Southern Oregon University Climate Action Plan 2022

Climate Leadership at SOU

SOU is committed to climate leadership locally, regionally, nationally and for higher education. Like everyone, we are feeling the impact of a changing climate through higher temperatures, changing precipitation patterns and wildfires. SOU recognizes the importance of reducing greenhouse gas emissions, both in how we operate our campus and how we prepare students for the future. Higher education plays a critical role in addressing climate change through its leadership, curriculum and operations for both the reduction of greenhouse gas emissions and preparing for the changing climate.

Climate change is happening. It is disrupting economies, affecting lives and costing people, communities and countries dearly. People are experiencing the significant impacts as a result of climate change, which include changing weather patterns, rising sea level and more extreme weather events. We need to transition. Sustainability is no longer an optional extra. It must be at the heart of everything we do.

We are in a global climate emergency, and we must reduce greenhouse gas emissions while addressing the changes and dangers that the climate is already presenting at global, regional and local levels.

SOU's Climate Action Plan is a high-level plan that establishes our goals and milestones to achieve net-zero emissions by 2040. This action plan specifically focuses on reducing greenhouse gas emissions in our operations. SOU recognizes that the climate is changing, and actions being taken to prepare for these changes are covered separately within our wider sustainability work at SOU. All actions taken to reduce greenhouse gas emissions will take into account resiliency of a changing climate.

What does net-zero emissions mean for SOU?

At SOU, net-zero emissions means taking action to reduce or remove all of SOU's greenhouse gas emissions measured within scope 1, 2 and 3. We also understand our wider impact as a higher education institution and strive for benefits and action beyond our campus operations on a daily basis through our curriculum, engagement and leadership.

Greenhouse gas emissions – Scope 1,2 and 3

SOU reports on its scope 1, scope 2 and scope 3 greenhouse gas emissions. Actions to reduce greenhouse gas emissions involve changes in technology and behavior change.

Scope 1 – direct emissions that arise from the combustion of fuels and energy generated by the organization's owned or controlled sources, e.g. on-site combustion of fuels or fugitive loss of refrigerants.

SOU's emission sources within Scope 1 include: natural gas (heating), gasoline and diesel for university owned fleet vehicles, Liquified Petroleum Gas (propane) and fugitive emissions typically found in air conditioning, cooling and refrigeration systems.

Scope 2 – Indirect emissions that arise from the purchasing and consumption of energy generated outside the organization's owned or controlled sources, e.g. purchased electricity, heat or steam.

SOU's emission sources within Scope 2 include: purchased electricity.

Scope 3 – indirect emissions that arise from the institution's value chain and other activities, typically outside the organization's immediate control.

SOU's emission sources within Scope 3 include: commuting emissions, business travel (including air travel), waste generated in operations and, procurement of goods and services.

We have a strong commitment to sustainability in SOU's Strategic Plan, and we have worked to ensure that SOU's Climate Action Plan is aligned with SOU's sustainability aspirations. SOU is actively progressing sustainability in its curriculum, operations, governance and engagement. SOU achieved Gold STARS rating in May 2022 for campus-wide sustainability, as measured by an evaluation system developed by the Association for the Advancement of Sustainability in Higher Education (ASHE). This plan is also aligned with the U.N. Sustainable Development Goals (SDGs) and to social and environmental justice by aligning our climate action work across this agenda.

SOU aligns with the UN Sustainable Development Goals and our Climate Action Plan contributes to all 17 goals with a specific focus on:

- Goal 7 Affordable and Clean Energy – Ensure access to affordable, reliable, sustainable and modern energy for all.
- Goal 12 Responsible Consumption and Production – Ensure sustainable consumption and production patterns.
- Goal 13 Climate Action – Take urgent action to combat climate change and its impacts.

Climate Action Plan Development

SOU has made significant progress and demonstrated our commitment and leadership with our first Climate Action Plan in 2010 and signing the American College and University Presidents' Climate Commitment (ACUPCC) as a Charter Signatory in 2007. This Climate Action Plan updates the 2010 plan and reaffirms our commitment to reduce greenhouse gas emissions and achieve net zero emissions.

The overall goals of the development process were to:

- Update SOU's 2010 Climate Action Plan
- Establish commitments to reduce our operational greenhouse gas emission
- Bring in a wide range of views
- Be inclusive and transparent
- Raise awareness about sustainability and climate action at SOU

The planning began through a fully remote process in 2021 and then further in-person planning took place in 2022. The development of the plan was informed by:

- A survey to all staff, students and faculty, and workshops available to all staff, students and faculty on their priorities for SOU in addressing climate change
- One-on-one meetings where interest indicated through survey response
- Discussions at SOU's Sustainability Council
- Smaller working group of members of SOU Sustainability Council came together to help finalize SOU's updated Climate Action Plan
- Meetings with staff, students and faculty who expressed an interest in being involved through the survey
- PEAK student projects around Climate Action and Energy Management on campus
- Consultation with staff, students and faculty
- Presentations at various groups and committees

SOU's Climate Action Plan 2022

- Sets out high-level commitment and goals
- Focuses on carbon mitigation (reducing greenhouse gas emissions) in our operations
- Is designed to be achieved through innovation and creativity; and
- Is transparent and designed to hold us accountable and responsible

SOU's Climate Action Plan is not intended to be a detailed schedule and program of implementation.

Alongside our actions to reduce greenhouse gas emissions:

- We will ensure that our actions are equitable and resilient to the changing climate
- We will ensure that our actions contribute to SOU's overall sustainability goals and value
- We will ensure that SOU's climate action plan aligns with the United Nations Sustainable Development Goals
- We will ensure that our actions contribute to an economically thriving institution
- We will ensure that our actions demonstrate climate leadership and climate justice
- We will continue to increase sustainability course offerings and build learnings from climate action into our academic courses

Greenhouse Gas Emission Reduction

SOU's 10 Commitments

We have 10 commitments to set us on the pathway to achieve net zero emissions by 2040. Our 10 commitments focus on greenhouse gas emissions from campus operations, recognizing the strong links that this area of work has with curriculum, higher education leadership and wider engagement. SOU will continue to build collaborations between curriculum, students and operations through on-campus projects and living laboratory work. We also recognize that higher education has a role to go beyond net zero, and demonstrate climate-positive. We will harness creativity and innovation to reduce greenhouse gas emissions and transition toward net-zero emissions.

1. Achieve 100% daytime electricity use through renewable electricity generation on campus by 2035
    a. We would need to show total electricity use compared to total electricity generated by our solar panels, currently SIMAP does not have the renewable energy data from the solar panels on it. %
    b. Line graphs, bat graphs or pie charts generated through SIMAP would work
2. Achieve 100% electric campus fleet by 2030
    a. Did we track the amount of EVs we had for the campus fleet?
    b. **Example** 1/50 in 2020 were EVs now in 2025 15 are EVs
3. Improve energy efficiency by 25% within 10 years (base year 2022)
    a. Will be shown with a fully updated energystar
    b. Which is being worked on

4. Reduce Scope 1 and Scope 2 emissions by 50% by 2033 (base year 2022)
    a. SIMAP shows scope 1s as a slight increase
    b. SIMAP shows scope 2s as a decrease
        i. This will go down as the solar information and progress continues
        ii. A PPA could be explored for this
5. Reduce waste and increase diversion from landfill to 70% by 2030.
    a. SIMAP can show that waste to landfills is going down
    b. Diversion would have the shown from our internal numbers
        i. Maybe something that Recology could help with
6. Increase number of EV charging stations on campus
    a. Working on it!
7. Implement SOU's Sustainability and Equity in Purchasing Policy
    a. It's better?
    b. Our conversion with Matt showed this
    c. How to monitor this
8. Improve commute transport related greenhouse gas emissions for staff, student and faculty
    a. Commuter survey is a start - ghgs
    b. Develop programs or incentives from the survey to lower the rates, specially on single person car use - number of incentive programs
9. Improve business travel-related greenhouse gas emissions
    a. Policies for this are in place (I think?)
    b. Air travel $$
    c. Was this tracked overtime?
    d. If this is tracked in SIMAP this can be shown in a graph
10. Commit to a pathway to move away from natural gas
    a. What have we done so far?
    b. I know we did some upgrades
    c. SIMAP can show a decrease in scope 1 burning of gas overtime

Our Climate Action Story So Far

Southern Oregon University became a charter signatory of the American College and University Presidents' Climate Commitment (now called Carbon Commitment) in 2007 and published its first Climate Action Plan in 2010.

Sustainability is at the heart of SOU's vision, mission, values and strategic plan, demonstrating commitment at the highest level of governance. SOU has a dedicated Sustainability Office overseeing climate action across campus. A Sustainability Council with representation from staff, students and faculty has been established since 2007 to advise on sustainability and climate action.

SOU achieved a "Gold" STARS rating in May 2022 for campus wide sustainability, as measured by an evaluation system developed by the Association for the Advancement of Sustainability in Higher Education (AASHE).

Climate action notable accomplishments for SOU's scope 1 and 2 emissions include:

SOU is committed to all new buildings and major renovations to meet a minimum of LEED Silver standards. The impact of this is that the buildings will use energy more efficiently and therefore reduce greenhouse gas emissions. This has included the following building projects:

- Raider Village (Housing and Dining Hall) 2014 LEED Gold
- Higher Education Center 2008 LEED Platinum Certificate
- Lithia Pavilion/Student Recreation Center 2018 LEED Gold Certificate
- SOU upgraded the mechanical equipment at the Central Plant Building on campus in 2019. Boilers 1 and 2 were replaced with high-efficiency Hurst boilers with high-efficiency Riello Burners. Boilers 3 and 4 had the burners replaced with the same high-efficiency Riello Burners. A new Riello control

system was installed to operate the boilers more efficiently. A new water softener system was installed to help reduce chemical usage. The existing 800-ton and 500-ton centrifugal chillers were replaced with two 800-ton, higher-efficiency centrifugal chillers. The roof-mounted, three-cell cooling tower was replaced with a larger-capacity, high-efficiency, two-cell cooling tower. One of the two existing condenser water pumps was replaced with a larger-capacity pump.

- The operation of the HVAC system for each campus building on the University's direct digital control (DDC) system is scheduled based on the building occupancy information. When a building is not occupied, the temperature controls go into "unoccupied" status, with a lower setback temperature during the heating season and a higher setback temperature during the cooling season. HVAC systems also upgraded during renovation projects across campus.
    - LED lighting became the SOU campus standard in 2016 and all new construction and renovation projects since 2016 have incorporated LED lighting. Projects with lighting retrofits throughout the building include the Theater Building, The Lithia Motors/SRC, Britt Hall and the Recycling Center. Other renovation projects with partial LED retrofits include the Music Building, Taylor Hall, the Science Building, the Osher Lifelong Learning Institute and Raider Stadium. SOU has been gradually replacing exterior campus lighting with LED fixtures and more than half of the campus has been retrofitted with LED since 2016.
    - Nine solar arrays have been installed on SOU's Ashland campus with a total output of 455 kilowatts, plus an array at the Higher Education Center in Medford and a pole-mounted array installed last year by a nonprofit on land leased from SOU. The university's first solar array was installed on the Hannon Library in 2000. Solar to date has been funded through private investors, grants, construction bonds, power purchase agreements with the student body and the University Administration. SOU also has three net-zero buildings on campus.
    - SOU purchases electricity from the City of Ashland, which supplies low-carbon electricity (primarily hydropower) contracted through Bonneville Power Administration.
    - SOU's campus fleet follows the Sustainability and Equity in Purchasing Policy which states that preference shall be given to electrical powered motorized vehicles and tools. Where vehicles and tools are not electrical, preference will be given to less-polluting alternatives to gas and diesel, such as compressed natural gas, bio-based fuels, hybrids, electric batteries, and fuel cells, as available. Eighty percent of our landscape equipment is electric, with the goal to be 100% by 2024.
    - SOU has made significant improvements on the energy use and energy efficiency of Information Technology equipment. SOU IT department continues the effort of reducing the number of physical hardware devices in its data center and has also partnered with vendors to purchase hardware that is right-sized for SOU's needs. This has led to a decrease in the use of energy for much of SOU's data center-housed hardware.

Climate action notable accomplishments for SOU's scope 3 emissions include:

SOU's Sustainability and Equity in Purchasing Policy and Procedure sets a strong framework for reducing SOU's greenhouse gas emissions including the following requirements:

- Greenhouse gas emissions must be considered in purchases over $25,000 and used as a guide for purchases under $25,000

- All new buildings and major renovation projects must achieve the U.S. Green Building Council's LEED Silver Certification or equivalent, at a minimum. New buildings shall target LEED Gold or Platinum Certification, Three Green Globes or higher certification, Living Building Challenge certification, or certification by another sustainable building standard. Green building concepts shall be integrated into architectural designs, construction documents and the construction of and renovations to all SOU buildings.
- An additional fee of 1% is added to business air travel to go into a fund to reinvest in sustainability initiatives.
- SOU has monitored commuting emissions through a survey and encourages active travel as well as bus travel through its RVTD partnership and bus pass. Staff and faculty receive a free bus pass and students receive a 90% discount. To encourage car-sharing, SOU has a discounted parking permit for carpooling, to incentivize a reduction in single-occupancy vehicles.
    - SOU has a recycling program on campus with outdoor and indoor recycling bins. The recycling is further sorted at SOU's on-campus recycling center to maximize diversion from landfill. We also have initiatives across campus to reduce and reuse. SOU recycles construction waste, biomass, electrical waste, tires and metal. More about SOU's waste and material management on campus can be found here.

Positive Action

We will take positive action around each of our commitments. We will continue to reduce greenhouse gas emissions on campus through a combination of behavior and technology, combined with creativity and innovation. We will leverage funding and grants targeted at clean energy, electrifying our campus fleet and energy efficiency in buildings to support us in a just transition to a net-zero emissions campus. We will also utilize partnerships to have a positive impact in reducing our greenhouse gas emissions.

Potential actions can be found below and the details of implementation will continue to develop. Some actions will overlap and contribute to multiple commitments. This is not an exhaustive list and we encourage creativity, innovation and ideas to not only achieve net zero emissions, but also take us beyond our current commitments.

1. **Achieve 100% renewable electricity generation on campus by 2035**
   Delivering on our solar ambitions will transform our campus and we are building a strategy to develop solar on roof space and parking lots. On-campus solar generation alongside energy efficiency measures will reduce greenhouse gas emissions as well as associated energy costs. We will leverage grants and funding to invest in solar installations on campus.
2. **Achieve 100% electric campus fleet by 2030**
   We will continue to make the transition to a 100% electric campus fleet for all SOU departments using vehicles. We will develop a timeline for all departments looking at vehicle needs and the availability of equivalent technology of electric vehicles. This will be carried out in tandem with building the charging infrastructure for the campus fleet.
3. **Improve the energy efficiency by 25% within 10 years (base year 2022)**
   We will increase energy efficiency and implement energy conservation measures across the campus through a combination of behavior and technology. Improving the energy efficiency of buildings and implementing energy conservation measures saves money, reduces greenhouse gas emissions and demonstrates environmental leadership to the public. We will explore the use of higher standards on renovation and building projects. Efficiency and conservation projects are the most cost-effective ways to reduce emissions. Each kilowatt saved is one that doesn't need to be purchased or generated. Conservation projects are relatively low in cost and provide lasting educational and behavioral benefits. **Energy efficiency and conservation measures could include:**
      - Technology and efficiency improvements, e.g., HVAC, lighting
      - Occupancy sensors for lighting
      - Power management of equipment and lighting
      - Space, use and hours management of buildings on campus
      - Building energy and waste management audits
      - Office certifications
      - Monitoring and dashboard of energy use per building
      - Equipment performance, e.g., SOU procurement policy
4. **Reduce Scope 1 and Scope 2 emissions by 50% by 2033 (base year 2018)**
   Renewable energy generation combined with energy efficiency and energy conservation measures and electrifying the campus fleet will reduce both scope 1 and scope 2 emissions. Actions will be carried out to achieve these other commitments and we will measure and monitor progress toward this milestone. We are also committed to exploring a pathway to move away from natural gas.
   This Commitment is aligned with the Department of Energy Better Climate Challenge, where we

have publicly pledged to reduce scope 1 and 2 emissions by 50% in 10 years from a 2018 base year.

5. **Reduce waste and increase diversion from landfill to 70% by 2030.**
   We are working to reduce waste and increase our diversion from landfill. We will do this through increased education and awareness, and participation in reduce, reuse and recycle initiatives on campus. We will aso look to reduce waste further and identify more materials to divert from landfill, e.g., food waste, and have initiated pre-consumer composting of food waste. More information about SOU's waste and material management program can be found here.
6. **Increase number of EV charging stations on campus**
   We will transform the parking infrastructure on campus as part of electrification of the campus by increasing the number of charging points as well as installing the capability to increase further. This will enable the SOU community to have access to electric vehicle charging. A Committee, SPARC (Solar Power and Rechargeable Cars) with representation from staff, students and faculty has been established to oversee the electrification of our campus for both charging infrastructure and links to solar.
7. **Implement SOU's Sustainability and Equity in Purchasing Policy**
   We will monitor the implementation of our Sustainability and Equity in Purchasing Policy. This policy takes into account the energy use of equipment operation the waste at the end of its life and whether the equipment can be recycled or repaired rather than disposed of to landfill.
8. **Improve commute/transport-related greenhouse gas emissions for staff, student and faculty**
   We will run campaigns and initiatives to promote more sustainable travel between home and campus for the SOU community. This will include car pooling, hybrid working, bus use and active travel. We incentives more sustainable transport, e.g., discounted bus passes and reduced-cost parking permits for car pooling, and will continue to build on these incentives. Staff and faculty currently receive free bus passes and students receive a 90% discount. We will continue to carry out our travel survey to both monitor progress and identify further opportunities to reduce our commuting-related greenhouse gas emissions.
9. **Improve business travel-related greenhouse gas emissions**
   We will continue to administer the Air Travel Fund fee to reinvest in sustainability initiatives on campus and encourage video conferencing. We will explore other measures to reduce our business travel-related greenhouse gas emissions.
10. **Commit to a pathway to move away from natural gas**
    We upgraded our boiler plant in 2019 to more efficient boilers and chillers to heat and cool the campus. However, in the long term, we seek to move away from natural gas. We will initiate this by exploring the feasibility and timeline of moving away from natural gas

Climate Action Progress

SOU's baseline year for reporting progress is 2018. The greenhouse gas inventory report for 2018 can be found here.

Greenhouse gas measuring and monitoring at SOU

SOU measures and monitors scope 1, 2 and 3 greenhouse gas emissions through SIMAP (Sustainability Indicator Management & Analysis Platform. SIMAP is a carbon- and nitrogen-accounting platform that can track and analyze greenhouse gas emissions. https://unhsimap.org/public

Sustainability rating at SOU

SOU tracks and monitors its sustainability credentials through STARS (Sustainability Tracking, Assessment & Rating System), run by the Association for the Advancement of Sustainability in Higher Education (AASHE) – a transparent, self-reporting framework for colleges and universities to measure their sustainability performance.