustainability progress. As a result of this commitment and work, Eastern has reduced greenhouse gas emissions over time and been recognized with a STARS silver rating in 2012, 2016 and 2019; 2018 Sierra Club Cool Schools ranking; and Princeton Review Green College recognition each year from 2010-2019.

## EXECUTIVE SUMMARY

Since Eastern's 2009 Climate Action Plan, the urgency and importance of taking bold action to address the climate crisis has increased. Through this plan, ***Eastern commits to move our carbon-neutrality goal up from 2050 to 2030.*** The 2030 carbon neutrality target is based on climate science and reflects our responsibility as an institution of higher education in shaping a sustainable society.

This Climate Action Plan for Eastern Connecticut State University is a revision to the 2009 Climate Action Plan and serves as living document to guide to the University to achieve carbon neutrality by 2030. The plan focuses on the short-term strategies to be implemented in the years 2020 through 2021, intermediate strategies for implementation in 2021 through 2023, and long-term strategies for implementation in 2023 through 2030. The intent of the timeframe for the actions is not to delay any action but rather to accurately gauge implementation based on funding needs and changes in operations and policies.

We acknowledge that additional strategies must be added to this plan over the next few years to ensure that we will reach the 2030 target. In addition, this plan does not yet include the quantitative projections associated with each strategy to determine potential greenhouse gas emission reductions. Such quantification or determination of the relative emissions reduction contributions of strategies is an important next step in our planning.

This Climate Action Plan is based on a broad view of our climate and sustainability responsibilities. Eastern's Climate Leadership Commitment addresses both climate mitigation, meaning the reduction of greenhouse gas emissions to achieve a carbon neutral campus, and climate resilience, meaning preparation and response to the impacts of our changing climate. This plan also includes goals that are not directly related to emissions reductions or resilience but are critical to sustainability leadership as a university. These goals embrace environmental, economic, and social sustainability. They include preparing students who understand climate science and their roles in creating a carbon neutral society. To reflect this broad view of Eastern's climate and sustainability commitments, this plan is organized by the impact categories of the Sustainability Tracking Assessment and Rating System (STARS): Operations, Campus Life, and Planning and Administration. The new, major strategic initiatives of this plan are summarized on the following page.

## Major Strategic Initiatives of this Climate Action Plan

Develop a culture of sustainability at Eastern
Achieve carbon neutrality by 2030
Transition to 100% renewable energy
Strive for net zero energy buildings
Integrate climate literacy into student learning
Improve greenhouse gas emissions data, tracking, and reporting
Quantify the greenhouse gas emissions reductions and cost savings associated with strategies in this plan
Develop additional strategies and target dates to ensure that Eastern meets the 2030 carbon neutrality target
Explore development of a green fund
Review and revise this plan as a living document to meet Eastern's climate and sustainability commitments
Build resilience by anticipating, understanding, preparing for, and adapting to the challenges and opportunities of a changing climate.

This plan was finalized during the COVID-19 outbreak, and we acknowledge that many actions will likely be delayed or not possible based on emerging health and safety needs. We will continue to adapt and add strategies in response to COVID-19 and future challenges.

# PLAN DEVELOPMENT PROCESS

The development of this plan was a collaborative effort between Eastern's Green Campus Committee, Institute for Sustainable Energy, Office of Facilities Management and Planning, Center for Sustainable Energy Studies, and students, faculty, staff, and stakeholders throughout the Eastern community. The Institute for Sustainable Energy coordinated development and drafted the plan. The following opportunities helped inform the goals and strategies:

- Input from University leadership through a presentation and workshop with the President's Extended Staff (Vice Presidents, Deans, Directors) in November 2019.
- Input from faculty and staff through university meetings, surveys, and departmental meetings during 2019 and 2020.
- Input from students through class presentations and in-class discussion sessions during the Spring semester of 2020 and invitations for input from student clubs and the Student Government Association.

In addition, this plan was informed by climate strategies and best practices of other universities. This plan incorporates goals and strategies of the *Connecticut State College and University Energy Master Plan* (August 2017), the *ECSU Master Plan Update* (April 2016), and Eastern's *Strategic Plan* (2013). Finally, this plan aligns with the goals and policy levers of the State of Connecticut climate plan, *Building a Low Carbon Future for Connecticut: Achieving a 45% GHG Reduction by 2030* (December 2018).



# GREENHOUSE GAS (GHG) EMISSIONS PROFILE

## Key

<b>Scope 1</b>	Scope 1 includes direct GHG emissions from heating fuel, transportation, and fugitive emissions.
<b>Scope 2</b>	Scope 2 includes indirect GHG emissions from purchased electricity, steam or chilled water.
<b>Scope 3</b>	Scope 3 encompasses other indirect GHG emissions from waste, flights and travel, commuting, and purchased goods.

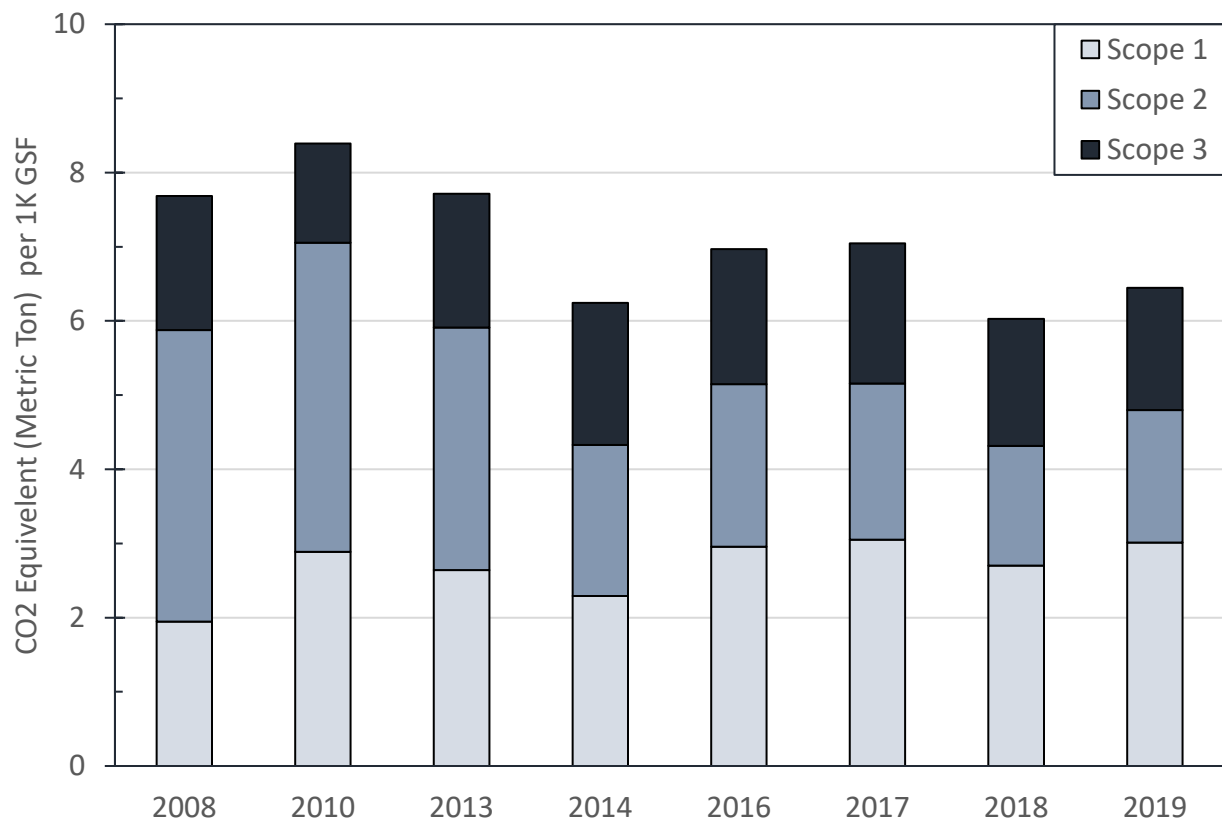


Figure 1. Eastern’s annual greenhouse gas emissions, normalized by campus gross square feet, as reported to Second Nature since 2008.

Figure 1 establishes Eastern’s greenhouse gas emissions, by “scope “(see box) from 2008 – 2019. The chart indicates progress in reducing emissions over time, with a significant reduction in scope 2 emissions resulting from purchased electricity that is 100% renewable after 2018. However, the changes in emissions reported are also influenced by changes in the reporting platform, inconsistent reporting methodology, and difficulty accessing reliable data.

From 2008 - 2014 Eastern used the University of New Hampshire’s Carbon Calculator tool to measure annual greenhouse gas emissions. Since 2016 Eastern has been using the Sustainability Indicator Management & Analysis Platform (SIMAP) to report and track emissions. During this time Eastern also established techniques to collect data more accurately. As we work to improve data and reporting, we must develop more accurate methods to estimate emissions that are very difficult to quantify (for example, transportation emissions from commuting). A major goal of this plan is to improve methodologies and standardize procedures to allow Eastern to report the most accurate information across all three scopes. Improved greenhouse gas data reporting is critical to tracking and verifying progress in reaching our goal to become carbon neutral by 2030.

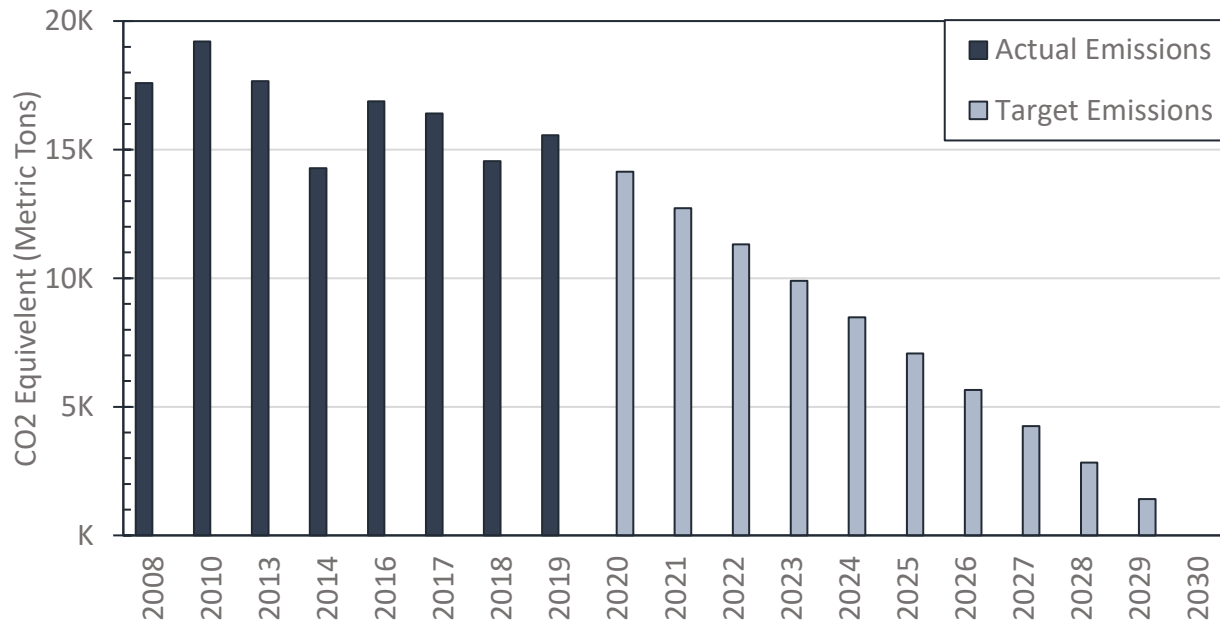


Figure 2. Eastern’s greenhouse gas emissions, projected linearly, to meet zero carbon goal by the year 2030.

Figure 2 shows past emissions and a linear reduction in future emissions to achieve carbon neutrality in 2030. To manage our carbon reduction goals more effectively and accurately, we will do research to better estimate carbon reductions from individual actions. Our improved annual GHG emissions inventory will help to track actual cumulative reductions from all actions.

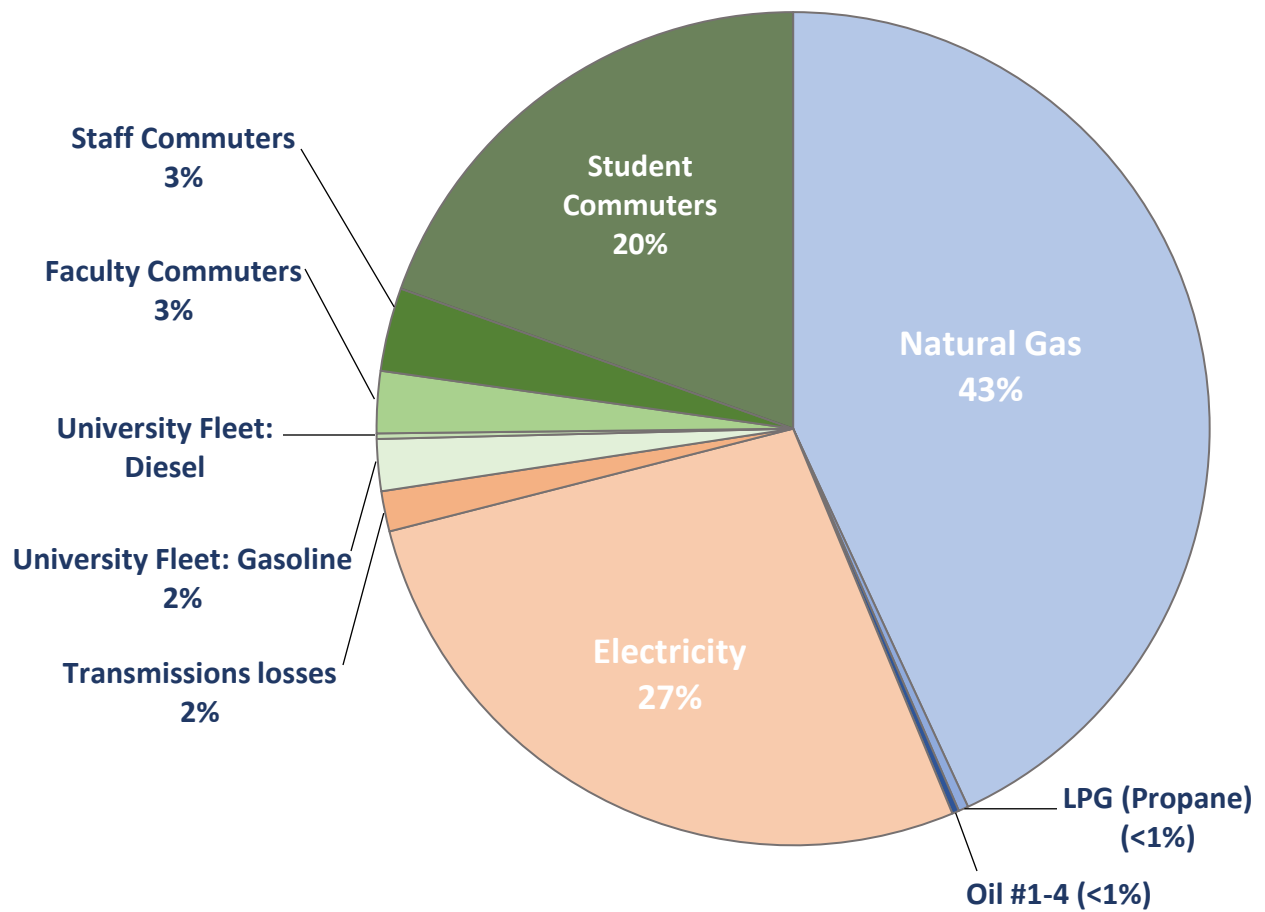


Figure 3. Eastern's greenhouse gas emissions broken down by source as reported to Second Nature in 2019.

Figure 3 aims to highlight the actions in this plan which have more or less potential for carbon savings. Over half of emissions on campus are a result of using natural gas and 86% of all of Eastern's emissions are a result of natural gas use and student commuting, revealing the importance of implementing actions focused on mitigating the emissions of these source categories.

# ACHIEVEMENTS TO DATE

Eastern has made many strides in creating a more sustainable campus since the 2009 Climate Action Plan was published. Below are some of these accomplishments broken down by the three impact categories of this plan: Operations, Campus Life, and Planning and Administration.

## OPERATIONS ACHIEVEMENTS

### Purchasing Achievements

Action	Description
Draft purchasing policy	In 2016, an ISE intern drafted a green purchasing policy. The policy was modeled after other Universities, and incorporated statewide purchasing standards involving cleaning, recycled paper content, and more.
Energy efficient and bulk IT purchasing	Since 2017, the IT department purchases Electronic Product Environmental Assessment Tool (EPEAT) registered products when purchasing new equipment. This equipment meets environmental performance criteria that address materials selection, design for product longevity, reuse and recycling, energy conservation, end-of-life management, and corporate performance. Purchases also incorporate bulk shipping practices to reduce the amount of waste created from packaging.
Paper consumption reduced by 50%	Since 2009, the University cut paper consumption by 50%. Previously Eastern was purchasing 840 cartons, or two truckloads per year. In 2019 we purchased 420 cartons: one truckload's worth. Paper consumption across campus has continued to be reduced since then.

### Buildings/Utilities Achievements

Action	Description
Fuel cell	In 2012, Eastern entered into a Power Purchase Agreement (PPA) to install a 400kW fuel cell on campus, which supplies electricity and heat to the Science Building. In 2016 the system was upgraded to 440kW.
High performance buildings	Five buildings on campus are built to LEED Silver Standards: Constitution (2004), Laurel (2005), and Nutmeg (2005) residence halls, the Science Building (2008), and the Fine Art Instructional Center (2015)
Energy dashboard	Eastern uses an online energy dashboard. The dashboard reveals energy use trends on campus and can be broken down by individual buildings. The dashboard is hosted on the Eastern Facilities' Department webpage ( <a href="http://dashboard.easternct.edu/dashboard/">http://dashboard.easternct.edu/dashboard/</a> ) and is available to the public. Users can download energy data for any selected period.
Automated building control systems	The J. Eugene Smith Library uses a sophisticated Energy Management System. This system utilizes a variety of methods to reduce energy use, including a sensor on each light fixture to automatically adjust light levels based on available daylight and occupancy which ties in with HVAC controls with occupancy sensors. In the first year of operation, energy use in the library was reduced by 26%. Since its implementation in the library, this Energy Management System has been installed in Gelsi Young Hall, the Student Center, Goddard Hall, and the Communications Building.
Solar lighting	Eastern has adopted outdoor solar lighting around campus, including bus stop lighting and a residential parking lot lighting at Laurel Hall.

Energy efficiency renovations	In 2018, the Communications and Goddard classroom buildings were retrofitted during renovation to be more energy efficient. In 2019, the Shafer building was retrofitted from an art building to a residence hall. These projects were complete gut rehabs of the buildings which were built between 1940-1970. Improvements included bringing the building envelopes up to current LEED Silver Standards, new windows, new insulation, new roofing and insulation, all new efficient HVAC, water efficient plumbing fixtures, and lighting and HVAC controls.
Water savings	In 2019, Facilities completed replacing all residence hall shower heads with low-flow models. Primary and secondary high-temperature hot water pumps at the heat pump were also changed to air cooled, saving thousands of gallons of water.
LED bulb retrofitting	Facilities continues to retrofit all campus lighting with LED bulbs.
Retro-commissioning buildings	Facilities continues to retro-commission buildings to fine tune HVAC Systems, install new controls, and update/upgrade equipment. Retro-commissioning of the Fine Arts Instructional Center and Webb Hall was recently completed.

## Food Achievements

Action	Description
Diverse food options	Rooted! Is a program offered since 2010 that provides a variety of vegetarian options at the dining hall.
Trayless dining	Hurley Hall, Eastern's dining hall, implemented trayless dining in 2015. There are now no trays for students to carry their food on, limiting them to choose what can fit on their plates. This initiative reduces food waste and saves water from cleaning the trays.
Student dining waste audits	"Project Clean Plate" is a food waste audit program conducted each semester to show students how much food has been wasted in a week. The goal is to encourage students to take only what they need.
Kitchen food waste tracking	Trim Trax, a food waste reduction program, is used to track and measure the amount of food waste that is created in our kitchens. This program continues to be a success in auditing and reducing the amount of food waste created each year.
Food waste awareness	The Love Food Not Waste Program on campus aims at increasing the awareness of waste and its cost. The campaign focuses on food, water, energy, and packaging, and addresses ways that staff, students, and guests can manage their waste generation by changing their dining behaviors.
Food waste donations on-campus	In 2017, an ISE Student intern teamed up with Dining Services to create the Warrior Waste Food Program. Each week, students recover leftover food from the dining hall to donate the local soup kitchen. Over 2,000 pounds of food have been donated to date.
Food waste donations off-campus	In 2019, the Warrior Waste Food Program began donating a portion of the recovered food to Shawn's Cupboard, Eastern's on-campus food pantry that began in 2017.
Reusable coffee cups	Students receive a discount at the Student Center's Campus Perks Café when they bring their own reusable mugs for tea or coffee.
Reusable takeout containers	In 2017, Eastern introduced reusable take-out containers in the dining hall. Students can purchase these containers to take food out of the dining hall, instead of using single use foam containers. When finished, students can return the dirty container for a new one, and dining hall staff wash it for reuse.

Organic waste to biofuel	In 2017, Eastern began sending pre-meal and post-consumer food waste from the dining hall to an anaerobic digester that converts food waste into bio gas for electrical power, with soil amendment as a by-product.
Straw ban	In 2018, Eastern stopped offering disposable plastic straws on campus.
Sustainable fisheries initiative	In 2018, Eastern, in partnership with Massachusetts Maritime Academy, UMass Dartmouth, and Northeastern University, received the Kendall Foundation's Food Vision Prize. This funding has allowed Eastern and its partners to source more sustainable and underutilized fish, like monkfish, and integrate more kelp into menus in the dining hall and cafes on campus. This project allows the University to support the local fishing industry and educate students, staff, and faculty about creating a more sustainable local food system.
Low impact meat offerings	The dining hall features Meatless Mondays throughout the semester that are advertised through signage in Hurley Hall and Facebook. Students are encouraged to "be a flexitarian" and not eat meat at least once a week to reduce the environmental impact of meat production.
Compostable dining ware for events	In 2018, Eastern began purchasing 100% compostable dining ware for catered events on campus.
Reuse of pickle buckets as recycling bins	In 2019, Dining Services partnered with Green Theme Housing students to upcycle discarded pickle buckets. Dining services wash the buckets and Green Theme Housing students place recycling information stickers on them and distribute them to residence halls for use as recycling containers.
High distinction in STARS Report	In 2019, Eastern's Dining Services was ranked 7th out of over 400 universities worldwide in the AASHE STARS report.

## Grounds Achievements

Action	Description
Landscape Master Plan	In 2012, Eastern created a Landscape Master Plan for campus. This plan recommended ways to increase campus green space and low-maintenance plantings.
Bioswale	In 2015, a bioswale filtration system was installed outside the main entrance of the Science Building. The system collects runoff and is designed to conserve and recycle rainwater. Most recently, rain gardens were added to the landscaping at Mead Hall to assist with rainwater retention.

## Transportation Achievements

Action	Description
Commuter programs	Eastern offers showers, lockers, and bike racks for students who bike to campus. They also offer faculty and staff carpool coordination services. Carpools are given priority parking.
Electric vehicle charging stations	In 2014, an ISE intern applied for a grant and Eastern was awarded a state grant to install two electric vehicle charging stations on campus available for use by faculty, staff, students, and the community. In 2019 Facilities, in cooperation with the Center for Sustainable Energy Studies, installed 4 additional stations.
Workplace charging challenge	In 2015, Eastern joined the Workplace Charging Challenge, a program of the US Department of Energy, and participated in National Drive Electric Week
Fleet inventory	In 2015 and 2019, an ISE student intern created a Fleet Inventory for all Eastern vehicles. This inventory cataloged each vehicle's mileage and emissions for the year, providing valuable information for fleet optimization and replacement to save on fuel and GHG emissions.
Transportation survey	In 2019, an ISE intern conducted a transportation survey for campus Sustainability Month. The survey obtained information on how students, faculty, and staff are travelling to campus.

## Waste Achievements

Action	Description
Waste audits	In 2015, student interns from ISE and the Center for Sustainable Energy Studies began conducting waste audits across campus. Monthly, they collect data on how full and how contaminated trash and recycling dumpsters are. The data are compiled by semester and reported to the Director of Facilities. These reports have been used to adjust the number of trash and recycling dumpsters needed in different areas of campus and to adjust the frequency of collection required. This has resulted in significant cost savings for the University in contracts for waste collection by identifying the true collection needs of each location.
Recycling education videos	In 2015, ISE interns, the Green Campus Committee, and Media Services created a series of videos to educate students, faculty, and staff about recycling on campus. These videos are posted on the sustainability page on Eastern's website.
Recycling stickers	In 2015, ISE staff and interns designed a recycling sticker to show what can be recycled. Stickers were ordered and placed on recycling containers in classrooms, offices, buildings throughout campus.
Recycling web page	Eastern has a dedicated web page with instructions on how to properly dispose of hard-to-recycle items on campus, such as batteries, light bulbs, and metal.
Waste reduction	From 2014 to 2017, Eastern reported a 48.36% decrease in total waste generated on campus.
Waste diversion	From 2014 to 2017 Eastern's diverted waste increased over 20%. Major construction projects follow the LEED Silver guidelines for construction waste diversion. Most recently this included the construction of the Fine Arts Instructional Center 2015, renovations of Goddard and Communications Buildings 2018 & 2019, and the renovation of Shafer Hall 2019. Diversion rates ranged between 70 to 95%.

# CAMPUS LIFE ACHIEVEMENTS

## Academics Achievements

Action	Description
Sustainable energy studies	In 2004, a minor in Sustainable Energy Studies was created at Eastern as part of the Environmental Earth Sciences major program.
Sustainability courses	As of 2018, 5.63% of courses were sustainability focused or related. These courses were offered throughout 15 departments.
Sustainability research	In 2018, 19.81% of Eastern's faculty/staff researchers were actively engaged in sustainability focused or related research.
Internships	Each year, ISE hires up to 5 student interns to work on sustainability related projects on campus and throughout the communities ISE serves. Additionally, the departments of Environmental Earth Sciences and Biology place 3 to 5 interns in sustainability related positions each year.
Field work	Each year the Environmental Earth Sciences department takes students on a sustainability field work trip.
Academic yearly newsletter	Each year, the Environmental Earth Studies department publishes a yearly newsletter where Sustainable Energy Studies projects are prominently featured.

## Housing Achievements

Action	Description
Green theme housing	Eastern offers Green Theme Housing for residential students interested in sustainability. Students living in this sustainability-themed housing learn sustainable life skills by living in a model sustainable environment while participating in green initiative programs. Examples include participating in a Zero Waste Conference in New Hampshire. The Green Theme Housing also completes cleanup around campus and the surrounding areas for community service.
Move-out waste reduction	Since 2012, Housing has coordinated a spring move-out waste reduction program called "Warriors Don't Waste." By collaborating with multiple organizations, Eastern has been able to collect and donate clothing, furniture, non-perishable food items, and more from students. It is estimated an average of \$2,195 worth of items are donated each year.
Energy conservation in dorms	The Warrior Cup is a competition held yearly between residence halls. One of the events is a competition to see which dorms conserve the most energy. The dorms with the greatest percent decrease in energy use compared to their baseline average wins. In 2017 the winning dorm, Noble Hall, reduced their energy consumption by 15.3%. That same year, 5 other dorms also decreased their energy use by more than 10%.



## Student Engagement Achievements

Action	Description
Sustainability at Eastern webpage	Eastern offers a dedicated webpage to sustainability on campus. This site serves as a resource to locate sustainability efforts and accomplishments on campus such as recycling guidelines, sustainability certifications, the Climate Action Plan, campus energy dashboard, and more. This website is noted for incoming students and employees during their orientations.
Student orientation	During student orientation, counselors perform an "Orientation Show." This show includes information on single stream recycling on campus, waste reduction programs, and organics collection for biofuel. Students are introduced to Eastern's Sustainability webpage as a resource. In 2017, student orientation packets and registration were provided digitally, drastically reducing printing and paper use.
On campus food pantry	Shawn's Cupboard is the on-campus food pantry started by students in 2017. The pantry is open to anyone in the Eastern community and stocks a supply of non-perishable items as well as items rescued from dining services.
Clubs (Environmental, Outdoors, Vegans)	There are several student-governed clubs on campus with a focus on sustainability. The Environmental Club "advocates the importance of human impact on the environment, while promoting sustainable awareness and practices on campus and in our surrounding community." They organize campus and community service projects, and promote sustainability through their Earth Day event, Environmental Earth Science Graduate Panel, and documentary screenings. The Eastern Outdoors Club "provides opportunities and events for the students of Eastern Connecticut State University to experience the outdoors." The Vegans of Eastern club "promotes the understanding of plant-based nutrition and ethical eating."
Campus Sustainability Month	In 2014, Eastern partnered with Yale University to create the CT Alliance for Campus Sustainability. Together they created Campus Sustainability Week in 2015, which has evolved into Campus Sustainability Month held every October and spread into a nationwide event.

## Community Outreach Achievements

Action	Description
Campus/community committee	Formerly the Town-Gown Committee founded in 1991, W/E CAN is a collaboration with the University and the Windham community to develop a positive relationship between the two entities.
Center for Community Engagement	The Center for Community Engagement organizes many community service and outreach opportunities for students and staff in the Windham Community. They have created on-going partnerships with more than 26 organizations and provide volunteers for nearly 100 one-time events. CCE also hosts the Day of Caring in the fall semester and Town Pride, Town Wide in the Spring semester. These events gather large groups of students to participate in cleanup projects across the community such as raking, collecting litter, and gardening.
Service learning courses	Several classes at Eastern require service learning projects in the community as part of their final grade. Examples include a Geography of Food class that requires students to raise money in the community for the Willimantic Farmers Market and the social work program that requires students to complete a community project with a partner organization. In 2019, social work interns helped obtain input from students on the development of this climate plan.
Campus/town resiliency workshop	In 2016, Eastern partnered with the Town of Windham, Second Nature, and the Nature Conservancy on a workshop to increase the awareness of risks from natural disasters and climate-related hazards. The result was a Resiliency Report for Eastern and Windham that identified the top concerns and challenges, and proposed actions.
Statewide municipal sustainability certification program	In 2018, ISE launched "Sustainable CT," a voluntary municipal sustainability certification program. Municipalities may become certified at the bronze or silver level after completing actions across a broad range of sustainability impact categories. These actions may include developing green purchasing policies for towns or increasing/promoting equity in their community. As of July 2020, 64% of CT municipalities have registered for the program and 48 towns have been certified. The program also offers free technical support to municipalities and funding for community-led sustainability projects.

# PLANNING AND ADMINISTRATION ACHIEVEMENTS

## Accountability Achievements

Action	Description
Princeton Review "Green Campus"	Since 2009, Eastern has been named a "Green Campus" by the Princeton Review. This honor is based on Eastern's reports submitted to STARS and Second Nature.
STARS reporting	In 2012, 2016, and 2018, Eastern submitted reports on sustainability progress to AASHE STARS and achieved Silver rating each time.
GHG reporting (Second Nature and SIMAP)	Since 2008, Eastern has submitted an annual GHG emissions inventory. The University calculates our carbon footprint and uploads this data into the Second Nature platform.
Green Campus Committee	The Green Campus Committee meets monthly to plan and implement campus sustainability initiatives on campus. The committee is chaired by ISE and includes representatives from a diverse group of departments across Eastern's campus.
Staff to support Eastern's climate commitment	In 2019, Eastern dedicated funds to hire a part-time University Assistant to support Eastern's Climate Leadership Commitment and develop a new climate action plan. The position is housed in and supervised by ISE and supported by funds from Facilities and the Center for Sustainable Energy Studies.
Climate leadership by President	As of July 1, 2020, President Núñez serves as Chair of the Climate Leadership Steering Committee of Second Nature. As part of this role, she is active in promoting and supporting climate leadership in higher education institutions across the country. In July 2020, Dr. Núñez moderated a webcast on "COVID-19, Climate and Higher Ed" with former Secretary of State John Kerry and MIT President Rafael Reif.
Transportation and Climate Initiative	October 8, 2020, Eastern signed a letter, along with over 100 other businesses, investors, colleges and universities, in supporting The Transportation and Climate Initiative. The letter called on governors to support a major policy initiative that would help to decarbonize the heavy-emitting transportation sector and invest in modern, low-carbon solutions.

## Staff Engagement Achievements

Action	Description
Employee orientation	Employee orientation includes Eastern's "Green Campus" designation.
Staff professional development	The Office of Professional Development offers training that can be defined as "sustainability-related" such as technology courses.
Climate planning input from university leadership	In 2019, ISE and Facilities senior staff made a presentation to the President's Extended Staff, a group consisting of department heads across campus, and received input on the development of this Climate Action Plan. The work session broke these key decision makers into smaller groups based on the following topics: Purchasing and Forms, Greener IT, Academics, Student Engagement, Faculty/Staff Engagement, and Buildings. Each group was given questions and a resource guide of examples from other Universities. They provided feedback on assigned topics and the best ways to proceed with adopting some of these initiatives for Eastern's campus. This feedback was used in establishing the goals and strategies for this Climate Action Plan

# CLIMATE ACTION PLAN STRATEGIES

As noted above, Eastern Connecticut State University has made progress in reducing greenhouse gas emissions since the development of the 2009 Climate Action Plan. Increasing and accelerating greenhouse gas emission reductions to become carbon neutral over the next 10 years will require strong leadership and bold action. This section outlines strategies to meet our climate leadership and sustainability goals within 3 impact categories: Operations, Campus Life, and Planning and Administration. Each section includes subsections with short, intermediate, or long-term strategies. These time frames are meant to serve as guidelines for the University as we work towards achieving these goals and will be revised as we learn more and track our progress on becoming a carbon neutral campus.

## Key

Short term	Summer 2020 – Spring 2021
Intermediate	Summer 2021 – Spring 2023
Long term	Summer 2023 – Spring 2030

## OPERATIONS

Operations encompasses all building operations such as HVAC, lighting, maintenance, and renovations, fleet operations, grounds operations such as landscaping practices, and more. Operations is the largest source of the campus’ greenhouse gas emissions, but also the area the University has the most control over. The greatest reductions in emissions will come from continued retrofitting and upgrades to our buildings, but we will also make progress through better data collection and policies and building a culture of sustainability that is reflected in the thinking and behavior of all staff as we perform our jobs.

### PURCHASING STRATEGIES

#### Procurement Contracts

Time Frame	Action	Description
<b>Short Term</b>	Sustainable purchasing policy	Review and revise Eastern's draft sustainable purchasing policy. The policy should include a review of contracts prior to expiration for opportunities to integrate sustainability, a general commitment to bulk packaging to reduce the amount of waste generated and appendices specific to individual departments including fleet, electronics, cleaning, dining services, and grounds. Eastern should adopt the revised purchasing policy to be used in developing future contracts.
	Contract monitoring	The Green Campus Committee should identify the timeline of current contracts and their expiration dates. This timeline would serve as a guide to prioritizing the sustainability component to be incorporated into all RFPs moving forward. This should include but is not limited to Dining Services, Grounds, and Waste Management accounts. As RFP dates approach, Eastern should integrate sustainability language into new RFPs. The actions listed below are short term actions to consider based on contracts already evaluated:
	Green filter for office supplies	Include the need for having a green filter on products in future office supply contracts. This would allow departments to make the most sustainable choice with minimal research.
	Integrated pest management plan	Adopt an Integrated Pest Management Plan and grounds guidelines for future contract solicitations. This would cover pesticide use and management on campus, prioritize native and pollinator friendly plants and general maintenance procedures. (June 2022)

<b>Short Term</b>	Sustainable dining	Adopt sustainable dining policies modeled after the forward-thinking practices currently in place. Eastern has become a nationally ranked leader in sustainable campus dining services but has no formal policies in place to ensure these standards will be maintained and augmented under future contracts. Future efforts should include goals for 10% “put local on your tray” and ensure sustainable food sourcing where possible.
	Busses/rental cars	Require the vendor to supply an appropriate size bus based on the number of travelers in future contracts. The current bus contract used to transport Eastern athletes to events only supplies one size bus. This means there are times when a full-sized bus is used to transport only a few people.
	Electronics	Draft an official electronics purchasing policy. IT should outline specific EPEAT/Energy Standards when purchasing equipment and include a commitment to bulk purchasing of this equipment to reduce packaging waste in the policy.
	Cleaning	Conduct a cleaning practices/supplies audit to identify current wasteful and eco-unfriendly practices used by cleaning services. This audit will be used to draft a cleaning policy that meets or exceeds the State of Connecticut green cleaning standards.
	Printing	Require that printer use data be sent each semester to the University in future contracts for printing services. This information should be used to monitor paper use and identify unnecessary printers across campus. Energy use standards should be set for printers and other equipment. Usage data from the printer contractor should be sent to IT and used to increase efficiency in printer consolidation. (October 2020)
	Vending	Require new vending contracts to include vending machine energy efficiency standards that meet or exceed Energy Star standards.
<b>Intermediate</b>	Plastic water bottle reduction	Work together with existing vendors to minimize the sale of plastic water bottles on campus. This plan could be implemented in phases such as eliminating the purchases for events, removing from cafes on campus, and then vending machines.
	Waste management	Require reporting of actual trash and recycling collection weights in waste collection contract.
<b>Long Term</b>	Total lifecycle purchasing policies	Research the benefits of transitioning to a total lifecycle purchasing priority (TLPP) by 2025. TLPP accounts for cost incurred throughout the manufacturing, use, and disposal of an item. Transitioning to this model should save the University money because high quality products last longer and also divert waste and reduce emissions.

## Paper

Time Frame	Action	Description
Short Term	Electronic timesheets	In partnership with the CSCU systems office, Payroll should complete conversion of employee timesheets to digital timesheets using the CT-Core self-serve feature.
	Common University forms and online submission	Fiscal Affairs should transition general University forms, such as travel authorizations and reimbursements, to an online submission platform.
	University taskforce to reduce paper	Explore the use of tablets by department heads and others to reduce the need for printing.
	Double-sided printing	Set all printers on campus to a double-sided printing default. The IT department should monitor printer use across campus with the intent of consolidating unnecessary printers.
Intermediate	Online syllabi submission	The Dean's Office should work with Library Archivist and Academic Departments to enact a system for online syllabi submission. Syllabi are currently sent as hard copies to the Dean's office for approval and then manually scanned into the Library's database. A digital system would save paper, time, and electricity and be more user friendly.
	Recycling options for shredded paper	Investigate alternative solutions for diverting shredded paper from disposal. Shredded paper is not recyclable, especially when bagged in plastic bags. Potential solutions include composting, special bins for shredded paper, or an outside contractor.
Long Term	State recycled paper purchasing contract	Advocate to the State of Connecticut DAS Procurement Office for a more affordable, 100% recycled paper contract. The current price is too costly which results in the University only buying 30% recycled content paper.

## BUILDINGS AND UTILITIES STRATEGIES

### Energy Monitoring, Maintenance, and Retrofits

Time Frame	Action	Description
<b>Short Term</b>	Explore building temperature policy	Research and adopt a building temperature policy that mandates temperatures during occupied/unoccupied hours and winter/summer to save energy and establish a plan for monitoring energy savings, while maintaining other necessary building controls. A better strategy is needed for maintaining comfort in dorms and to minimize open windows.
	EUI targets and monitoring for existing and new buildings	Set Energy Utilization Index (EUI) targets for buildings (existing and new). Each building should have a reported EUI monthly that should be compared with its historical data. Eastern's energy dashboard will be upgraded based on technology platform changes. The university should develop a process and identify individuals to monitor the energy usage of each building to detect inefficiencies in buildings and set energy usage goals. This could be done through student, faculty, and Facilities collaboration.
	Daylighting and LED fixtures	Dim lights near windows to allow for daylighting. Hallways that are daylit should have lights turned off during daylight hours. Convert all lighting on campus to LED.
	IT energy reduction	IT should create a task force to set energy efficiency goals for use and future equipment purchases. This should include but is not limited to "university wide power down events," providing power cords for equipment and overall computer lab energy use reduction.
	Timers on equipment	Use power strips used on gym equipment, vending machines, etc., that can be turned off after hours to conserve energy. A product called "vending miser" should be explored to manage vending machine energy use.
	Steam piping insulation	Continue to insulate all valves and fittings of steam and condensate piping, including condensate receivers.
	Managing unnecessary energy	Create a plan for managing unnecessary energy use on campus. This may include outdoor lights currently left on for 24 hours a day, printers turned on while not in use, computers not in use, etc.
	HVAC economizer modes	Control HVAC with economizer modes, controlling, and reducing outside airflow at times to increase efficiency.



<b>Intermediate</b>	Intentional scheduling	Facilities should partner with the Student Activities office to create intentional scheduling guidelines for buildings on campus. This will include ideal hours of operations, including summer months, for each building, other appropriately sized room options on campus and more. These guidelines should be integrated into the online scheduling system and be used as a tool for students, faculty, and staff to best schedule their event while optimizing resource use.
	Energy systems evaluation	Reevaluate energy systems after space use changes. Consider downsizing oversized equipment upon replacement. Equipment run-times should be reported.
	Water bottle refill stations	Continue to upgrade existing water fountains with water bottle refill stations. Use data collected from students on current stations to identify the high traffic locations and determine where to install new ones. Current stations exist in Goddard Hall, the Communications Building, Shafer Hall, the Student Center, and Webb Hall.
	PV potential	Explore roof-top solar PV opportunities, specifically with new construction or roof renovations, and/or ground mounted arrays through PPA (Eastern is evaluating Burnap Hall and Crandall Hall).
	Pathway to zero carbon plan for buildings	Create a plan for individual buildings to meet zero carbon standards. Investigate building renovations and retrofits that would increase building efficiency and decrease overall building loads to create easier pathways towards incorporating renewables.
	Building maintenance plan	Modify and/or create maintenance plans to ensure efficient buildings operations and to meet the EUI goals set forth for each individual building.
	Transformer upgrades	Explore options for transformer upgrades and resizing for the Sports Center and other expansion projects to ensure maximum efficiency.
	Heat pumps	A pathway for using heat pumps should be continued, by converting steam to low pressure, 130°F hot water in buildings. This has been achieved in many buildings, with only one building left on steam.
	100% renewable energy plan	Develop a plan for 100% renewable energy for campus energy needs. This may include a combination of renewable energy installations on-site, off-site renewable energy credit purchases, and removing oil and gas heat and power generation sources from campus.

<b>Long Term</b>	Convert from oil and propane heat to low carbon sources	Convert heating to low-pressure, hot water (not steam) and create pathways for using heat pumps. 182 High St (Counseling Services), 192 High St (Faculty Offices), 392 High St (Storage), 176 High St (Honors House), and 372 High St (ISE) use oil heating. The Facilities Warehouse and the Mansfield Campus Athletic Support Center use propane heating and the Police Station uses both oil and propane. Switching these buildings to alternative heating sources would result in a 1.3% drop in emissions from 2018 levels.
	Parallel positioning controls on boilers	Investigate installing parallel positioning controls on boilers with O <sub>2</sub> trim. The energy savings potential is upwards of 5%.
	Zero carbon buildings	The pathway to zero plan for buildings should be executed through retrofit, renovation, and new construction.
	Geothermal system upgrades	Reevaluate the one path GSHP system when the aging geothermal system needs to be replaced to address water concerns. The pumps are becoming more efficient than the ones currently installed.
	Central boiler	Further investigate replacing the central boiler with CHP or removing it entirely based on building needs.
	100% renewable energy	Execute the developed plan for 100% renewable energy for campus energy needs.

## New Construction and Major Renovation

Time Frame	Action	Description
<b>Long Term</b>	Energy efficient buildings	Continue to build new buildings and renovate existing buildings to meet high efficiency standards.
	Building targets	Procure all new projects and renovations to a target EUI in order to achieve zero carbon buildings. A/E/C firms should be selected competitively based on goals and budget.
	Building electrification	Incorporate heat pump heating and cooling into all new facilities. No new fossil fuel obligations should be included in new construction or renovation.
	Net-zero energy construction	Explore the option of net-zero energy building construction for future designs. This is becoming more feasible with advances in renewable energy technology.
	Building envelope	Complete EBCx testing for building envelopes on buildings built before 1980, or for buildings with obvious deficiencies such as ice dams and drafts. Insulation should exceed the latest building code or ASHRAE 90.1-2019 standard. Ensure that EBCx testing and balancing is performed after renovations. Goddard Hall, the Communications Building, and Shafer Hall have all had recent envelope commissioning.
	Water chiller	Install a high efficiency water chiller system with a heat recovery system during building renovations.
	Windows	Install energy efficient windows, complying with ASHRAE 90.1-2019, or ENERGY STAR. Consider daylighting with window placement and install dimmable lights accordingly. This is currently taking place with renovation projects of Goddard Hall and the Communications Building.

## FOOD STRATEGIES

### Sourcing

Time Frame	Action	Description
<b>Short Term</b>	Sustainable purchasing guideline	Adopt a sustainable dining policy. Eastern has become a nationally ranked leader in sustainable campus dining services but has no formal policies in place to ensure continuation for these policies and practices.
	Meat reduction	Incorporate 20% mushrooms in beef patties, increasing 'Meatless Mondays' into food service planning. A plan should be explored for providing pasture-raised meats and calculating CO <sub>2e</sub> reduction against factory farmed meats.
	Campus grown food	Work with greenhouse manager to explore opportunities for students to grow food for dining services.
	Record keeping	Work with Dining Services to compile purchasing history into STARS database.

### Waste Reduction and Recovery

Time Frame	Action	Description
<b>Short Term</b>	Waste education	Expand project 'Clean Plate' and educate dining hall users on how to reduce post-consumer waste.
	Food collection	Expand food collection to on campus cafes and improve volunteer coordination through the Warriors Waste program.
	Food cupboard	Extend operating hours and product availability at Shawn's Cupboard.
	Organics to biofuel and composting	Create a plan to expand organics diversion to cafes and student center food courts for pre- and post-consumer waste. This plan should also explore options for organics collection from residence halls.

## GROUNDS STRATEGIES

### Landscape Management

Time Frame	Action	Description
Short Term	Integrated Pest Management Plan	Adopt an Integrated Pest Management Plan and grounds guidelines for future RFP contracts. This will cover pesticide use and management on campus, prioritize native and pollinator friendly plants and general maintenance procedures. The following actions will be incorporated into our IPM plan:
	Water use	Create a plan to manage landscape watering in accordance with weather forecasts. Research the potential for rainwater collection on campus to use for irrigation and plan landscaping and grounds accordingly to manage surface runoff.
	Pesticide standards	Implement safe and healthy pest control options and alternatives to pesticides. Eliminate the use of neonicotinoids and other pesticides that harm pollinators.
	Road and walkway salt	Eliminate the use of salts on surfaces and explore alternative options to create safe winter driving and walking conditions.
Intermediate	Solar lighting	Equip outdoor lighting with PV panels and battery storage to minimize grid energy usage.

### Biodiversity Preservation

Time Frame	Action	Description
Short Term	Native plantings	Create a policy to include only native plantings in landscaping and to remove invasive and non-natives growing around campus.
Intermediate	Tree plantings	Plant trees, from a native selection, on campus. Develop a strategy to calculate carbon sequestration from tree planting.
	Arboretum	Develop a forest management plan for the arboretum at Eastern, aimed to enhance the biodiversity, habitat, and carbon sequestration. Create a plan to calculate carbon sequestration in this area.
	Light pollution	Explore options to further minimize light pollution by changing lighting schedules and adding light pollution shades to outdoor lighting. Research on outdoor lighting is beginning to reveal signs of disrupting biological processes, negatively impacting a variety of species.

## TRANSPORTATION STRATEGIES

### Campus Fleet

Time Frame	Action	Description
Short Term	Fleet inventory goals	ISE should continue to conduct a fleet inventory of campus vehicles each year. This information should be distributed to Facilities, Public Safety, Center for Community Engagement and used to make future fleet purchasing decisions, including finding where the University would most benefit by switching to EVs. Based on the 2018 & 2019 Fleet Inventories the following actions should be taken:
	Correct sizing of fleet vehicles	Use all vehicles in the university's fleet with occupancy and distance in mind, reducing the use of vans when smaller vehicles meet the needs
Intermediate	Public safety	Develop a plan with Public Safety to optimize the efficiency of their vehicle fleet. This plan should strive to replace inefficient vehicles while meeting public safety needs.
	Facilities	Identify the best candidates for electric upgrades in the Facilities' fleet beginning with the University mail truck and golf carts.
	Shuttles	Invest in electric shuttles when purchasing new shuttles, beginning with the oldest shuttle purchased in 2013. It has been found that electric buses are the best alternative fuel technology based on their low life cycle costs and emissions.
	Lead by Example Executive Order	The Facilities and Public Safety departments should work with purchasing to create a plan to transition the University's fleet to hybrid or EV vehicles. This plan will comply with Governor Lamont's Executive Order 1 that at least 50% of the State of Connecticut's fleet will be electric by 2030.

## Commuting and Travel

Time Frame	Action	Description
<b>Short Term</b>	Public transportation	Understand and support student interests and needs for Eastern to join CT's U-Pass transportation program, which would provide free public transportation for students throughout the state.
	Commuter records	Include questions on annual parking pass applications for students, faculty, and staff to obtain information on commuting practices. This data should be used each semester to estimate, report, and track GHG emissions for scope 3.
	Airline miles on travel authorization forms	Include airline miles on all TA forms and use this data to estimate, report, and track GHG emissions for scope 3.
	Commuting suggestions	Compile a list of suggestions for future University policies based on commuter data.
	Regional transit	Explore options for partnership with WRTD buses potentially offering a reduced fare for Eastern students if U-Pass program is not adopted.
<b>Intermediate</b>	Bike friendly campus	Increase bike rack availability across campus and the potential for a bike share/loan program on campus. Bike lanes could be made on campus and Eastern could work with the Windham community to support creation of bike lanes in town.
	Travel policy	Draft a travel policy for faculty and staff based on data from TA forms and airline miles. This could include limiting airline flights within a certain mile radius, encouraging telecommuting to meetings, and carpooling.
	Carpooling program	Develop a carpooling program for faculty and staff. Under guidance of EES Professor, Meredith Metcalf, students created a GIS (in spring 2020) of zip codes and union codes to show where faculty/staff are commuting from as well as their work schedules. This information could be used to create an effective carpool program.
	Travel carbon offsets	Work with the Department of Energy and Environmental Protection to explore potential for a carbon offset mechanism for state travel (e.g., purchase offsets from travel funding).
<b>Long Term</b>	Carbon offsets	Develop a policy to purchase carbon offsets once carbon reduction measures have been maximized. This is the last step to achieving carbon neutrality.

## WASTE STRATEGIES

### Waste Reduction and Diversion

Time Frame	Action	Description
<b>Short Term</b>	Waste audits	Continue to conduct waste audits and require reporting of waste and recycling weights from waste collection vendor. Monitor and track data to calculate cost savings and develop waste reduction goals and strategies.
	Education	Expand recycling, composting, and waste reduction education throughout campus.
	Dorm recycling	Add recycling bins to university dormitories.
	Hand dryers	Replace paper towels in bathrooms with hand dryers.
	Move-in/move-out day recycling	Create a committee to better organize waste management on move-in and move-out days. Tag sales could be held for new students to purchase used furniture and appliances at reduced cost saving on money and waste.
<b>Intermediate</b>	Water bottle reduction	Eliminate single use plastic water bottles from being sold on campus. This would need to be included in vendor contracts and coupled with student/faculty education. Reusable water bottles could be distributed to all students and staff as incentive.
	Zero waste events	Create Zero Waste Event guidelines including procedures for compost removal at the end of the event. The guidelines/zero waste event options should be included on each event scheduling form.
	Organic waste diversion	Expand biofuel composting to the Student Center and cafes. Additional opportunities for diverting organic waste from offices and student areas should be explored.
<b>Long Term</b>	Carry in/out classrooms	Explore a policy to remove trash cans from classrooms, relying on individuals to carry out what they bring in. Consider a pilot program that also monitors outdoor litter on campus.



## CAMPUS LIFE

A sustainable campus does not just include greenhouse gas emissions. It is also about creating sustainably minded students by giving them the tools to enact change on campus and in their lives after they graduate. Eastern is committed to providing these opportunities in the classroom and the community. Campus life actions are meant to make sustainability a part of everyday life for students and faculty on campus, implementing campus wide policies, initiatives, and programs to support Eastern’s community and climate commitments.

## ACADEMICS STRATEGIES

### Courses

Time Frame	Action	Description
<b>Short Term</b>	Course catalog sustainability filter	Create a database of classes with a sustainability component. Work with IT to create a filter in Eastern’s online course catalog for students choosing classes.
	Faculty sustainability advocate	Explore potential for faculty release time or a summer stipend to integrate sustainability into curriculum and to support other campus sustainability initiatives.
	Faculty sustainability training	Provide a short training for faculty members on how to implement and encourage sustainable actions in the classroom and around campus.
	Thinking local	Encourage faculty to incorporate more local based examples in the classroom and implement more projects on campus. This will provide valuable real-world experience while doing work to help sustain our community.
<b>Intermediate</b>	LAC sustainability literacy	Explore the integration of a sustainability literacy requirement into the LAC. The goal would be to increase climate literacy and make every student aware of sustainability issues and pertinence to their fields of study.

### Research

Time Frame	Action	Description
<b>Intermediate</b>	Climate and sustainability research database	Create a database that would provide access to past research done by faculty and students at Eastern, based in climate science, climate resilience, and/or sustainability. The database would also include potential research opportunities for students and provide a platform for faculty to find students interested in assisting in their research.
	Data analysis	Collaborate with Eastern’s new Institute for Data Analytics to provide support for analysis of Eastern climate and sustainability data.

## Immersive Experience

Time Frame	Action	Description
<b>Intermediate</b>	Sustainability career/internship options	Seek out more companies to invite to career and internship fairs with a larger focus on sustainability. Focus on smaller companies to provide students with a more personal experience.

## STUDENT ENGAGEMENT STRATEGIES

### Improving Student Engagement

Time Frame	Action	Description
<b>Short Term</b>	Culture of sustainability	Develop a culture of sustainability at Eastern through student orientation, increased visibility and communications on sustainability practices and accomplishments, and opportunities for student learning in and outside of the classroom.
	Sustainability for clubs	Create a guide on how to incorporate sustainability into club activities and campus events. Longer-term, this guide should be used as a rubric for “sustainability grade” of various clubs and create a database of sustainability focused clubs.
	Visibility for campus sustainability initiatives	Develop signage, posters, tabling, and outreach for sustainability in and around campus as well as online. ISE, Green Campus Committee, sustainability options in academics, and events such as sustainability month and Earth Day should be promoted, partnering with other existing events to spread awareness.
	Sustainability internship and jobs inventory	Provide access to a full inventory of sustainability related jobs, projects, and internships available through Eastern as well as locally, to encourage students to get involved in sustainability related work.
<b>Intermediate</b>	Student sustainability training	Include sustainability training during orientation. This should include basic behaviors on campus such as recycling, reusing water bottles, walking as much as possible or using bus transportation. A full guide could be created with collaboration from students and what they think is important/feasible.
	SGA sustainability committee	Create a sustainability committee on SGA to have representation at Green Campus Committee meetings as well as to assist in establishing a Green Fund.
	Green Theme Housing	Create housing in a desirable dorm to encourage participation in Green Themed Housing. A plan should be established for the requirements of the priority housing and how sustainable living will be incorporated.
<b>Long Term</b>	Nationwide Initiatives	Join student-led nationwide initiatives such as Bee Friendly Campus, Recyclemania, and the Post-Action Landfill Network. These could be integrated with existing clubs.

## PLANNING AND ADMINISTRATION

Planning and administration actions account for much of the “behind the scenes” work done for promoting sustainability across campus. This includes data collection and management, policy development, collaboration, long term planning and more which will help ensure the University remains on track with our climate commitments. Sustainability must become ingrained in our culture to create lasting change for the campus. We must hold ourselves accountable to our goals, reshape office habits, advocate, and lead by example for our peer institutions.

### ACCOUNTABILITY STRATEGIES

#### Green Campus Committee (GCC)

Time Frame	Action	Description
<b>Short Term</b>	Culture of sustainability	The GCC will develop additional strategies to build a culture of sustainability that is reflected in the behavior, actions, and decisions of students, faculty, staff, and administration. Eastern’s sustainability commitment will become evident to those who visit our campus, website, and interact with the Eastern community.
	Broad participation	Invite participation in the GCC by a broad range of stakeholders across the campus.
	Plan implementation	ISE and the GCC should continue to meet monthly to actively implement this plan, monitor progress, and revise this plan as a living document.
	Hire campus sustainability coordinator	Hire a full-time campus sustainability coordinator to guide the implementation of this plan.
	Sustainability representatives	Present sustainability focused views to decision-making committees on campus, including Senate, COFE III Committee, and more.
	Public input	Create a form for sustainability ideas and improvements to encourage student, faculty, and public input on sustainability related issues on and around campus.
	Equitable sustainability planning	Collaborate with the Office of Equity and Diversity at Eastern on ideas to integrate equitable and diverse practices into sustainability planning and implementation on campus.

## Data Collection and Reporting

Time Frame	Action	Description
Short Term	GHG emissions data, tracking, and reporting	Improve sustainability and greenhouse gas emissions data, tracking, and reporting through collaboration with administrative offices, Institutional Research, ISE, Center for Sustainable Energy Studies, Institute for Data Analytics, and others.
	STARS certification	Submit STARS reports to maintain silver rating. Eastern should strive for gold STARS rating in 2021.
	Data collection	Improve GHG data, tracking, and reporting, with the priority being Scope 3.
	GHG impact of strategies in this plan	Research and quantify the potential greenhouse gas emissions reductions associated with strategies in this plan.
	Additional climate strategies	Develop additional strategies to ensure that Eastern meets the 2030 carbon neutrality target. Assess progress and continue to add, refine, and prioritize strategies.
Intermediate	Scope 3 emissions reduction	Using Scope 3 data collected, develop additional recommendations to reduce emissions.

## Policy Advocates

Time Frame	Action	Description
Short Term	Public statement on climate crisis	Work with university senate and other stakeholders to consider declaring a climate emergency or similar public statement.
	Collaboration	Continue to help coordinate the CT Alliance for Campus Sustainability with Yale and other campuses to network, share best practices, and collaborate on actions.
	Climate leadership by president	Continue to support President Núñez's leadership in serving as Chair of the Climate Leadership Steering Committee of Second Nature, participation in climate public policy issues, and presentations to state, regional, and national audiences.
Intermediate	Long term planning	Use this plan and the State of Connecticut climate plan and relevant programs as a guide when creating long term plans for the university Master Plan, Energy Plan, Strategic Plan, etc.
	Resiliency planning and implementation	Initiate next steps on resiliency planning and implementation, using the 2017 resiliency plan workshop with Town of Windham as a starting point.
	Department engagement	Hold departments responsible to help the University meet our specific goals (i.e., athletics hosting zero waste game days, art department recycling initiatives, etc.)

## STAFF ENGAGEMENT STRATEGIES

### Initiatives

Time Frame	Action	Description
Short Term	Culture of sustainability	Develop a culture of sustainability at Eastern through student and faculty orientation, modeling and information at university meetings, increased visibility and communications on sustainability practices and accomplishments, operations and maintenance practices, and staff decisions as they perform their jobs.
	Green office goals	Develop guidelines and incentive programs to help departments become greener.
Intermediate	Sustainability objective in job description	List sustainability as a priority in job descriptions as a part of our campus culture.
Long Term	Carbon offset models	Explore department-based carbon offset models based on travel, energy use, supplies, etc.

### Trainings

Time Frame	Action	Description
Short Term	Staff sustainability training	Offer training opportunities for faculty on how to "green" their curriculum. This should include online reading, assignments, turning computer labs, lights, and lecterns off when done, reducing plug loads in classrooms, etc.
Intermediate	New hire sustainability orientation	Require sustainability orientation for all new hires. The orientation will focus on carpool opportunities, how to properly dispose of trash/recycling, turning electronics off when not in use, etc.

## FINANCE STRATEGIES

### Funding

Time Frame	Action	Description
<b>Short Term</b>	Cost savings	Quantify the cost savings associated with strategies in this plan and track cost savings from action implementation.
	Campus green fund	Explore development of a campus green fund which could be funded by energy savings, voluntary SGA contributions, and grants and managed by the Green Campus Committee with student input.
	Rebates and incentives	Consider engaging students to research and monitor energy efficiency rebates, retrofitting opportunities, and campus energy data.
	Sustainability coordinator	Dedicate funding to establish a long-term sustainability coordinator position.
<b>Intermediate</b>	Divestment	Continue to explore fossil fuel divestment opportunities.
	Carbon offset subcommittee	Form a committee to develop a policy for carbon offsets.
<b>Long Term</b>	Carbon offset policy	Adopt an official offset policy that addresses eligible sources for offsets and sets the maximum percentage of total GHG to be covered through offsets.

## RESILIENCE STRATEGIES

Eastern has committed to reducing carbon emissions to zero by 2030 to help mitigate the effects of climate change. Alongside this commitment, however, Eastern recognizes that there are many inevitable effects as a result of climate change, even if carbon emissions are reduced in the immediate future. Because of this, Eastern must also plan strategies to promote campus and community resilience. The strategies listed below are high priority actions, seeking to build resilience on campus and in the Windham community by anticipating, understanding, preparing for, and adapting to the challenges and opportunities of a changing climate. The strategies related to increasing emergency preparedness and planning were developed during the May 2017 community resilience building workshop with Eastern and the Town of Windham.

Action		Description
<b>Improve ecosystem management</b>	Neonicotinoids and pollinator harming pesticides	Identify current pesticides being used and create alternate suggestions for more environmentally and pollinator friendly products. Ban harmful pesticides from being used on campus to ensure the longevity by 2025.
	Invasive species on campus	Identify and remove areas inundated by invasive species. Remove all invasive species by 2035 from university grounds.
	Rainwater used for landscaping	Move toward 100% naturally or non-irrigated landscaping on campus by 2040. This will help reduce the need for water during times of drought for landscaping purposes as well as help reduce grounds maintenance costs.
	Trees on campus	Plant trees across campus where practical to maximize carbon sequestration, air quality, and to minimize ground surface temperature. Create and implement a forest management plan for forested areas on university grounds to maintain healthy forests.



Action		Description
<b>Increase food security and resilient food distribution and storage systems</b>	Repurposed excess food from dining	Ensure all excess food from campus dining services ends up at Shawn’s cupboard or the Willimantic soup kitchen by 2025. This will help make the community more food secure and resilient to hunger. Excess food is an unnecessary byproduct of campus dining and should entirely be repurposed.
	Locally and sustainably sourced foods	Investigate creating a meal plan option which would source 75% of foods locally or from regenerative agriculture farms. Sourcing local and sustainably grown foods for dining can ensure the health and safety of consumers as well as promoting local economic resilience and food security by supporting local and sustainable supply chains.
<b>Improve educational outcomes and incorporate resilience into curriculum</b>	Assessment of students for climate literacy and input	Assess 50% of students by 2022. Assessing the student body for climate literacy would help the university gauge the awareness and understanding of climate change and resilience on campus and identify key areas to focus on related to climate education. This would help guide climate and resiliency additions to the curriculum.
	Climate change, resilience, and/or sustainability related classes	Work with faculty so that 10% of classes focus on or relate to climate change or resilience by 2035. Many disciplines have strong ties to sustainability other than sciences such as business, finance, education and more. Providing a variety of classes related to climate and resilience will spark interest in a wide array of majors across campus.
	Sustainability LAC requirements	Require 100% of students to take a LAC sustainability requirement by 2040. The liberal arts core curriculum at Eastern contains classes from a broad background that all students must take their first years at Eastern. This action would incorporate a sustainability/resiliency component into the LAC at Eastern to ensure all students are aware of pressing climate and sustainability related issues.

<b>Action</b>		<b>Description</b>
<b>Pursue energy efficiency, carbon neutrality goals, renewable energy</b>	LED lights	Replace 100% of lights with LED lighting by 2025 to optimize lighting and energy efficiency. Window daylighting should also be considered when lights are being replaced, removing lighting where daylighting is adequate.
	Net carbon emissions	Achieve zero net carbon emissions by 2030 to meet our carbon neutrality commitment. Climate change mitigation and resilience strategies are interdependent.
	Resilient energy sources	Develop a plan for campus microgrid for emergency needs in the event of grid failure. The plan should include, PV, campus fuel cells, low carbon generators, and battery storage. If an additional fuel cell is added on campus, explore setting it up to be an isolated microgrid, and expanding infrastructure to a single meter for the campus to negate the need for separate back-up generation at each building.
	Net-zero new construction	Include net zero construction designs for at least half of new building construction on campus by 2030. This will maximize energy efficiency capabilities and reduce energy demands. These buildings should include passive measures to ensure periodic off-grid operation at some level (passive survivability).
	Energy management plan	Catalogue and integrate existing alternative energy systems into overall energy management plan for campus including the existing fuel cell at the Science Building and geothermal systems at student dorms.
<b>Increase community engagement</b>		<p>Increase student engagement opportunities related to climate change and resilience to support to climate action implementation on campus as well as provide valuable sustainability-related educational experiences for students.</p> <p>The goal is to include 10 student engagement opportunities related to sustainability by 2025, 20 by 2030, and 30 by 2040.</p>

Action	Description
<b>Increase emergency preparedness and planning</b>	Increase cross-over training on resiliency with other municipal, state, and campus counterparts.
	Highlight the ecosystem services and co-benefits such as clean drinking water in local and regional planning amongst the Town, adjoining municipalities and ECSU.
	Seek to improve emergency preparedness by continuing to run tabletop drills from the “playbook” of potential situations for campus.
	Provide regular maintenance of power plant and anticipate backup needs for fuel supply during major events. Look to establish working group between campus and municipalities to develop and integrated energy management plan to ensure continuity of services in the event the larger grid is compromised. This plan should include municipal microgrid and campus energy plant along with other sustainable practices and renewable energy sources. Identify ways to create redundancies and fortify structures where feasible and cost effective.
	To enhance emergency management processes, establish routine opportunities for campus and town planning meetings and updates.
	Develop a snow management plan with the Town of Windham’s public works department and ECSU
	Work with the utility to determine the exposure of critical regional transformers to severe weather events to help define proactive measures to increase resilience of equipment and facilities at the regional scale for the Town of Windham and surrounding municipalities.
	Strengthen dialogue with hospital administration to better understand and assess the capacity of hospital in the event of multiple, simultaneous scenarios. Explore ways that campus facilities and capacity could help augment the municipal needs during major events.
	Enhance emergency communications in different languages besides English to ensure important messages reach all populations across the municipality. Look to diversify communication methods expanding social media, etc.
	Assess upstream dam vulnerability and Eastern’s location relative to the floodplain for potential impacts of catastrophic failure.

## CONCLUSION

Eastern has made a major commitment to setting a high standard for sustainability on campus throughout the past decades and will now accelerate and amplify our commitment and progress. By following this detailed, action-based plan and regularly reviewing and revising the plan to tie it to our target, the University will reach our ambitious goal of achieving carbon neutrality by 2030. As implementation begins, we expect to modify this plan based on ever changing campus operation needs and external factors.

Operations is the largest source of the campus' greenhouse gas emissions and the area of greatest opportunity for reducing greenhouse gas emissions. The largest reductions in emissions will come from continued retrofitting and upgrades to our buildings, while properly managing our campus operations by increasing the focus on creating better data collection strategies and policies throughout key departments on campus.

A sustainable campus encompasses beyond reducing greenhouse gas emissions. It includes creating sustainably minded students by giving them the tools they need to enact change on campus and in their lives after they graduate. Eastern has recognized the importance of student, faculty, and staff involvement towards accomplishing our climate and sustainability goals on campus. Campus life actions help make sustainability a part of everyday life for students and faculty on campus through the implementation of campus wide policies, initiatives, and programs to support Eastern's community and climate commitments.

Sustainability must become ingrained in our culture to create lasting change for the campus. We must hold ourselves accountable to our goals, reshape office habits, advocate, and lead by example for our peer institutions. We seek to build a culture of sustainability that is deeply rooted in everything we do and reflected in the lives of our students, alumni, faculty, and staff.

This Climate Action Plan serves as a guideline for Eastern to achieve its carbon neutral goal by 2030, through changes in operations, campus life, and planning and administration. The actions set forth in this plan, however, go beyond achieving carbon neutrality, and strive to incorporate resiliency and sustainability as a whole throughout campus.

# APPENDIX

## Eastern Connecticut State University Environmental and Sustainability Timeline

### 2000

On July 14th, the CSU Board of Trustees approves Resolution No. 00-74, establishing the Center for Sustainable Energy Studies at Eastern and Resolution No. 00-75, establishing the Endowed Chair in Sustainable Energy Studies. Eastern receives \$500,000 of non-state contributions to support the endowed chair.

### 2001

Eastern Connecticut State University receives a CT Department of Energy and Environmental Protection GreenCircle Award for the conversion of the High-Rise dormitory from an electric heating system to a geothermal system providing both heating and air conditioning. Much of the water in the open-loop system is captured and used for irrigation.

The board of Trustees of the Connecticut University System designates Eastern a “Center for Excellence in Sustainable Energy Studies” due to the creation of an undergraduate academic program in SES with an Endowed Chair and the establishment of the Institute for Sustainable Energy, with a goal to “identify, develop, and implement the means for achieving a sustainable energy future for Connecticut.”

### 2004

The Institute for Sustainable Energy receives ENERGY STAR® Partner of the Year award for Excellence in Energy Education.

Dr. Fred Loxson is appointed as the first endowed chair in Sustainable Energy Studies.

A Minor in Sustainable Energy Studies is approved as part of the EES major program.

The Institute for Sustainable Energy at Eastern Connecticut State University provides the education program design and coordination for the international U.N. Children’s Conference on the Environment, which brings 450 middle school aged children from 51 countries around the globe to Connecticut to discuss the impact of energy use on the environment.

The Institute for Sustainable Energy receives the Environmental Protection Agency Environmental Merit Award from the EPA New England Region for work in promoting energy efficiency in Connecticut.

## 2005

The Institute for Sustainable Energy receives the Environmental Protection Agency Environmental Merit Award from the EPA New England Region for work in promoting energy efficiency in Connecticut.

“Sustainable Energy and the Environment,” a general education course, is offered for the first time by the EES department as part of the Sustainable Energy Studies Program. This course has gone on to be very successful, with several on-campus and online sections of this Tier II science course offered every semester.

“Sustainable Energy Resources,” an advanced course in sustainable energy studies, is offered for the first time by the EES department as part of the Sustainable Energy Studies program.

Research publication: “Teaching Environmental Sustainability in the Context of an AP Environmental Science Course” Fred Loxsom, Beth Nichols, Hilary Inyang, Dean Goodwin, Tom Corley, Proceedings of INCEED, July 2005, Charlotte, NC.

Research Publication: “Developing a Sustainable Energy Studies Curriculum at ECSU”, Fred Loxsom, Proceedings of INCEED, July 2005, Charlotte, NC.

Eastern Connecticut State University receives a CT Department of Energy and Environmental Protection GreenCircle Award for influencing sustainable decisions on campus through its Green Campus Initiative, including facilities- and academic-based projects.

The Roots and Shoots Club receives a CT Department of Energy and Environmental Protection GreenCircle award for their sustainability action on campus, including Earth Day celebrations and campus energy and greenhouse gas reduction challenges.

The new Child and Family development Center opens on campus, which incorporates many high-performance building techniques, including special emphasis on the use of natural light.

Eastern installs two 2.5kW solar photovoltaic systems on two of its dormitories to power perimeter and emergency lighting, and six smaller PV arrays to provide LED lighting for bus shelters and recycling stations around campus.

## 2006

Eastern receives a Connecticut Quality Innovation Gold Award for the development and implementation of “The Greening of Eastern” program through the Institute for Sustainable Energy.

Online sustainable energy general education and advanced courses are offered by the EES department as part of the Sustainable Energy Studies program.

The Bachelor of General Studies concentration and a certificate program in Sustainable Energy Management is developed and begins to be offered to Eastern students.

Research Publication: “The Role of Residential Windows in New England Climates,” Fred Loxsom and Norma Vivar-Orum, referred abstract for Poster Session, NCSE Annual Meeting, January 2006.

Research Publication: “Window Heat Transfer in Conventional New England Residences,” Fred Loxsom and Norma Vivar-Orum, Proceedings of the American Solar Energy Society, Annual Meeting, July 2006.

Five small grants for sustainable energy research or course development are received by the Center for Sustainable Energy Studies, including: “US and Canadian Sustainable Energy Study Tour,” Canadian Embassy; Environmental Community Grant, Northeast Utilities; “The Effect of Windows on Energy Consumption in New England Home,” CSU-research; “Modeling Building Energy Consumption,” CSU-Faculty Development; and “US and Canadian Sustainable Energy Study Tour,” CSU-Course Development.

## **2007**

Eastern receives a Connecticut Quality Innovation Silver Award for the Institute for Sustainable Energy’s work in creating a statewide high school energy education program to address both local and global issues concerning climate change and energy efficiency.

The individualized major plan for Sustainable Energy Studies is approved.

Research Publication: “Engaging Faculty and Greening the Curriculum: Developing a Green Campus,” Fred Loxsom, Proceedings of the Northeast Coalition for a Sustainable Campus, Bowdoin College.

In September, President Elsa Núñez signs onto the American Colleges and University Presidents’ Climate Commitment (ACUPCC) and becomes one of the first 50 to make the commitment to carbon neutrality.

Eastern forms a Green Campus Committee in September 2007. The committee continues to meet monthly to discuss current energy and sustainability initiatives.

Eastern’s South Residential Village housing complex is awarded LEED™ certification by the U.S. Green Building Council, consisting of Constitution, Nutmeg, and Laurel Halls.

## **2008**

Eastern opens the new 174,000 square foot LEED Silver Science Building, equipped with daylighting controls, grey-water system, variable speed drives, and overall systems and materials selected to minimize energy use and impact on natural resources.

“Global Climate Change,” a general education course is offered for the first time by the EES department as part of the Sustainable Energy Studies program.

“Sustainable Energy Laboratory,” a general education course, is offered for the first time by the EES department as part of the Sustainable Energy Studies program.

A grant for sustainable energy research or course development is received by the Center for Sustainable Energy Studies: “Monitoring Solar Hot Water Systems,” from the Connecticut Office of Policy and Management.

Research Publication: “Sustainable Energy Studies at Eastern Connecticut State University,” Fred Loxsom, Proceedings of the National Council on Science and the Environment, Washington, DC, January 2008.

## **2009**

Eastern submits its first Climate Action Plan to the American College and University Presidents’ Climate Commitment, with a goal of achieving carbon neutrality by 2050.

Center for Sustainable Energy Studies staff work with colleagues at other universities to develop a national energy workshop for Geoscience teachers. A workshop is offered during May at Wyoming State University as part of the On the Cutting Edge series, supported by NSF and the National Association of Geoscience Teachers.

The Sustainable Energy Studies Department receives funding for the “Renewable Energy International Service Project” from the Connecticut Campus Compact to take two students to Jamaica for the initial phase of a service learning project.

## **2010**

Eastern begins to offer a Sustainable Energy track and minor within the Environmental Earth Science department, where students complete a series of courses designed to educate them about energy-related environmental issues and policies and prepare them to design, analyze, and monitor fossil fuel and renewable energy systems.

Students and staff from Eastern’s Sustainable Energy Studies department travel to Lucea, Jamaica for a service learning project focused on designing and implementing renewable energy systems, installing a small wind power system for a local school and providing community outreach as well as a learning experience for both parties.

Research publication: “Passive Cooling of Roof-Mounted Photovoltaic Modules,” Madeline Yozwiak and Fred Loxsom, American Solar Energy Society, Proc. ASES Annual Conference, Phoenix, AZ, May 2010.

Research publication: “Wind and Solar Resource Assessment of New England,” Charles Stoloff and Fred Loxsom, American Solar Energy Society, Proc. ASES Annual Conference, Phoenix, AZ, May 2010.



## **2011**

Research Publication: “Sustainable Energy and Diversity at Eastern Connecticut State University,” Fred Loxsom and Norma Vivar, Diversity and Democracy, Summer 2011.

The Sustainable Energy Studies Department is awarded a grant for the Lite-Trough monitoring project, from the CT Clean Energy Fund.

The SES Department is awarded a LI-COR Environmental Education Fund Award for equipment.

## **2012**

The Institute for Sustainable Energy receives a Workplace Partner of the Year from The Workplace, Inc. for assistance with obtaining a Department of Labor grant to develop and provide green job training for 600 unemployed citizens of Bridgeport’s 12 most impoverished neighborhoods.

Eastern installs a 400 kW fuel cell on the west side of the Science Building, with 100 percent of the electricity generated going to the buildings main electric room and supplying a majority of the power needed to run the facility. Excess heat produced by the unit is used in both the Science Building and the rest of Eastern’s power infrastructure, giving the fuel cell an operating efficiency of 90 percent, more than double that of traditional power sources.

Eastern earns AASHE STARS Silver rating in December, through the efforts of the Green Campus Committee.

ECSU completes installation of an automated building controls system into Eugene Smith Library, achieving a 27 percent reduction in energy in the first month of operation, with a projection to save \$114,000 in annual energy costs.

## **2013**

The Institute for Sustainable Energy receives Best of Green Schools Award for Collaboration 2013 from the US Green Building Council.

The Institute for Sustainable Energy receives Green Building Advocate of the Year Award from the CT Green Building Council for collaborations with the State Department of Education, Energy and Environmental Protection, Public Health, Construction Services, as well as with the CTGBC itself.

The Institute for Sustainable Energy is highlighted in “Sustainability the Journal of Record” with an article by Ted Muro entitled “Connecticut’s Lead by Example Green Campus munh.”

Eastern establishes a 50’ by 50’ community garden during the summer with the help of faculty, staff, and students. The garden produces more than 50 pounds of vegetables for the local soup kitchen during its first summer.

Eastern is selected as one of seven institutions of higher education nationwide to participate in the Department of Homeland Security's Campus Resilience Pilot Program, which aims to develop emergency preparedness plans for campuses in the face of both man-made and climate-related challenges.

Eastern begins construction of the new 118,000 square-foot Fine Arts Instructional Center, being built to LEED Silver Standards.

Eastern earns Power of Change award 2013 in the Fast Track category for the installation of an energy control system in the Library, which delivered over 22 percent in energy savings and over \$95,000 in savings in 2013.

## **2014**

The Institute for Sustainable Energy hosts the first Statewide Campus Sustainability Conference at Middlesex Community College, with participation from students, faculty, staff, and administration from private and public colleges and universities across Connecticut.

Eastern adds a "Sustainable Behaviors" course into the curriculum to be offered in the Fall as a collaborative effort by the Psychology and Business Departments.

Eastern hires a new Endowed Chair, Paul Torcellini, for the Center for Sustainable Energy Studies.

The Institute for Sustainable Energy receives ENERGY STAR Partner of the Year Award for its efforts to promote energy efficiency and sustainability practices as a means of fighting climate change and for recruiting participants to ENERGY STAR initiatives.

The Institute for Sustainable Energy receives a Power of Change Award in the State Difference Maker category for their work in promoting energy efficiency and sustainability in CT.

Eastern receives a \$4,000 grant from the CT DEEP to install electric vehicle charging stations at Eastern, resulting in two indoor wall-mounted EV charging stations at the Shakespeare Parking Garage on campus and will be available for public use.

The Institute for Sustainable Energy and Yale University Office of Sustainability establish the CT Alliance for Campus Sustainability. The goal of the Alliance is to empower sustainability actions in CT's higher education institutions, as well as assist with collaboration between public, private, and other campus-based education providers.

Connecticut Green LEAF Schools, a program of The Institute for Sustainable Energy at Eastern, is recognized by the CT Green Building Council as the 2014 Green Advocate of the Year.

Student interns from The Institute for Sustainable Energy travel to New York City to attend the North American Student Energy Summit, which challenges postsecondary students from across the continent to both question and understand key energy issues within their region and to further comprehend them within the larger context of existing and future global energy dynamics.

The Institute for Sustainable Energy works with the CT Technical High School System to perform energy benchmarking, as well as building walkthroughs on the CTHSS facilities across the state in order to identify potential energy efficiency projects.

The Facilities Department begins a project to convert much of the exterior lighting around campus to high-efficiency LED fixtures.

## **2015-2020**

Actions completed during this time can be found in the “Achievements to Date” section of this plan.