UNIVERSITY OF WISCONSIN-STEVENS POINT

Carbon Neutrality Plan 2025

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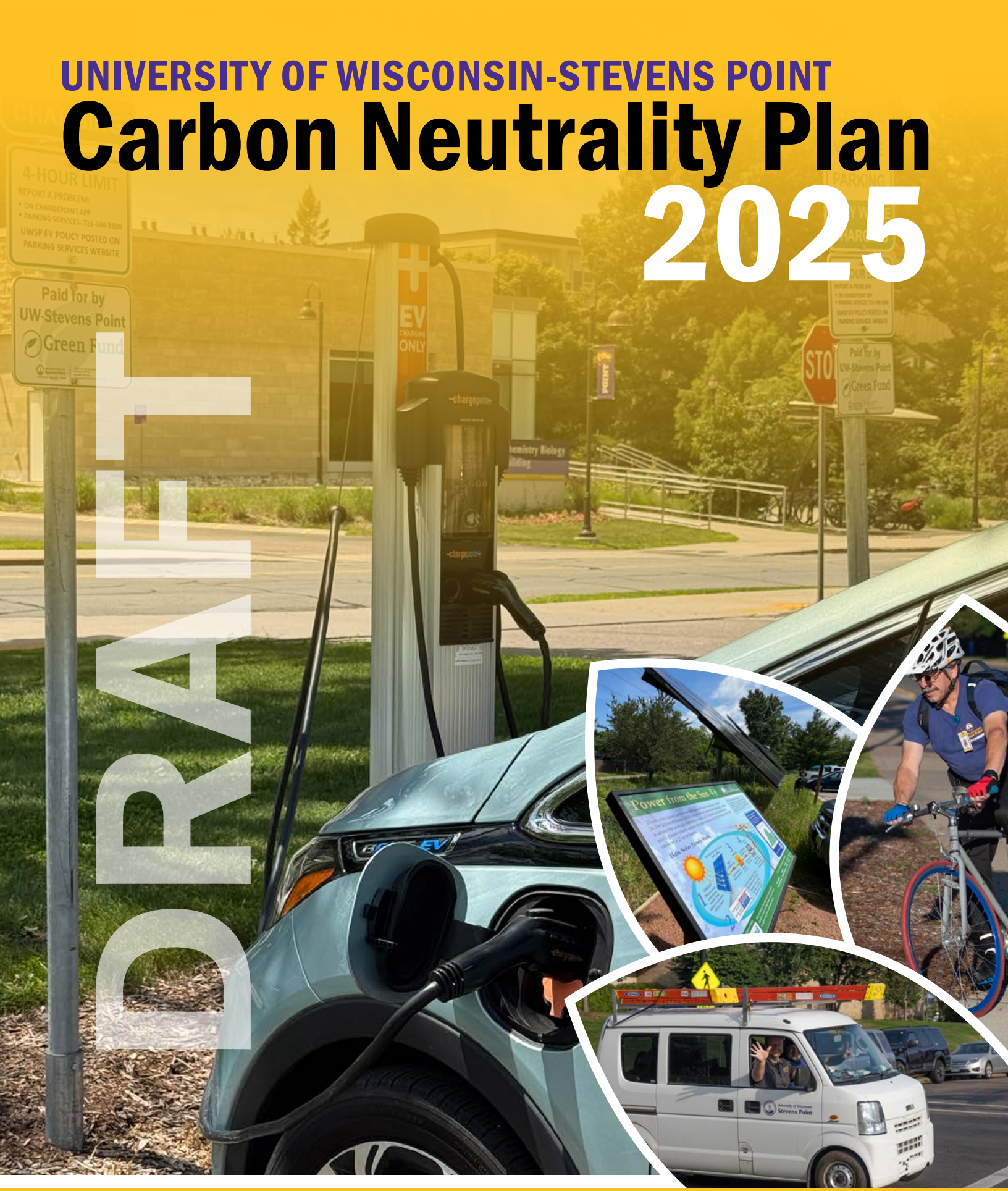

University of Wisconsin Stevens Point

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DISCOVER YOUR PURPOSE

UNIVERSITY OF WISCONSIN-STEVENS POINT

Carbon Neutrality Plan 2025

Purpose

The purpose of the Carbon Neutrality Plan is to guide the decarbonization efforts throughout UW-Stevens Point's various facilities and operations. The original 2011 plan acted as a goal setting document by committing to reaching carbon neutrality by 2050, a goal this plan maintains. Additionally, the previous plan contained information on why the campus needed to commit to decarbonization. This revision strives to continue refining the "why" behind decarbonization while also addressing the "what" and the "how." More specifically, this document will highlight what areas across campus create the most emissions, and exactly how we as a university can strive to reduce those emissions. This plan utilizes broad strategies for reducing emissions as well as specific action steps that are meant to be measurable, achievable and relevant to the university's decarbonization journey.

The Office of Sustainability at UW-Stevens Point

The Office of Sustainability (OoS) at UW-Stevens Point is active in engaging all departments of the university on the sustainable opportunities that are available to them. From improving sustainability education and outreach, identifying operational inefficiencies and pursuing strategies for decarbonization to responsible waste management. The Office of Sustainability is an interdisciplinary office housed within the Finance and Administration division and located in Nelson Hall. The OoS consists of full-time, part-time, graduate and undergraduate employees that have committed to positively changing the sustainability culture of UW-Stevens Point. Every current OoS team member and many who came before have informed this Carbon Neutrality Plan by the work that they accomplish in the office and the classroom.

The Office of Sustainability 2025-2026

Dave Barbier, Director of the Office of Sustainability
Sergio Romero, Sustainability analyst
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Executive Summary

UW-Stevens Point is continuing its commitment to sustainability by updating its Carbon Neutrality Plan, aligning with the progress of the university and setting a path forward to achieve future reductions in greenhouse gas emissions. Previously, UW-Stevens Point signed the Talloires Declaration, the American College and University President's Climate Change Commitment (ACUPCC) and Second Nature's Carbon Neutrality Commitment. These commitments led to the university adopting its first Carbon Neutrality Plan in 2011 with the goal of reaching carbon neutrality by 2050. More recently, UW-Stevens Point signed Second Nature's Resilience Commitment in December 2023. Having signed both the Carbon Neutrality Commitment and Resilience Commitment from Second Nature, UW-Stevens Point began the Climate Action and Resilience Planning process in 2024 through the Office of Sustainability. This planning process necessitated reviewing and updating the 2011 Carbon Neutrality Plan. This document represents that review and updating process.

Combining economic responsibility, environmental stewardship and equitable goal setting, this plan will lay out UW-Stevens Point's continued efforts to reach net zero by 2050 with the understanding that the plan will be reviewed and updated every 10 years by the Office of Sustainability and informed by campus stakeholders, including but not limited to faculty, staff, students and community members.

Introduction

Greenhouse Gas Inventory

UW-Stevens Point has been taking inventory of Greenhouse Gas Emissions (GHGe) since 2007. Therefore, there are 18 years of data that show UW-Stevens Point is trending towards carbon neutrality. As of Fiscal Year (FY) 2022, UW-Stevens Point had reduced total GHGe by 36%. By FY2023 that reduction was 49% and by FY2024 carbon reduction reached 51%. This was a major milestone as the goal was to reduce GHGe by 50% by FY2030, meaning UW-Stevens Point is now 6 years ahead of schedule as it relates to our carbon neutrality goals. The previously accomplished goal was a 25% reduction in GHGe by FY2020.

These goals were accomplished in various ways.

- First, UW-Stevens Point has been purchasing 100% renewable electricity since 2016 using Renewable Energy Credits (RECs). This has allowed the university to commit to renewable electricity while the local grid continues to add renewable capacity.
- Second, through a state energy project led by a third-party contractor (McKinstry), the university completed several electrical, mechanical, and water conservation upgrades that reduced our annual CO2 emissions by 10,382,596 lbs.
- Third, new construction has helped reduce our GHGe by decommissioning an entire building that was aging and inefficient. Although new and efficient construction leads to reduced GHGe over the long term, they inherently add complexity to data collection efforts and make GHGe reduction a dynamic process throughout time.
- Finally, UW-Stevens Point completed a conversion of its coal burning heating plant to a more efficient natural gas system with distillate oil-based backup in 2020. This means that as of FY2020, UW-Stevens Point is operating 100% coal free.

These four items have been the catalyst for the major reductions in GHGe over the years but there have been smaller items as well such as installation of solar panels, high efficiency appliances and cultural changes across campus that have all made a positive impact.

As UW-Stevens Point seeks to continue this trend, it will be critical to stay ahead of these goals to ensure emissions reductions continue up to and beyond our 2050 goal of carbon neutrality. Although carbon neutrality is a valuable metric to achieve, it does not inherently solve the university's impact on climate change or the natural environment. Leading up towards carbon neutrality in 2050, there should be discussions regarding historical emissions, reducing the reliance on purchasing RECs, increasing biodiversity and other resource conservation strategies.

Introduction

Scoped Emissions

The Greenhouse Gas Protocol Initiative is the most recognized standard when it comes to GHGe inventories. The Greenhouse Gas Protocol categorizes emissions by three main categories called “scopes.” Scope 1 consists of traditional emissions based on fuels such as natural gas, oil, coal, petroleum or diesel used throughout daily operations. Scope 1 also includes items such as refrigerants and fertilizers used within operations. Scope 2 emissions originate from utility consumption of electricity, chilled and heated water or emissions reductions through renewable energy production or purchasing. Finally, Scope 3 emissions embody the embedded emissions that derive from our supply chain as well as non-fleet-based travel, including but not limited to conference and athletic travel. Scope 3 emissions are found in supply chains throughout UW-Stevens Point, including bookstore supplies, food processing and delivery or any other purchases from third parties to help the university operate. Although all scopes are critical, due to available data, Scope 1 and 2 are currently the priorities as UWSP continues to build systems and processes to better understand the Scope 3 emissions embedded within university operations.

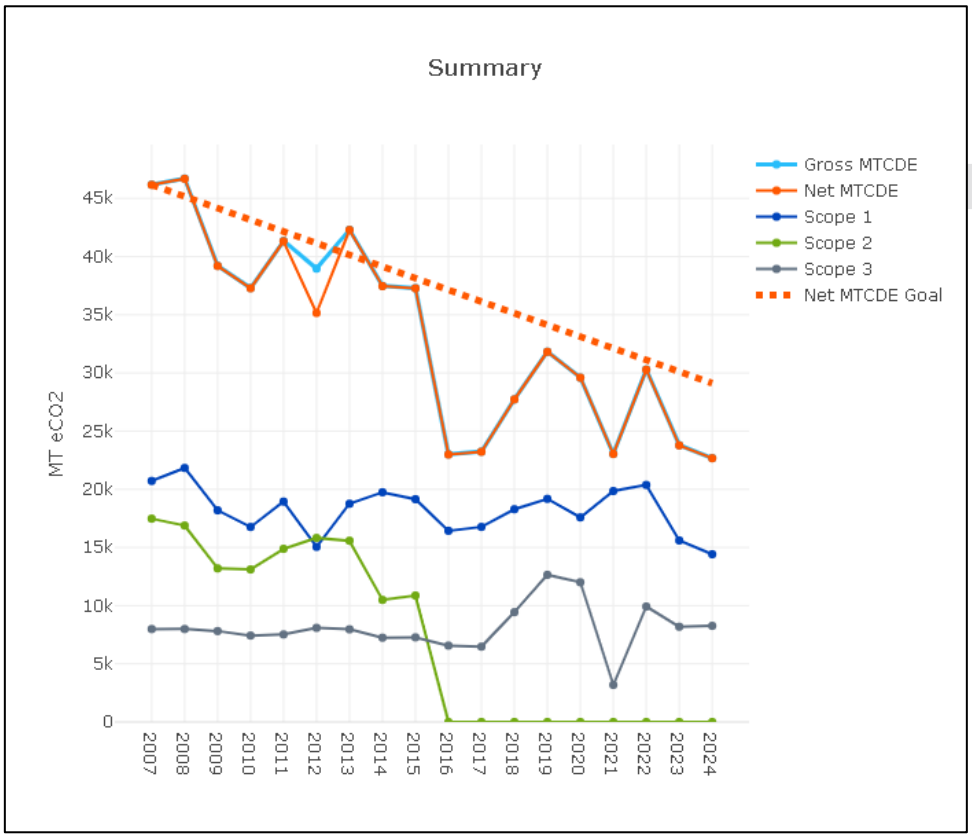

Figure 1 UW-Stevens Point’s scoped emissions since 2007

Strategies

Based on local, regional and national initiatives, UW-Stevens Point will focus on the following 10 carbon neutrality strategies over the next 25 years.

- Electrification
- Energy efficiency and retrofits
- Alternative transportation
- Renewable energy adoption
- Sustainable supply chains
- Sustainable waste management
- Water conservation
- Equitable land usage
- Responsible computing
- Onsite energy storage

Electrification

Strategy

Fossil fuels (i.e. coal, natural gas, oil, propane, petroleum and diesel) are the largest greenhouse gas emitting fuel sources; therefore, it is important for the university to pivot towards more efficient, sustainable and renewable sources of energy. Because of the efficiency of renewable energy sources, the scientific consensus is that electricity is the cleanest of the end-use energy sources. UW-Stevens Point's heating plant and its four natural gas boilers (with fuel oil backup) currently represent the largest source of fossil fuel emissions on the campus, followed by our vehicle fleet, which runs on petroleum-based fuels. Transitioning our heat plant either to electric boilers or utilizing more advanced technologies such as air-sourced heat pumps (ASHP) or ground-sourced heat pumps (GSHP) throughout the campus to heat and cool our buildings as needed will be critical to electrifying our campus and reducing GHGe.

For UW-Stevens Point's fleet, it will be crucial to begin the transition to electric vehicles (EV) as soon as existing vehicles need to be replaced. EVs not only provide 2-4 times the energy efficiency as their petroleum burning counter parts, but they also have a reduction in maintenance cost over their life cycle, meaning a direct reduction in operating costs. Furthermore, the connection between EVs, improved air quality and human health have become well established in the last few years. Essentially, moving to EVs at the university can positively impact the health of the local community. The transition towards electrifying every fossil fuel burning vehicle on campus will not only lead towards meeting the university's decarbonization goals but will also help to stabilize operating costs at a time when higher education faces budget concerns.

Action Steps

- Transition Campus Heating to Electric Sources: Based on a 2025 Pro Bono Consulting Grant, Coho climate advisors recommended these next steps for UW-Stevens Point's heating plant decarbonization strategy: **(Champion: Facilities Planning and Planning director)**
  - Complete heating plant capacity study: Recommended because of the current heating plant being oversized for the needed heat load. (Recommended to be included in next master planning process)
  - Explore geothermal heating: Based on capital and operational cost. Geothermal heating was deemed the best choice due to the reduced operating cost over time with a potential return on investment (ROI) accomplished in 15 years. (Recommended to be included in next master planning process)
  - Explore renewable natural gas: This would minimize our Scope 1 GHGe in the short term but does not appear to be a sustainable option for the long term. This would also likely increase operating costs.
- Transition Vehicle Fleet to Zero-Emissions Vehicles (Battery-Electric): This transition would need to occur through policy adoption for future vehicle purchases and infrastructure projects. This transition can also reduce the operating cost of the UW-Stevens Point fleet over time due to the increased efficiency of electric vehicles. **(Champion: Transportation supervisor, Facilities director, Sustainable Transportation coordinator)**

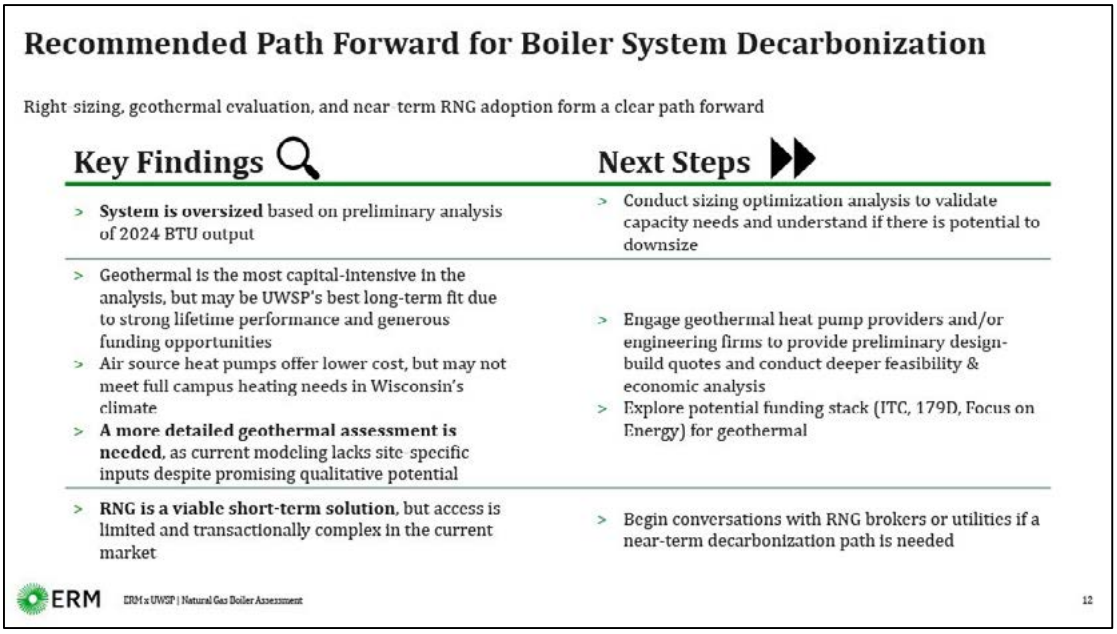

Figure 2 Final Coho recommendations June 2025

Strategies

Energy Efficiency and Retrofits

Strategy

As technology has evolved, there are various ways to improve energy efficiency. UW-Stevens Point will need to use additional energy efficiency improvements, building retrofits and other tools to meet our carbon neutrality goals. These energy efficient recommendations can involve lighting, enhanced building insulation, efficient windows, computing devices, appliances, and many other facets of energy use across campus. It is critical that future projects and procurement prioritize energy efficiency to maximize cost savings and reduce GHGe. Additionally, following the decarbonization study completed by Coho Climate advisors, it was recommended to use a mix of solutions to decarbonize our campus and one of those solutions is the use of air sourced heat pumps to support our heating plant.

Furthermore, energy management across the university lacks a holistic approach. Departments and teams such as facilities planning address energy management before, during, and after projects, but there is no individual or team focused on energy management across the campus. In the original Carbon Neutrality Plan published in 2011, there was mention of hiring an energy manager to oversee this process. Because this did not happen over the course of 14 years, it is now recommended that this position is created, funded and given resources accordingly to reduce the energy use and operating cost across all campuses and field stations. One of the reasons investing in an energy manager did not happen previously was due to the manner that energy budgets were divided across the various state institutions, however, due to recent changes there is now economic value in reducing the institution's spending on energy. UW-Stevens Point must start adopting and adjusting policy and procurement language that specifically addresses the goals of decarbonization through our operational actions and collective purchasing power.

Action Steps

- Air Sealing Buildings: Create an inspection and maintenance process to check individual buildings for potential air leaks. This can be done once per academic year or once per heating/cooling season (winter/summer). **(Champion: Facilities director)**
- Computing Policy: Implement and enforce university computer settings to ensure sleep/hibernation occurs on a regular basis to reduce energy when not in use. **(Champion: IT director)**
- Appliances: Convert major appliances to high efficiency electric options (Heat Pump Dryers, HE2 Washers, Induction Stove Tops). **(Champion: Procurement director)**
- Procurement Policy: Establish UW-Stevens Point Policy to ensure future appliance purchases meet or exceed certain energy efficiency standards (EnergyStar, WaterSense). **(Champion: Procurement director)**
- Air Sourced Heat Pumps: While the main goal will be to electrify the heating plant, air sourced heat pumps can help begin electrification sooner and reduce some of the capacity demand on the heating plant. **(Champion: Facilities Planning director)**
- Energy Manager: Created/delegate, fund and give resources to this role accordingly to reduce the energy use and operating cost across the campus, branch campuses, and field stations. **(Champion: Finance and Administration vice chancellor)**
- Green Lab Certification: Acquire green lab certification by optimizing energy use and developing responsible waste management processes across all university lab spaces. **(Champion: Dean of the College of Natural Resources)**

Alternative Transportation

Strategy

While UW-Stevens Point moves towards electrifying their vehicle fleet, there is still a need to adopt and support alternative transportation methods to meet our carbon neutrality goals. These alternative transportation methods involve the use of bicycles (electric or standard), walking, buses and carpooling where possible. All these approaches towards sustainable transportation have a direct impact on reducing our Scope 3 emissions. Additionally, greater adoption of sustainable transportation methods can reduce the strain on UW-Stevens Point's infrastructure and create safer transportation corridors for everyone. As mentioned with electrifying the campus, there are also documented public health benefits with increased use and promotion of alternative transportation. Whether it is encouraging a more active lifestyle by walking and biking or reducing overall air pollution by using public transportation, there are tangible benefits to moving alternative transportation into the mainstream for the UW-Stevens Point community.

Action Steps

- Implement a fleet purchasing policy that sets the standard for all fleet purchases going forward (Zero or low emissions vehicles) **(Champion: Facility Service director, Fleet manager)**
  - Focusing on the purchasing policy on the following metrics will help reduce fuel costs, and reduce the associated emissions (75MPGe minimum, CCS/NACS charging, 200 mile minimum range, maximum $60,000 MSRP)
  - These are only recommendations, and it is known that each vehicle class (LSV, passenger, work truck, bus) will need to have their own specific standards set in place.
- Reinvest in biking and pedestrian activity on and off campus. Increase signage, implement protected bike lanes, and increase bike parking facilities. **(Champion: Office of Sustainability transportation coordinator)**
- Consider standardized E-Bike rules on campus (Recommend investigating UL certifications, speed limits) **(Champion: Chief of Police, Risk Management)**
- Revisit Bicycle and Pedestrian Master Plan that was first published in 2018. **(Champion: Sustainability analyst)**
- Use League of American Bicyclist Bike Friendly University feedback as a starting point to find improvement opportunities. **(Champion: Office of Sustainability transportation coordinator)**
- Increase carpooling through incentives and general communications. **(Champion: Parking Services and Chief of Police)**
- Provide free or subsidized busing for faculty and staff in partnership with the City of Stevens Point. **(Champion: Common Council and Student Government Association)**
- Increase accessibility, awareness, and education on bus usage. **(Champion: Common Council and Student Government Association)**
- Develop a plan to improve bus infrastructure on campus for all weather and seasons. **(Champion: Office of Sustainability transportation coordinator)**
- Explore and develop a plan for implementing commuter bussing program among campuses. **(Champion: Office of Sustainability transportation coordinator)**
- Crosswalk Blinkers: Identify high traffic areas where pedestrian crosswalk blinkers are needed and work on adding them. **(Champion: Facilities Planning director)**

Strategies

Renewable Energy Adoption

Strategy

As of early 2025, UW-Stevens Point has several renewable energy projects at various campus locations. These consist of solar panels at Schmeeckle Reserve, Treehaven and several academic (photovoltaic) and residential buildings (solar heated hot water). Although these projects highlight our efforts to move toward renewable energy, UW-Stevens Point will need to plan and implement larger, near-utility-scale installations if we hope to operate primarily on renewable energy sources. Although UW-Stevens Point has focused on solar energy, there remains the potential for wind turbine installations as well as having a robust and diversified portfolio of energy production to meet the needs of campus with minimal pollution. With technology evolving in terms of cheaper prices and greater efficiency, it will be important to consider renewable energy on buildings and other lands across campus locations to further reduce reliance on fossil fuels.

Action Steps

- Update legacy building solar study to determine where solar panels can be installed across campus. **(Champion: Facilities Planning director)**
  - Newer buildings likely already have this documented, but it will be critical to utilize older building space especially as they are the most energy demanding.
- Continue utilizing the Green Fund to install small scale solar that will clean the local grid. **(Champion: Sustainability director)**
  - Schmeeckle Reserve Visitor Center
  - Treehaven
  - Central Wisconsin Environmental Station
  - Legacy campus buildings
- Continue purchasing Renewable Energy Credits (RECs) as a stop gap measure. **(Champion: Office of Sustainability, Sustainability analyst)**
  - As the local grid continues to be “cleaned”, the need for RECs will diminish.
- Because UW-Stevens Point has several field stations and branch campuses, solar and wind turbines should be explored in those areas as well. **(Champion: Facilities Planning director)**
- Use existing parking lots to develop large scale solar on campus that also acts as covered parking (solar car park). **(Champion: Sustainability director)**

Sustainable Supply Chains

Strategy

UW-Stevens Point has continued to make progress in reducing Scope 1 and Scope 2 emissions over the last 18 years. It is becoming apparent that one of the next major steps in reducing emissions is establishing an accurate baseline of Scope 3 emissions followed by efforts to reduce them. These emissions are directly tied to the supply chains that support UW-Stevens Point's daily operations. From office supplies to the items sold in our bookstore, it will be critical for UW-Stevens Point to understand the embedded emissions within these items while also working to reduce the emissions associated with them.

One of the greatest challenges with Scope 3 emissions is directly related to their overall complexity. There will need to be processes put in place to capture this data and interdepartmental teams will need to develop systems that encourage this data to be captured and processed in a timely matter. Finally, we will need to choose partners and vendors that can specifically assist with these tasks before supply chain purchases ever arrive on our campus. This can most likely be addressed in the beginning stages of the procurement process, most notably by including language in our Request for Proposals (RFP's) and Request for Bids (RFB's).

Action Steps

- Procurement Policy: Standardize sustainability language in UW-Stevens Point specific contracts and work to implement similar measures in UW System and state contracts. **(Champion: Procurement director)**
- Track Scope 3 emissions, ensure fair wages from supplies and use certifications such as Fair Trade certified where possible **(Champion: Sustainability director)**
- Explore carbon tax to fund decarbonization projects over time. **(Champion: Sustainability director)**
  - Primarily valuable for decarbonization of Scope 3 emissions (athletic travel, business travel, etc.)
- Education and Communication: Create training for P-card users and budget managers laying out the importance of sustainable procurement. **(Champion: Procurement director)**
- Data Processes: Create internal processes to collect data related to purchasing and emissions. **(Champion: Sustainability analyst)**

Strategies

Environmentally Responsible Waste Management

Strategy

UW-Stevens Point was the first university within the Universities of Wisconsin to implement a campus wide composting system. As a leader in waste management, UW-Stevens Point needs to continue to take additional steps towards responsible waste management. This means maximizing surplus inventories, utilizing free stores and minimizing waste that derives from our daily operations and especially those in the food service area. Although composting has been a critical step in UW-Stevens Point's journey towards zero waste and reducing our Scope 3 emissions, there is much to do in terms of reducing single use products. Due to plastic being derived from fossil fuel-based petroleum; it will be important to move away from plastic and move towards more sustainable materials such as aluminum, cardboard or other durable goods alternatives.

Action Steps

- Create Zero Waste Plan: Create a cross functional team to develop UW-Stevens Point's Zero Waste plan that focuses on the following: **(Champion: Sustainability analyst)**
  - Single use plastic reduction
  - Increased composting
  - Free store/Surplus Office utilization
  - Recyclable materials (focused on aluminum)
  - Reducing litter
  - Hazardous waste management
- Reduction in waste sent to landfill
  - Minimize planned obsolescence
  - Food recovery
  - Educating campus community on best practices
- Campus Composting: Maximize composting efforts across campus via educational opportunities outreach and overall operational expansion. **(Champion: Sustainability director)**

Water Conservation

Strategy

Historically, Wisconsin has been privileged with clean and accessible water, but there will need to be measures put in place to protect the waters relied on in the past. From introducing efficient appliances such as shower heads, sinks and toilets to ensuring that the runoff across the various campuses and field stations that enters lakes and streams is clean and managed accordingly, there are various tools available to reduce water usage. Currently, as a result of reducing the campus water demand, there will be reduced emissions as a substantial portion of the university's water usage is heated by some form of fuel (electricity, natural gas, propane). Although water conservation is not always connected to decarbonization efforts, in this instance it will be important to view reductions in water use as another step towards the university's decarbonization efforts. Additionally, as flooding becomes a larger concern because of more extreme weather, it will be important to manage water in a way that protects university property and the health and wellbeing of those living and working in those spaces.

Action Steps

- Low-Flow Appliance Options: Ensure low flow aerators are used across campus in sinks and showers. Water saving options range from .5GPM-2.0GPM. To maintain proper drainage, a target of 1.5GPM fixtures should be used. **(Champion: Facilities Services director)**
- High Efficiency Washers: Update washers to high efficiency models, often abbreviated as "HE" across the campus and dorm areas. **(Champion: Facilities Services director)**
  - Ensure proper filter maintenance and cleaning to reduce microplastic pollution
- Efficient Toilets: Begin retrofitting toilets across the campus that use the latest water saving technology to reduce water usage while also maintaining a clean environment. **(Champion: Facilities Services director)**
- Stormwater Drainage: Expand utilization and maintenance of swales, bioretention ponds and ditches to minimize the risk of flooding on campus and within the greater community. **(Champion: Facilities Services director)**

Strategies

Equitable Land Usage

Strategy

UW-Stevens Point has a long history related to natural resources and the land connected to those resources. UW-Stevens Point has continued to maintain various pieces of forest land across the state of Wisconsin in a sustainable manner while creating opportunities for students to use those lands as living laboratories. As UW-Stevens Point continues to maintain these pieces of land, it is important that we use them in an equitable manner to not only provide quality education but to provide recreational areas for our local communities.

As it relates to carbon sequestration specifically, there are growing standards, policies and best practices being developed across the carbon market and the realm of higher education regarding managed land. At the time of this publication there is still no definitive practice, and therefore any sequestration that takes place because of our managed land will be considered non-additional to our GHGe.

Action Steps

- Protect Managed Forest: Continue to integrate the College of Natural Resources with UW-Stevens Point's managed land to create a living laboratory and an opportunity to encourage biodiversity in the region. Furthermore, continue to understand best practices related to carbon sequestration on natural lands. **(Champion: Dean of the College of Natural Resources)**
- Increase Campus Green Spaces: Create long-term planning to reduce building space and impervious surfaces and increase green spaces. The use of native plants/native grasses, such as marsh bluegrass would be encouraged. **(Facilities Planning director)**
  - As a result of reducing building space there are additional benefits from reduced energy consumption
- Maintain Bee Campus USA Certification: Encourage pollination through various means to maintain this certification. **(Champion: Bee Campus Committee chair)**
- Maintain Tree Campus USA Certification: Encourage tree planting on campus in coordination with facilities to ensure proper care is taken of new seedlings and buildings that may be impacted by tree growth. **(Champion: Sustainability director)**
- Obtain Green Grounds Certification: The Office of Sustainability and the Grounds team should develop a plan to obtain this certification. This will involve more green spaces, higher native plant populations, and a reduction in pesticide use. This should create a reduction in operating costs. **(Champion: Sustainability director)**

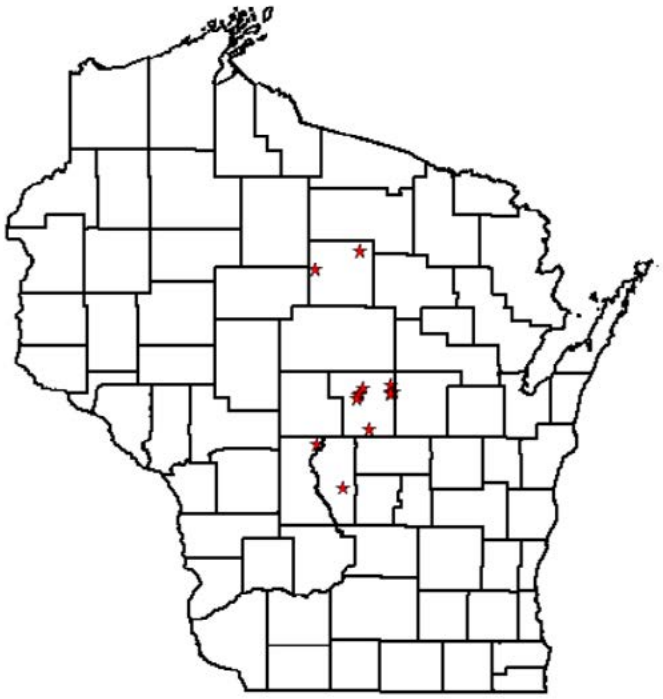

Figure 3 A snapshot of managed land owned by UW-Stevens Point

Responsible Computing

Strategy

As more of our lives rely on computers, algorithms and now artificial intelligence, it is increasingly important that UW-Stevens Point takes a responsible approach to computing across the different areas of the university. UW-Stevens Point will need to ensure the purchase and maintenance of energy efficient computers now and into the future.

Additionally, with the right to repair laws continuing to help consumers keep devices running for extended periods of time, it will be important for UW-Stevens Point to ensure future computers can be repaired with reasonable effort and cost.

Finally, the use of artificial intelligence and cryptographic computing will need to be understood thoroughly in the university setting and regulated as needed. This is especially important in a realm where crypto mining and artificial intelligence models can now be run on consumer grade products; therefore residential living in particular will need to develop policies and maintain compliance.

Action Steps

- Analyze Computer Demands: With the advances in cloud computing and energy efficient technology, it will be important to understand what computing hardware is needed across the campus. For example, a study lounge may need minimal processing power, whereas an ArcGIS or Autodesk computer lab will need more powerful computing options. Understanding these needs can help to reduce computer-based power consumption. **(Champion: Chief information officer)**
- Procurement: EPEAT is a standard when it comes to environmental, social, and governance aspects associated with the manufacturing and deployment of electronics. Procurement policy should seek to adopt EPEAT certifications where possible. This standard uses bronze, silver, and gold ratings to designate environmentally friendly electronic devices. This ensures that the computers purchased are likely to last for extended periods while ensuring repairability. **(Champion: Procurement director)**
    - Additionally, a process will need to be put in place to responsibly manage electronic purchases as part of Scope 3 emissions
- Crypto/LLM: With cryptocurrency mining and Large Language Models (LLM) now accessible to the masses with consumer grade hardware it is critical that UW-Stevens Point create policy that controls the use of these digital tools while connected to UW-Stevens Point's electrical grid. Although the university can control university owned hardware, there will need to be location-based policies to enforce rules on private devices that are connected to UW-Stevens Point's electrical grid and internet connections. **(Champion: Chief information officer)**
- Paperless Options: Continue to lean into digital skillset by reducing printing needs across business and academics where possible. **(Champion: Sustainability director)**

Figure 4 Docusign environmental savings

Strategies

Onsite Energy Storage

Strategy

UW-Stevens Point has a well-documented history of power outages. Some of these incidents are due to maintenance issues, others due to climate and weather conditions. This highlights the need for onsite energy storage at UW-Stevens Point to avoid service disruptions and by reducing the operating costs associated with peak energy demands. These onsite energy storage systems will need to go beyond the standard gasoline or diesel-based generators that expel hazardous fumes and instead need to be utility grade lithium-ion batteries or other sustainable based battery options. Although these are early days in terms of large-scale battery backup systems, there is a possibility of integrating this level of need with our electrified fleet in the future in what the industry is referring to Vehicle-To-Grid (V2G) or Vehicle-To-Everything (V2X).

Action Steps

- Residential Grade Batteries: Lithium-ion batteries have shrunk in size over the last few years to the point that there are many residential and commercial grade options on the market. These batteries should be viewed as solutions for buildings to maximize renewable energy storage and reduce interruptions caused by an unstable power grid. **(Champion: Facilities Planning director)**
- Industrial Grade Batteries: In addition to smaller residential options, there are also larger scale versions that can act as central battery backups for entire parts of campus. Due to their nature of using stored electricity, it will be critical to prioritize certain types of energy usage such as HVAC, foodstuff refrigeration, academic research and medical equipment. **(Champion: Facilities Planning director)**
- Backup Generators: Although standard generators rely on burning fossil fuels (diesel, petrol), it will be critical to understand the importance of continuing day-to-day operations across the university in the event of a power outage. Therefore, the use of backup generators should be considered a viable, albeit a stop gap solution in terms of onsite energy storage on our way towards developing zero emissions back-up systems. **(Champion: Facilities Planning director)**

Strategic Plan: Purpose Made Possible

UW-Stevens Point has a strategic plan that is focused on the following four pillars:

- Aligning our Financial Model with Our Institutional Vision
- Expanding Educational Opportunities for Educational Success
- Enhancing The Student Experience
- Serving Our Internal and External Communities for Impact

These four themes make up the primary directives university departments have as they relate to our goals. Therefore, it is critical that this Carbon Neutrality Plan fits within these four pillars.

Aligning Our Financial Model with Our Institutional Vision

As the university navigates uncertainty within the higher education market, it is critical that UW-Stevens Point uses its current financial capabilities to ensure a sustainable and long-term path of educating future generations. Therefore, UW-Stevens Point should continue to lean into sustainable, environmental and carbon-contaminate practices for various economic reasons.

First, UW-Stevens Point continues to be a leader within the environmental fields across the state of Wisconsin and within the greater United States of America (as noted by AASHE and The Princeton Review) and it would be beneficial from a student recruitment perspective to continue to be a leader in this realm of education. Additionally, many of the practices and goals mentioned throughout this Carbon Neutrality Plan target cost reductions as it relates to energy use, supply purchasing and even operating during emergencies. By committing further to carbon neutrality, UW-Stevens Point can reduce overall operating costs in the short term and long term.

Expanding Educational Opportunities for Educational Success

As mentioned previously, UW-Stevens Point continues to be a leader when it comes to environmental and sustainability work. As a result, it is valuable that UW-Stevens Point continues to offer sustainability course work while also expanding these offerings to better prepare students for the workforce of tomorrow. Topics that need expansion include carbon accounting, renewable energy, social justice, community engagement, climate change and life cycle assessment/analysis. By also establishing these processes throughout the university as distinct business operations, there will be hands-on experiences that students can tap into as a form of education and workforce development.

Enhancing The Student Experience

As an institution of higher education, students are not only the “product” of our industry, but they are also our primary customers. As UW-Stevens Point continues to expand environmentally and sustainability focused on course offerings, it will be critical to ensure these classes are focused on the student experience. This means that students have hands-on experience with the important environmental work going on locally and regionally. One area of focus will be to ensure that students have valuable work-study, co-op and internship experiences that not only supply students with a livable wage but also provide valuable experience that they can take with them long after graduation. The strategies and action steps within this plan can act as catalysts for projects and work opportunities for undergraduate and graduate students across the university. Additionally, there is value in highlighting the social justice aspect of this climate work as the institution’s decarbonization journey is only one step towards fostering a sustainable community.

Serving Our Internal and External Communities for Impact

UW-Stevens Point is an average sized campus on the surface, but upon closer inspection UW-Stevens Point has a significant impact across the state of Wisconsin. From the city of Stevens Point to the city of Marshfield and the city of Wausau to our field stations Treehaven, Central Wisconsin Environmental Station (CWES) and the Northern Aquaculture Demonstration Facility (NADF) and the 17 other managed land areas across the state UW-Stevens Point has a large footprint. By serving these various communities the university should seek to gain and then share their expertise as it relates to carbon reduction and sustainable practices both from an environmental perspective and from a financial sustainability perspective as well. If UW-Stevens Point can help multiple communities through this Carbon Neutrality Plan, it will not only advance the university but also the state of Wisconsin.

Additional Planning and Strategies

Energy Management

The GHGe inventory has been a critical component in understanding where UW-Stevens Point started, where we are now and how we plan for the future of a carbon neutral university. Currently, there is a designated role within the Office of Sustainability that is responsible for publicly reporting the GHGe data. Although this role is critical to our Carbon Neutrality Plan, there is need for an additional leadership role on campus that can commit their time towards energy management across all university locations to continuously improve our processes and systems as they relate to carbon reduction. This role should be within the Office of Sustainability or the Facilities Department.

Climate Action and Resilience Plan

Following the signing of Second Nature's Resilience Commitment, UW-Stevens Point began work to create the first Climate Action and Resilience Plan for the university. Although the climate action portion of this plan leans heavily into decarbonization, this Carbon Neutrality Plan document sets the strategies and action steps needed to accomplish goals mentioned within the Climate Action and Resilience Plan.

Waste Management

Although waste plays a limited role in scoped emissions for the university, there is still a relevant number of emissions that can be addressed through proper waste management on campus. From using onsite composting services to leaning into truly recyclable materials such as aluminum, there is a lot of opportunity across the campus to reduce waste and therefore lower operating costs (tipping fees) through custodial tasks, supply purchasing and purchasing fertilizer/compost for our grounds team to use. In the Climate Action and Resilience Plan, there is a mention of creating a Zero Waste Plan for the university. This plan would contribute towards reducing Scope 3 emissions created via waste and should be considered a priority over the next five years to draft and adopt.

Transportation and Mobility Plan

In 2018 UW-Stevens Point published a Bicycle and Pedestrian Plan for the university. Across this plan, there was emphasis placed on improving the health of the campus community, reducing transportation emissions and introducing opportunities to lower the cost of living for the local campus community. This plan laid the foundation for UW-Stevens Point to receive bronze recognition from the League of American Bicyclist in 2019 and most recently a silver designation in 2023. Since 2018, many things involving transportation have changed. With increased adoption of electric bikes, electric cars and various infrastructure improvements, it will be valuable to revisit this plan to keep up with social trends and overall best practices as it relates to transportation in general across campus.

Forest Preservation Offsets

As mentioned, when discussing equitable land usage, there is an inherent benefit towards managed lands when it relates to sequestering carbon. The idea of using existing land to capture and store what would become carbon emissions is not new, but it has come under increasing scrutiny by the scientific and climate change community. Therefore, UW-Stevens Point should continue to follow industry recommended guidance and best practices to ensure that our pre-existing forests do not count as active carbon sinks but instead are treated as activities that maintain biodiversity in the region and give our students meaningful hands-on experience in the field as part of their academic activities.

Glossary

American College & University President's Climate Change Commitment (ACUPCC)
A "high-visibility effort" universities and colleges across the United States signed on to eliminate greenhouse gas emissions from campus operations and to promote research and education to prepare society to stabilize the earth's climate.

The Association for the Advancement of Sustainability in Higher Education (AASHE)
An organization that is focused on empowering higher education institutions to be effective, change agents and drivers of sustainability.

Artificial Intelligence (AI)
AI is the use of computers to simulate human intelligence, behaviors, and decision-making skills.

Bee Campus USA Certification
Bee Campus USA and its accompanying certification is an affiliate of Bee City USA and works to certify campuses as pollinator friendly via advocating for pollinators, creating and protecting pollinator habitats and providing education and research around pollinators

Bike Friendly University Certification
The Bike Friendly University program gives higher education institutions recognition for promoting and providing a more bike-friendly campus for faculty, staff, and students.

Carbon Tax/Charge
An institutional imposed cost placed on individual teams, or offices to offset associated carbon emissions of their activities as part of the greater organization. Funds are used to decarbonize the institution, leading to the carbon tax ending.

Cryptocurrency Mining
The process of using powerful computers (commonly GPUs) to validate cryptocurrency transactions within the blockchain network. This energy intensive activity often rewards the validator with cryptocurrency as a decentralized way of maintaining trust.

Cloud Computing
The use of computing devices that are not local to one's own device/location. A rudimentary example would be using a remote desktop to complete intensive workloads without using a powerful computer locally.

EV Charging Standards (CCS/NACS)
Electric vehicles have various standards, like internal combustion engine equivalents. One of the most discussed standards is the charging connector/system. Combined Charging Standard (CCS) and North American Charging Standard (NACS) are two of the most used plugs in North America and internationally.

Greenhouse Gas Emissions
A group of gases such as carbon dioxide and methane that trap heat in the atmosphere and therefore drive climate change.

Greenhouse Gas Emissions Inventory
A GHGe inventory is a list of emission sources and the associated emissions quantified using standardized methods.

Green Grounds Certification
The Green Grounds Certification recognizes improvement in various stages of transition to organic land care. This certification is broken down into four tiers (Bronze, Silver, Gold and Platinum).

Glossary

Large-Language Models
A Large-Language Model is a computer model that has been trained on vast amounts of text and designed for natural language-based tasks, most commonly language generation. Most LLM usage cases occur in the cloud (ChatGPT, Gemini, Claude) but due to advances in consumer hardware some LLMs can be run on local machines (Llama, Quen, DeepSeek).

Low Speed Vehicles (LSV)
A low-speed vehicle (LSV) is typically a street-legal, four-wheeled vehicle with a maximum speed of 25MPH (40KPH). LSVs are often used on university campuses for facilities teams and other operational needs.

Miles Per Gallon Equivalent (MPGe)
A measure of average distance traveled per unit of energy consumed. Primarily used to compare energy consumption of alternative fuel vehicles, and electrified vehicles to conventional internal combustion vehicles that use standard miles per gallon (MPG).

My Green Lab Certification
My Green Lab Certification is the most widely recognized lab sustainability program that focuses on science-based approaches to embed sustainability into everyday lab practice.

Renewable Energy Credits (RECs)
RECs are a market-based instrument that can be traded to obtain attributes of renewable electricity generation. UW-Stevens Point currently purchases RECs to offset Scope 2 (utility consumption) emissions.

Request for Bid
An official solicitation where the purchasing agent (organization or institution) invites suppliers to submit bids for their goods or services.

Request for Proposal
An official solicitation where the purchasing agent (organization or institution) invites suppliers to submit proposals for goods and services. This allows review and comparison across proposals prior to making purchasing commitments.

Second Nature's Carbon Commitment
A commitment developed and organized by Second Nature that focuses on reducing greenhouse gas emissions and achieving carbon neutrality as soon as possible.

Second Nature's Resilience Commitment
A commitment developed and organized by Second Nature that focuses on climate adaptation planning and community capacity building to deal with a changing climate and resulting extremes.

Talloires Declaration
A declaration for higher educational institutions to develop, create, support, and maintain sustainability practices that will make them leaders in this area.

Tree Campus USA Certification
A national recognition program created by the Arbor Day Foundation that helps colleges and universities plant, nurture, and celebrate trees on campus and beyond.

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