

SEATTLE UNIVERSITY

A Climate Positive Campus



Achieving Our Climate Commitment

Carbon Offsets

A CLIMATE POSITIVE CAMPUS

THE CHALLENGE?

SU's Carbon
Pollution

16,772
CO₂ metric tons/year

EMISSION SOURCES



45%
AIR TRAVEL



35%
COMMUTING



19%
BUILDINGS



1%
SU FLEET

WHAT CAN WE DO?

REDUCE WHAT WE CAN...

Prioritize internal
projects to reduce
emissions



ZERO WASTE



RENEWABLE
ENERGY



COMMUTING
SUSTAINABLY



GREEN
CAMPUS
FLEET



REDUCE
AIR TRAVEL



CAMPUS
ENGAGEMENT

...OFFSET WHAT WE CAN'T

Invest in community
projects to remove
and avoid emissions



METHANE
CAPTURE



TREE
PLANTING



RENEWABLE
ENERGY



ENVIRONMENTAL, SOCIAL, ECONOMIC,
& EDUCATIONAL BENEFITS

COST? < 0.1% OF SU'S ANNUAL BUDGET

Executive Summary

In December 2006 the American College and University President's Climate Commitment (ACUPCC) was launched, and included over 300 institutions by June 2007. Seattle University signed the commitment to work towards achieving climate neutrality. This commitment included agreeing to conduct an annual greenhouse gas (GHG) inventory and establishing a Climate Action Plan (CAP) to make internal GHG reductions. In 2009, SU adopted a CAP and committed to GHG emissions reductions of 12% by 2020 and 51% by 2035. In 2017, SU had approximately 16,772 metric tons of GHG emissions, almost 80% of which were related to transportation (e.g. commuting and air travel).

Working towards carbon neutrality is a multi-strategy approach that will require the use of both internal emissions reductions and carbon offsets. Internal emission reductions will be accomplished by initiatives such as waste reduction, renewable energy projects, electrifying SU's campus fleet, reducing air travel, and lessening our reliance on single occupancy vehicle commutes. These reductions will be addressed primarily through the university's updated CAP which will be released later in 2019.

While Seattle University should first and foremost aim to address its carbon emissions through internal reductions, the majority of emissions cannot be mitigated by on-campus initiatives alone. Offsets are a necessary tool to take accountability for unavoidable emissions (e.g. air travel) and are *required to ensure that SU meets its existing climate commitment by the target dates*. The carbon offset market has been well established for at least a decade and has been supported by numerous corporations and universities. The President's Committee for Sustainability (PCS) recommends prioritizing third-party-verified offset projects that provide significant social, environmental, and economic benefits to communities that go beyond the benefits of GHG reductions while offering significant academic benefits to the Seattle University community.

The PCS recognizes that the need for climate action is urgent and proposes that SU go beyond its current goals and beyond carbon neutrality. The PCS recommends that SU offset all of its GHG emissions plus an additional 10 percent to help cover the cost of emissions of those in our community who are unable to mitigate their emissions. By becoming the first climate positive (or carbon negative) university in the world for a cost of less than 0.1% of its annual budget, Seattle University will further establish itself with future students and alumni as a leading institution for climate action.

A CLIMATE POSITIVE CAMPUS



SEATTLE UNIVERSITY'S CLIMATE COMMITMENT

In December 2006, the American College and University President's Climate Commitment (ACUPCC) was launched, and included 300 signatories by June 2007. Seattle University signed the commitment to work towards achieving climate neutrality¹. As part of the commitment, each institution would conduct a greenhouse gas (GHG) inventory, establish a Climate Action Plan to make internal GHG reductions and set a date for carbon neutrality. After planning and initiating internal reduction strategies, a signatory has the option to purchase carbon offsets to achieve its climate neutrality goal.

BACKGROUND

In 2007, Seattle University signed the American College and University Presidents' Climate Commitment (ACUPCC)². As an ACUPCC signatory, SU adopted a Climate Action Plan (CAP) and committed to greenhouse gas (GHG) emissions reductions of 12% by 2020 and 51% by 2035³, but SU has yet to establish a date for achieving carbon neutrality as required by our ACUPCC commitment. Seattle University's GHG emissions for FY17 were 16,772 metric tons, almost 80% of which were related to transportation (commuting and air travel).

¹ Second Nature. Implementation Guide. Retrieved from https://www.seattleu.edu/media/cejs/files/campus-sustainability/ACUPCC_Implementation-Guide.pdf. Accessed on 02/15/19

² Second Nature. ACUPCC. Retrieved from <http://secondnature.org/who-we-are/background/>. Accessed on 10/23/18.

³ Seattle University. CEJS. Retrieved from <https://www.seattleu.edu/cejs/campus-sustainability/what-su-is-doing/climate-action-plan/>. Accessed on 10/23/18.

While we have reduced our GHG emissions by approximately 10% since our baseline year of 2009, emissions have been increasing between 2012-2017 (Figure 1). Given this trend, it is possible that our modest 2020 goal may not be met without the use of carbon offsets and meeting our 2035 goal will be impossible without them.

The October 2018, an Intergovernmental Panel on Climate Change report estimated a 12-year window for climate action to maintain global warming below 1.5°C. Actions must include reducing emissions and sequestering carbon dioxide⁴. The time for climate action is now, and we should reflect deeply on the words of President Stephen Sundborg who said “unusual measures need to be taken to do what we can to awaken other universities and the public at large to what might be called the terminal illness of the planet.”⁵

Figure 1: Greenhouse gas emissions, FY12-FY17

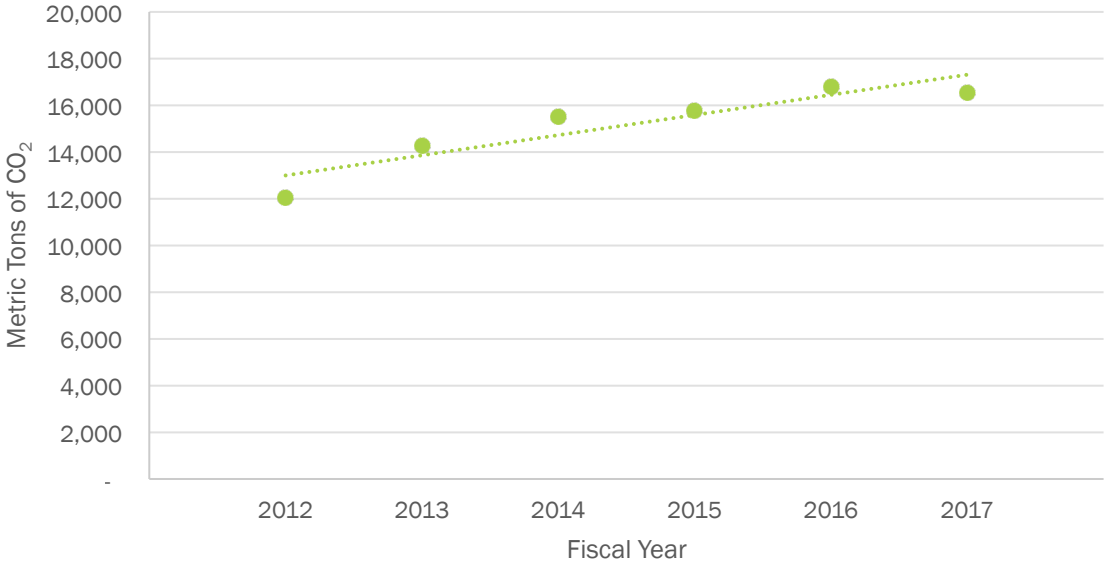


Figure 1: Seattle University greenhouse gas emissions 2012-2017



⁴ IPCC. Special Report Global Warming. Retrieved from <https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/>. Accessed 01/11/19

⁵ President’s Convocation. Retrieved from: <https://www.seattleu.edu/media/office-of-the-president/President's-Welcome—Fr.-Stephen-V.-Sundborg-Remarks.pdf>. Accessed on 1/11/19.

STRATEGY 1: REDUCING INTERNAL EMISSIONS

Seattle University first and foremost aims to address its carbon emissions through internal reductions. These reductions will be addressed primarily through the university's Climate Action Plan⁶. Internal emission reductions will be accomplished by initiatives such as waste reduction, renewable energy projects, electrifying our on-campus fleet, reducing air travel and promoting sustainable commuting.

STRATEGY 2: PURCHASING OFFSETS TO COMBAT UNAVOIDABLE EMISSIONS

While Seattle University should prioritize internal reductions, some emissions (e.g. commuting, air travel, etc.) are unavoidable, and to achieve climate neutrality they must be offset. The topic of carbon offsets has been controversial because of early concerns about the validity of some carbon offset markets, but these concerns have waned due to third-party verification programs

As the momentum to act on climate change has grown, many prominent organizations have already achieved their goals for carbon neutrality. Almost a decade ago, Pope Benedict made a commitment to climate neutrality for The Vatican that included carbon offsets. In the early 2010's, SU purchased carbon offsets for natural gas-related emissions, but these expenditures have since been eliminated. Corporations such as **Microsoft** and **Google** have made purchasing carbon offsets “a cost of doing business” and have achieved carbon neutrality.

In April 2018, **American University** became the first university in the U.S. to become carbon neutral via a portfolio of different offsets. In April, 2019 **University of San Francisco** followed in the footsteps of other higher education carbon leaders to become the first Jesuit university to become carbon neutral. While some may say that buying offsets is comparable to paying indulgences for one's sins, others may argue that in paragraph 167 of *Laudato Si'*, Pope Francis is supporting the use of carbon offsets by referring to “*the obligation of those who cause pollution is to assume its costs.*”

“unusual measures need to be taken to do what we can to awaken other universities and the public at large to what might be called the terminal illness of the planet.”

Stephen V. Sundborg, S.J.
Seattle University President



⁶ Seattle University. Climate Action Plan. Retrieved from <https://www.seattleu.edu/media/cejs/files/contentx2fmisc/Seattle-University's-Climate-Action-Plan-2010-2035-v1.2.pdf>. Accessed on 02/15/19.

In 2018, the President’s Committee for Sustainability (PCS) recommended that SU implement an offset program to achieve our emissions goals. Carbon offsets are a legitimate way to reduce our emissions profile as well as an indispensable tool given that almost 80% of our emissions cannot be reduced by on-campus action. The PCS has proposed that SU’s program should offset our emissions plus an additional 10 percent to help cover the cost of emissions of those in our community who are unable to pay for offsets. By becoming climate positive (carbon negative), Seattle University will further establish itself as a leading institution for much-needed climate action.

As will be discussed in the following sections, good carbon offset projects result in real and additional greenhouse gas reductions. The PCS has recommended prioritizing offset projects that provide significant social, environmental, and economic benefits to local and disadvantaged communities that go beyond the benefits of greenhouse gas reductions while offering significant academic benefits to the Seattle University community. The PCS is motivated by its conviction that Seattle University has the capacity and responsibility to lead on climate action for the sake of our students and society.



WHAT IS A CARBON OFFSET?

A carbon offset is a reduction or removal of one metric ton of carbon dioxide equivalent (CO₂e) greenhouse gas emissions that is used to counterbalance or compensate for (“offset”) emissions from other activities, such as air travel, commuting, and other sources of carbon emissions⁷. Carbon offsets are different from carbon credits. Carbon offsets fund projects with clear boundaries, verification, and benefits that directly results in an emissions reduction. Under the carbon credit cap and trade system, an entity is able to pollute as much as they want, as long as they can afford to purchase unused credits from companies that have polluted less⁸.



REQUIREMENTS OF A CARBON OFFSET: PAVER

Permanent – The reduction must last in perpetuity

Additional – The reduction would not have occurred during business as usual

Verified – The reduction must have been monitored and confirmed to have occurred

Enforceable – The reduction must be counted only once and then retired

Real – The reduction must have actually occurred and not as a result of flawed accounting

In addition to PAVER requirements⁹, offset projects will also adhere to Second Nature’s offset guidance¹⁰, which additionally includes (1) the transparency of projects and (2) that offset projects occur within a reasonably close time of GHG emissions.

⁷ Second Nature. The ACUPCC Voluntary Carbon Offset Protocol. Retrieved from http://secondnature.org/wp-content/uploads/08-11-10_ACUPCCCarbonOffset.pdf. Accessed on 10/23/18.

⁸ There has been some confusion between carbon credits and carbon offsets. A carbon credit is an instrument that represents ownership of one metric ton of carbon dioxide equivalent (CO₂e) that can be traded, sold, retired, etc. If a company is regulated under a cap-and-trade system, they have an allowance of credits they can use toward their cap. If they use fewer emissions (credits) than they are allocated, they can trade, sell, hold, or do whatever they like with the credit. If it is sold, it is their allowance of emissions being sold to someone else, who can then increase emissions above their cap with the purchased carbon credit. Carbon credits are the purchase of the right to additional emissions, while carbon offsets are the purchase of the removal of past emissions. <https://carbonfund.org/2012/05/30/difference-carbon-offsets-carbon-credits/>. Accessed on 10/24/18.

⁹ Second Nature. Peer Reviewed and Innovative Carbon Offsets. Retrieved from http://secondnature.org/wp-content/uploads/Webinar_Peer-Reviewed-Innovative-Offsets_2016-10-18.pdf. Accessed on 10/24/18.

¹⁰ Second Nature. Carbon Offset Guidance. Retrieved from <https://secondnature.org/wp-content/uploads/Carbon-Markets-and-Offsets-Guidance-1.pdf>. Accessed on 10/24/18.



CO-BENEFITS

Seattle University should pursue carbon offset programs with benefits that go beyond GHG emissions reductions. In line with SU's mission of academic excellence, sustainability and empowering leaders for a just and humane world, offset projects will have educational opportunities, social engagement, environmental health and conservation benefits while supporting local and worldwide equity. These projects will provide concrete action that align with Jesuit traditions and values while lowering the university's GHG emissions.



Economic

- Provide job opportunities
- Promote transition to a renewable energy economy
- **Example project:** Duke's [residential energy efficiency project](#) provides jobs for the construction industry and community organizations.



Education

- Participation in project selection and design
- Tracking project implementation
- Data collection and publication
- Research opportunities
- **Example project:** The [Land Conservation Initiative](#) (LCI) and the [King County Forest Carbon Program](#) offer 3rd-party-verified carbon offsets through urban or rural forest preservation in King County. The programs offer volunteer opportunities that Seattle University students, staff, and faculty could join. These type of local projects provide Seattle University with opportunities for local engagement and community building with other leading organizations and institutions.

Social



- Increased social equity – projects that increase the well-being of communities with benefits shared equally regardless of age, race, religion, education level or socio-economic status.
- **Example project:** By providing efficient cook stoves to families in either Kenya, Ethiopia, or Guatemala, offset purchases from [The Paradigm Project](#) save 15% of household income, reduce the number of pollution-related deaths, focus on the hiring and advancement of women, increase access to clean water by over 90%, provide access to affordable and clean energy, reduce GHG emissions from users, reduce wood and charcoal consumptions by up to 60%, and help to prevent deforestation while increasing biodiversity, soil quality, and erosion control. The Paradigm Project generates [Gold Standard Verified](#) Emission Reductions and Certified Emission Reductions.

Environmental



- Air quality – projects will provide improvements to air quality by reducing harmful pollutants.
- Land use/Soil quality – projects will improve erosion, land availability, quality and use.
- Biodiversity – projects will increase the variety of plants and animals of an area, benefiting the local environment.
- Water quality – projects will reduce water pollution, stormwater runoff, and the need for infrastructure to manage storm flows.
- **Example project:** The [Lancaster County Landfill](#) from 3 Degrees collects landfill gases and converts them to energy. The project aims to utilize a portion of these landfill gases for a gas-to-energy plant project. This project reduces air pollution within the community.





CARBON OFFSET EXAMPLES FROM ACADEMIA AND INDUSTRY

While there are hundreds of examples of institutions that purchase carbon offsets, the list below represents some of the most successful and well-established carbon offset programs.

University of San Francisco

University of San Francisco became the [first Jesuit university to go carbon neutral](#) in 2019 through a combination of on campus initiatives and the purchasing of offsets. USF supports mission driven offsets that focus on environmental justice such as forest restoration projects, methane capture, and clean cook stoves. USF cites Pope Francis' call to care for our common home as a well as the United Nations' Sustainable Development Goals as motivation for their purchase of offsets and efforts towards carbon neutrality. Charlie Cross, USF's vice-president states that, "sustainability is not a destination. We want to get to a point where we are going the other way, regenerating and creating our own energy. To me, carbon neutrality is a really key thing, and it embodies that USF is living its values"

American University

American University was the first University to reach carbon neutrality in 2018 through offsets purchased from [The Paradigm Project](#) and local tree planting [projects](#). Megan Litke, the director of Sustainability Programs at American University shares that, "Not only are we able to offset the climate impacts of our daily commutes, but we're doing it in a way that beautifies our city and provides other very significant benefits to the District and its residents."¹¹

Duke University

Through their expansive Carbon Offset Initiative, Duke University paves the way in carbon offset projects that include [swine waste to energy](#), [residential energy efficiency](#), and [urban forestry](#) partnership with [Urban Offsets](#). Duke also [partners with Delta Airlines](#) to plant trees in the local area, offsetting Duke's business travel. As stated by the [DCOI](#) staff, their use of carbon offset projects "result in real and additional greenhouse gas reductions that are absolutely necessary if we're to avoid the most damaging effects of a rapidly changing climate. Offset projects provide academic connection to the project and have a link to involve students through research, monitoring, site visits, verification or employment opportunities. This increases academic offerings, provides exciting class or independent study projects for relevant coursework and provides hands-on training that builds incredibly abnormal skill-sets for a growing and increasingly necessary job market."

Seattle City Light

In 2005, Seattle City Lights became the first electric utility in the US to achieve carbon neutrality¹². Through the use of renewable energy and aggressive energy efficiency projects the utility has managed to keep emissions low. The remaining emissions from vehicles and equipment, employee air travel, and refrigerant leakage are covered by offset projects from Climate Action Reserve and Verified Carbon Standard. Projects purchased by Seattle City Light include biodiesel fuel for Seattle buses, ferries, and garbage trucks; shore power for Port of Seattle cruise ships; aerobic composting of local food waste; and methane recapture and destruction at dairy farms and landfills.

¹¹ American University. <https://www.american.edu/media/news/20180418-Carbon-Offset-Program-Launched.cfm>. Accessed on 10/24/18.

¹² Seattle Gov. Seattle City Lights. <http://www.seattle.gov/light/enviro/carbonneutral.htm>. Accessed on 01/14/19.

Microsoft

Through an internal carbon tax, Microsoft has funded offset programs such as avoided deforestation, and reforestation projects from [Renewable Choice](#), efficient cook stoves from [The Paradigm Project](#), sustainable rice production in the US, and many projects overseen by [The Carbon Neutral Company](#). Microsoft states that “we’ve chosen to invest in carbon offsets because, in addition to helping us offset global emissions, our carbon offset strategy also helps us deliver the added economic, societal and educational benefits that Microsoft is already committed to providing around the world...These projects will advance our corporate citizenship in the years to come, not only by reducing GHG emissions but by improving health, protecting ecosystems and providing income and employment.”¹³

Google

In 2007, Google became a carbon neutral company. As the year progressed, Google continued making strides by making a \$3 billion investment in renewable energy. This investment makes Google’s global operation consumption matched 100% by wind and solar energy. The company signed a Power Purchase Agreement (PPA), which is a long-term contract that provides not only Google’s data centers with clean energy, but also the communities that surround these data centers. Senior Vice President, Urs Hölzle, who oversees Google’s green innovation, expresses the importance of this project by stating “As we became a bigger user of energy, we wanted to make sure we were not just part of the problem, but part of the solution.”¹⁴

Lyft

In 2017 Lyft joined the We Are Still In movement to show its continued support for the Paris Climate Accord. In April 2018, Lyft announced it would immediately offset the carbon emissions from all rides globally. Lyft rides are carbon-neutral through the direct funding of emission mitigation efforts, including the reduction of emissions in the automotive manufacturing process, renewable energy programs, forestry projects, and the capture of emissions from landfills. This is a multi-million dollar investment in the first year alone, which makes Lyft one of the top voluntary purchasers of carbon offsets in the world.

Co-Founder and President of LYFT, John Zimmer, expresses why this is important: “In the future all vehicles will operate with clean energy. But climate change is not waiting. It’s happening now, and it presents a clear and immediate threat to our world and those who live in it. Action cannot wait.”¹⁵

Seattle Forterra Evergreen Carbon Capture Companies

Local Seattle participants have included Pearl Jam, the Seahawks, Woodland Park Zoo, Cherry Street Coffee, Sub-Pop, Seattle Aquarium, Molly Moon’s Ice Cream, Seattle Sounders FC, Stream Real Estate LLC, Outdoor Research, Seattle Mariners, Nordstrom, GLY Construction, Grist, Boeing Employees Credit Union and more. In 2012 the partners captured 26,093 metric tons of carbon through the [Forterra Evergreen Carbon Capture](#). Pearl Jam guitarist Stone Gossard shares “There’s so many different partners through this program, so many different smaller environmental groups that can connect to Forterra and through neighborhoods, so for every tree that gets planted we’re also connecting with a lot of people.”¹⁶

¹³ Microsoft. <https://blogs.microsoft.com/green/2013/09/10/microsofts-carbon-offset-strategy-making-a-difference-one-project-at-a-time/>

¹⁴ Fortune. <http://fortune.com/2012/07/12/googles-zero-carbon-quest/>. Accessed on 10/24/18.

¹⁵ Medium. <https://medium.com/@johnzimmer/all-lyft-rides-are-now-carbon-neutral-55693af04f36>. Accessed on 10/24/18.

¹⁶ BizJournals. <https://www.bizjournals.com/seattle/news/2012/05/17/pearl-jam-partners-with-forterra-and.html>. Accessed on 10/24/18.



SAMPLE SEATTLE UNIVERSITY OFFSET PORTFOLIO

Below is a sample offset portfolio for Seattle University that aligns with SU’s mission of offsets that provide co-benefits and fulfill the PAVER requirements.

Price per Metric Ton	Percentage of Portfolio	Metric Tons of CO ₂ Offset	Total Cost	Project/Provider
\$22	25%	4,193	\$92,246	King County Forest Carbon Program pilot; Bonneville Environmental Foundation ¹⁷
\$20	25%	4,193	\$83,860	TBD: Energy efficiency project such as Duke ¹⁸ ; Renewable Energy project such as Native Energy ¹⁹
\$15	20%	3,355	\$50,325	The Paradigm Project ²⁰
\$3	30%	5,032	\$15,095	3 Degrees ²¹
		Total	\$219,364	



FAQ

What are Seattle University’s current CAP goals?

Seattle University committed to reduce greenhouse gas (GHG) emissions by 12% by 2020 and 51% by 2035.

What scopes do our goals cover?

Our goals cover scopes 1 (direct emissions), 2 (indirect emissions from purchased energy), and 3 (indirect emissions from transportation: commuting, air travel, etc.)

How do we know if a carbon offset is “real”?

Carbon offsets will be purchased through third-party verified sources that pass rigorous standards including PAVER requirements.

What is the cost of offsets and how volatile are these prices?

Prices of carbon offsets range anywhere between \$2/metric ton and \$20/metric ton depending on scope of the chosen project. Offset prices have been fairly stable for the last several years. Nationwide there are many entities that have set 2020 as their first GHG target year, so we *may* see offset prices increase at that time if there is a surge in purchases.

¹⁷ Urban forest preservation offsets are 3rd-party verified under City Forest Credits protocol and offsets from rural forest conservation are 3rd-party verified under VCS/Verra’s VM0012 methodology. Retrieved from <https://www.kingcounty.gov/depts/dnrp/wlr/sections-programs/rural-regional-services-section/forestry-program.aspx>. Accessed on 02/15/19.

¹⁸ Duke. Energy Efficiency Offsets. Retrieved from <https://sustainability.duke.edu/offsets/projects/residential>. Accessed 02/15/19.

¹⁹ Native Energy. Carbon Offsets. Retrieved from <https://nativeenergy.com/product/carbon-offsets/>. Accessed 02/15/19.

²⁰ The Paradigm Project generates Gold Standard Verified Emission Reductions. Retrieved from <https://www.theparadigmproject.org/>. Accessed 02/15/19.

²¹ 3 Degrees projects are Green-e® Climate certified and they source projects that are registered on the Climate Action Reserve, The Gold Standard and Verified Carbon Standard. Retrieved from <https://3degreesinc.com/services/carbon-offsets/>. Accessed 02/15/19.

Who pays for these offsets?

We propose that Seattle University prioritize approximately 0.1% of its annual operating budget for the purchase of offsets.

Why choose offsets?

Although emissions reductions should be prioritized, there are many emissions that simply cannot be eliminated by internal reductions (such as air travel and commuting). Additionally, by making offset projects a budget priority, this will encourage us to develop long-term plans that reduces internal emissions. Offset projects will also further Seattle University's core Jesuit values by engaging in projects that provide significant co-benefits to local and international communities as well as educating our campus community on offsets and the importance of climate action.

Has SU ever purchased offsets?

Seattle University participated in Puget Sound Energy's Carbon Balance program in 2012 and 2013. The offsets were purchased through Bonneville Environmental Foundation in an anaerobic digestion project in Washington State.



The President's Committee for Sustainability

Greg Magnan, co-Chair, Albers School of Business and Economics
Michelle Clements, co-Chair, Human Resources
April Atwood, Albers School of Business and Economics
Eli Christopher, Marketing and Communications
Yolanda Cieters, Center for Environmental Justice and Sustainability
Dae Durisko, Student Representative
Eric Guerra, Athletics
Tanya Hayes, College of Arts and Sciences
Wes Lauer, College of Science and Engineering
Bernie Liang, Student Development
Katherine Lopez, Student Representative
Margi Luttrell, Purchasing
Brian McCullough, Albers School of Business and Economics
Richard Moyer, Facilities Services
Anisha Patel, Student Representative
Mike Thee, Marketing and Communications
Phillip Thompson, Center for Environmental Justice and Sustainability
Jennifer Tilghman-Havens, Center for Jesuit Education
Whitney Wedge, Parking and Transportation Services
Nathaniel Wolk, Facilities Services
Anya Barrese, EcoRep
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