

Cabrillo College

Cabrillo College Sustainability Plan



April 2016

Prepared by the Sustainability and Climate Planning Subcommittee:

Karen Groppi, Co- Chair; Joe Nugent, Co-Chair; Nicole Crane, Committee Member; Elizabeth Flynn, Committee Member; and Robert Jones, Climate Corps Bay Area Fellow and Committee Member
Robert Jones

The Charge of the Sustainability and Climate Planning Subcommittee is to identify and recommend environmental initiatives that reduce energy consumption and improve environmental performance at Cabrillo College. This committee reports to the Facilities Planning Committee.

In the matter of **Cabrillo's Sustainability Plan**

The Cabrillo Community College District Board of Trustees commits to environmental sustainability, reducing the use of fossil fuels, the reduction of greenhouse gas emissions, and sustainability in the curriculum as a fundamental operational objective integral to the strategy of fulfilling our educational mission.

Sustainability can be defined as meeting the needs of the present while ensuring that future generations can meet their needs. We recognize our responsibilities as an institution entrusted with the education of future generations and as good citizens of the local and global communities to ensure that our operations are as sustainable as possible.

The District Board of Trustees, faculty, staff, and students have been proactive in implementing sustainability programs at the campus for the past several years and wish to establish and implement a sustainability plan for the reduction of the carbon and environmental footprint of college operations.

These efforts will also help meet the commitments of the American College & University Presidents Climate Commitment for carbon neutrality at the campus, of which the District is a signatory.

Therefore, it is requested that Cabrillo Community College Board of Trustees adopt this Sustainability Plan. The Plan will consist of broad sustainability recommendations, Plan Goals, and Implementation Programs that will lay a roadmap for the District to help to achieve our Sustainability goals.

TABLE OF CONTENTS

SECTION 1. EXECUTIVE SUMMARY

SECTION 2. BACKGROUND

- 2.1 HISTORY OF SUSTAINABILITY EFFORTS TO DATE
- 2.2 CREATION OF THE SUSTAINABILITY PLAN
- 2.3 SUSTAINABILITY AND CLIMATE PLANNING COMMITTEE
- 2.4 THE POLICY CONTEXT OF SUSTAINABILITY PLANNING

SECTION 3. VISION STATEMENT, GOALS, AND PRIORITIES

SECTION 4. PROGRAMS AND PROJECTS FOR IMPLEMENTATION

- 4.1 MANAGEMENT AND ORGANIZATIONAL STRUCTURE
- 4.2 ENERGY EFFICIENCY
- 4.3 FACILITIES OPERATION
- 4.4 SUSTAINABLE BUILDING PRACTICES
- 4.5 ON-SITE GENERATION AND RENEWABLE ENERGY
- 4.6 TRANSPORTATION, COMMUTING, AND CAMPUS FLEET & TRAVEL
- 4.7 WATER, WASTEWATER, AND SUSTAINABLE LANDSCAPING
- 4.8 SOLID WASTE REDUCTION AND MANAGEMENT
- 4.9 GREEN PURCHASING
- 4.10 STUDENT AND CURRICULUM DEVELOPMENT
- 4.11 CAMPUS AND COMMUNITY OUTREACH & AWARENESS
- 4.12 CREATE A CLIMATE ACTION PLAN

SECTION 5. MEASURE AND REPORT PERFORMANCE

- 5.1 MEASURING PERFORMANCE
- 5.2 REPORTING PERFORMANCE
- 5.3 CAMPUS WORKSHOPS

SECTION 1.

EXECUTIVE SUMMARY

As with many public sector agencies, Cabrillo College recognizes the environmental, economic, and social benefits of resource efficiency and sustainability. Since the passage of the California Global Warming Solutions Act (AB-32), there have been many steps taken toward making the campus more sustainable. Beginning with a few individuals, most often students, campus sustainability initiatives have started small but have now grown in scope to departments, divisions, and finally to campus and systemwide efforts. These include the establishment of a Sustainability Policy by the California Community Colleges (CCC) Board of Governors, former president Brian King's signing of the American College and University Presidents' Climate Commitment (ACUPCC), the Cabrillo Governing Board's partnering with the Monterey Bay Regional Climate Compact (MBRCC) and the Cabrillo Student Senate's policy on purchasing sustainable food service products. It is time to combine our efforts to develop a holistic, organized, and comprehensive approach that states specific goals and sets criteria for measuring progress. This plan seeks to do just that by satisfying state regulations, taking advantage of available resources and programs, and adopting the Best Practices of other sustainable institutions.

Sustainability can be defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs. The purpose of this Sustainability Plan is to prepare the Cabrillo Community College for the anticipated environmental and regulatory challenges of the 21st century, to guide the campus towards becoming a more sustainable institution, and to prepare students for the green economy.

The following Sustainability Plan articulates visions, goals, and objectives, as well as the strategies to meet these goals. This Plan has been developed by the Cabrillo Climate Action Task Force and its more recent incarnation, the Sustainability and Climate Planning Subcommittee which includes college students, staff, faculty, and administrators. This Sustainability Plan has been developed in coordination with the many different campus stakeholders to ensure that the plan meets their needs.

CABRILLO COLLEGE'S VISION

Cabrillo College is passionate about developing critical thinking, honing oral and written communication, and enhancing global awareness, while cultivating personal and professional responsibility in our students. Exploration, innovation, creativity, and the implementation of a variety of teaching methods, including technology literacy, are hallmarks of our approach to learning. We help students of varying skill levels achieve their potential and consider everyone in the college part of a community of learners who are treated with dignity and respect. Cabrillo College supports a climate of diversity, self-empowerment, and sustainability, with a strong sense of social justice.

As an integral part of Santa Cruz County, Cabrillo College is an accessible gateway to prosperity that provides education for all, supporting the local economy, and improving economic vitality. We serve students who have goals of transfer, career preparation, basic skills development, personal fulfillment, and retraining through an inclusive and effective learning environment. Students will leave with greater knowledge and a richer expectation of themselves.

Cabrillo recognizes our responsibilities as an institution entrusted with the education of future generations and as good citizens of the local and the global communities to ensure that our operations are as sustainable as possible.

SECTION 2. BACKGROUND

2.1 HISTORY OF SUSTAINABILITY EFFORTS TO DATE

Sustainability efforts at Cabrillo have been ongoing for a number of years and have been championed by individuals as well as various campus departments, organizations, and committees.

The following are a few of the accomplishments on campus:

Creation of an Energy and Climate Action Plan

Creation of a sustainability website (GreenSteps.Cabrillo.edu)

Membership in American College and University President's Climate Commitment (ACUPCC)

Earth Week

Earth Day or Earth week has been a long running annual celebration on the campus. Events are generally planned by the student Sustainability Club which has, in recent years, been renamed Sustainability Council. Events and displays during this week have included community groups, films, lectures, and activities aimed at engaging the entire campus community.

Climate Initiative Task Force

Upon signing the American College and University President's Climate Commitment (ACUPCC) in 2007, Brian King formed a task force to carry out the requirements of the commitment which included preparing Carbon Emission assessments and reductions plans. This group has so far met the requirements and has submitted three carbon assessments (2008, 2011, and 2014), and a Climate Action Plan and update (2010 and 2013). The group has included members from all campus stakeholders; students, staff, administrators and faculty.

Plastics to Fuel Machine

Jim (Homer) Holm, Executive Director of Clean Oceans International, owns and operates a Plastics to Fuel machine at Cabrillo. The goal of the Plastics to Fuel program is to provide a way to incentivize the clean-up of plastics in the ocean, in order to sustain a clean and habitable ocean. Cabrillo and UCSC students and faculty have been performing research and testing with the machine in order to fine-tune the process of making usable fuel from discarded plastics.

Proposition 39

Cabrillo College has taken advantage of state money to perform various energy efficiency projects on campus. So far, we have utilized three years of Proposition 39 money in order to commission various LED lighting retrofits as well as a pool solar thermal system. These projects have reduced campus consumption of electricity by 9 percent, and are starting to show significant natural gas reductions.

EV Charging Infrastructure

As of April 2016, Electric Vehicle charging infrastructure has been installed at Cabrillo College. The Sustainability Subcommittee is now working on choosing a vendor to provide charging services at Cabrillo. Once completed, 26 hard-line charging ports will be installed at Cabrillo.

DC Solar Freedom

As of April 2016, DC Solar Freedom has leased, at no cost, 26 mobile solar trailers to Cabrillo College. These trailers will provide clean energy for Electric Vehicle charging, phone and laptop charging, lighting, as well as generators to power the Plastics to Fuel machine.

Student Sustainability Council

The student-run Sustainability Council has become an active club on campus and, among other projects, spearheaded an effort to ban plastic water bottles and establish bottle filling stations on campus.

Cabrillo Bike Co-op

The Mission Statement of the Cabrillo Bike Co-op is:

- To provide Cabrillo students and the surrounding community with the tools, space, and education to use bicycles as a means of sustainable, low-cost transportation.
- To dramatically increase the number of students that ride bicycles to and from school.
- To create a safe space for individuals of any age, gender, nationality, religion or social status to feel accepted, inspired, and empowered.
- To promote the larger goal of making the Cabrillo campus more sustainable.
- To develop and maintain working relationships with organizations who hold similar values.
- To support and encourage the health and well-being of Cabrillo students and the local community.

Curriculum projects

Cabrillo collaborated in the EILS (National Science Foundation) grant in partnership with UC Santa Cruz. The grant produced curriculum, activities, labs, and other units that emphasized sustainability. There have been several new classes, rewritten curriculum, and participation from faculty representing a broad range of academic disciplines. There are over 50 courses with identified sustainability content, a number of certificates and one A.S. Degree program which focus on aspects of sustainability.

2.2 ADOPTION OF A SUSTAINABILITY PLAN

The Cabrillo Community College Governing Board will be asked to review this sustainability plan for adoption. If adopted by the Board, this will prove a strong commitment to improve campus sustainability and energy reduction efforts.

2.3 SUSTAINABILITY AND CLIMATE PLANNING SUBCOMMITTEE

In order to manage the process of developing a Sustainable Campus, the College established the Campus Sustainability and Climate Planning Subcommittee (reporting to the Facilities Planning Committee), consisting of faculty, staff, and students, to provide representation from the different campus stakeholders. The Subcommittee is responsible for developing, advising, and implementing sustainability initiatives throughout Cabrillo. The sustainability programs and projects described in this plan provide a clear path to achieve a more sustainable Cabrillo.

The Campus Sustainability and Climate Planning Committee co-chairs (April 2016).

1. Karen Groppi, Engineering Instructor, kagroppi@cabrillo.edu
2. Joe Nugent, Director of Facilities Planning and Plant Operations, jonugent@cabrillo.edu

2.4 THE POLICY CONTEXT OF SUSTAINABILITY PLANNING

Sustainability can provide environmental, economic, and social benefits to campuses. However, there are other motivations for Cabrillo to pursue these practices. The State of California has been on the forefront of

efforts in establishing aggressive policies and standards for environmental protection and reducing greenhouse gas (GHG) emissions that contribute to global warming. In 1970, the State adopted the California Environmental Quality Act (CEQA) with the goal to inform governments and the public about potential environmental impacts of projects. From 2005 onward, legislation has been passed to directly regulate GHG emissions by utilizing incentive mechanisms, cap-and-trade programs, and mandatory reporting while encouraging voluntary activities such as purchasing emissions offsets and offering renewable energy certificates (RECs). Compliance with state policies and regulations regarding these issues is an important factor for consideration by Cabrillo.

The policies below outline the numerous policy and regulatory drivers that urged the creation of this Plan.

2.4.1 CCC BOARD OF GOVERNORS ENERGY AND SUSTAINABILITY POLICY

To encourage the California Community Colleges (CCC) to a more sustainable future, the CCC Board of Governors approved the Energy and Sustainability Policy in January 2008, which put forth the goal for each campus to reduce their energy consumption from its 2001-02 baseline by 15 percent by 2011-12. It also sets goals for minimum efficiency standards of new construction and renovation projects and provides an incentive of 2 percent of construction cost for new construction projects and 3 percent of construction cost for modernization projects. The policy also sets goals for energy independence through the purchase and generation of renewable power and energy conservation through the pursuit of energy efficiency projects, sustainable building practices, and physical plant management.

The CCC Board of Governors Energy and Sustainability Policy can be found here:

http://www.cccco.edu/Portals/4/Executive/Board/2008_agendas/january/3-1_Attachment_CCC%20Energy%20and%20Sustainability%20Policy%2011-9-07%20FINAL.pdf

2.4.2 CALIFORNIA STATE CLIMATE REGULATIONS

2.4.2.1 State of California Executive Order S-3-05

Executive Order S-3-05 was signed by the Governor of California in 2005, thereby identifying the California Environmental Protection Agency (Cal/EPA) as the primary state agency responsible for establishing climate change emission reduction targets throughout the state. The Climate Action Team, a multi-agency group comprised of various state agencies, was formed to implement the Executive Order S-3-05. Shortly thereafter in 2006, the team introduced GHG emission reduction strategies and practices to reduce global warming. These measures are aimed at meeting the Executive Order's long term goal of reducing GHG emission to 80 percent below 1990 levels by 2050.

2.4.2.2 Global Warming Solutions Act of 2006 (AB-32)

The Global Warming Solutions Act, or Assembly Bill 32 (AB-32), was adopted in 2006 by the California legislature, establishing two key requirements in regard to climate change reduction measures. The first requires that California GHG emissions be capped at 1990 levels by 2020, and the second establishes an enforcement mechanism for the GHG emissions reduction program with monitoring and reporting implemented by the California Air Resources Board (CARB).

In 2008, the Assembly Bill 32 Scoping Plan was released by CARB which describes measures to implement the requirements set by AB-32. In addition to partnering with local governments to encourage the establishment of regional emission reduction goals and community regulations, the Scoping Plan uses various mechanisms to reduce emissions statewide, including incentives, direct regulation, and compliance mechanisms.

2.4.2.3 Assembly Bill 1493 (The Pavley Bill)

Assembly Bill 1493, widely known as “The Pavley Bill”, was passed in 2002 and authorizes CARB to establish regulations to reduce the GHG emissions from passenger cars and light trucks by 18 percent by 2020 and 27 percent by 2030 from 2002 levels. This aggressive bill was temporarily blocked by the US EPA in March 2008 and later received a waiver of approval for implementation throughout California in June 2009.

2.4.2.4 Low Carbon Fuel Standard (LCFS)

The Low Carbon Fuel Standard (LCFS) was established in January 2007 by Executive Order S-01-07 and requires California fuel providers to decrease lifecycle fuel carbon intensity of transportation fuels by 10 percent from 2007 levels by 2020.

2.4.2.5 California Renewables Portfolio Standard

The California Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill 1078 and mandated that electrical corporations increase its total procurement of eligible renewable resources by at least 1 percent a year to reach a goal of 20 percent electricity generation from renewable resources. These goals were accelerated in 2006 under Senate Bill 107, which mandated that at least 20 percent of the total electricity sold be generated from renewable resources by the end of 2010. The RPS was further extended in 2008 by Executive Order S-14-08, which required that 33 percent of total electricity sales be generated from renewable resources by 2020. In April of 2011, this RPS standard of 33 percent renewable by 2020 was enacted into law through final passage of Senate Bill X 1-2 (Simitian) and extended to apply to both public and investor owned utilities.

2.4.2.6 Senate Bill 97

Senate Bill 97, passed in 2007, required the Governor’s Office of Planning and Research (OPR) to develop and recommend amendments to CEQA Guidelines for addressing GHG emissions related to land use planning. The amendments to CEQA were approved and became effective in March 2010, thereafter requiring all CEQA documentation to include and comply with the new amendments established for addressing greenhouse gas emissions.

2.4.2.7 Senate Bill 375

Senate Bill 375 was passed in 2008 to reduce GHG emissions caused indirectly by urban sprawl throughout California. The bill offers incentives for local governments to execute planned growth and development patterns around public transportation in addition to revitalizing existing communities. Metropolitan Planning Organizations (MPOs) work with CARB to reduce vehicle miles traveled by creating sustainable urban plans

with a comprehensive focus on housing, transportation, and land use. Urban projects consistent with the MPO's Sustainable Community Strategy (SCS) can bypass the CEQA's GHG emission environmental review. This provides developers with an incentive to comply with local planning strategies which support the State's greater effort for overall emission reduction in the land use and transportation sector.

2.4.2.8 Assembly Bill 341

Starting July 1, 2012, businesses and public entities, including schools and school districts that generate four cubic yards or more of waste per week and multifamily units of five or more, will be required to recycle, if they are not already doing so. AB 341 also establishes a statewide goal of 75 percent diversion of solid waste to landfills. The purpose of this new law is to reduce greenhouse gas emissions by diverting commercial solid waste to recycling efforts and expand opportunities for additional recycling services and recycling manufacturing facilities in California.

2.4.2.9 Regional Air Pollution Control District (APCD) and Air Quality Management Districts (AQMD)

In 1947, the California Air Pollution Control Act was passed and authorized the creation of Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs) in every county. APCDs and AQMDs are tasked with meeting federal and state air pollution requirements set by the Clean Air Act and can develop regulations to achieve the necessary public health standards, though these regulations need approval from CARB and the US EPA. APCDs and AQMDs have jurisdiction over businesses and stationary sources of emissions and can offer varying levels of outreach, grants, and CEQA review and technical assistance to interested public and private parties. The APCDs and AQMDs do not have the authority to regulate mobile air pollution sources, which is the responsibility of CARB, and must defer to state or federal regulations provided by the California Air Resources Board and the U.S. Environmental Protection Agency. Cabrillo College falls under the jurisdiction of the Monterey Bay Air Pollution Control District.

SECTION 3. VISION STATEMENT, GOALS, AND PRIORITIES

The Campus Sustainability and Climate Planning Subcommittee has developed the following Statement to guide Cabrillo in its Sustainability Planning efforts.

Sustainability can be defined as meeting the needs of the present while ensuring that future generations can meet their needs. We recognize our responsibilities as an institution entrusted with the education of future generations and as good citizens of the local and the global communities to ensure that our operations are as sustainable as possible.

To realize this Statement, the Campus Sustainability and Climate Committee has defined the following sustainability goals and priorities. The goals and priorities for the Sustainability Plan reflect campus needs, interests, and available resources.

Area of Sustainability	Established Goal
Energy Use Reduction	Steadily reduce energy usage by 2 percent every year from a baseline peak year of 2009.
Green Building Standard	Follow the United States Green Building Council standard for renovations and new buildings.
Renewable Energy Use	Use more renewable energy on campus such as installing photovoltaics and wind generation.
Water Use Reduction	Adhere to statewide mandate of a 25 percent reduction of water usage by 2020, compared to a 2013 baseline. Follow Cabrillo's Water Efficiency Program .
Waste Diversion and Management	Divert 75 percent of solid waste from landfills by 2020.
Transportation Efficiency	Reduce total staff, faculty, and student vehicle miles traveled (VMT) by 25 percent from 2011 levels by 2020.
Greenhouse Gas Reduction	Reduce GHG emissions 2 percent annually, and achieve carbon neutrality by 2060.

Purpose: The Cabrillo Community College District Governing Board commits to environmental sustainability, reducing the use of fossil fuels, the reduction of greenhouse gas emissions, and sustainability in the curriculum as a fundamental operational objective integral to the strategy of fulfilling our educational mission.

Sustainability can be defined as meeting the needs of the present while ensuring that future generations can meet their needs. We recognize our responsibilities as an institution entrusted with the education of future generations and as good citizens of the local and global communities to ensure that our operations are as sustainable as possible.

The District Board of Trustees, faculty, staff, and students have been proactive in implementing sustainability

programs at the campus for the past several years and wish to establish and implement a sustainability plan for the reduction of the carbon and environmental footprint of college operations.

These efforts will also help meet the commitments of the American College & University Presidents Climate Commitment for carbon neutrality at the campus, of which the District is a signatory.

Therefore, it is requested that Cabrillo Community College Governing Board adopt this Sustainability Plan. The Plan will consist of broad sustainability recommendations, Plan Goals, and Implementation Programs that will lay a roadmap for the District to help to achieve our Sustainability goals.

SECTION 4. PROGRAMS AND PROJECTS FOR IMPLEMENTATION

Based on the goals and priorities described above, the Campus Sustainability and Climate Planning Subcommittee has selected the following programs and projects to actively improve campus sustainability.

These key actions were selected from a menu of suggested programs and projects from Section 7 of the California Community College Sustainability Template.

4.1 MANAGEMENT AND ORGANIZATIONAL STRUCTURE

4.1.1 Adopt a District Sustainability Policy

A Sustainability Program Plan and Narrative will be proposed to the governing board for adoption into official campus policy.

This document presents guidelines and recommendations that the college can take advantage of to save resources and money, while increasing campus sustainability. This Sustainability Plan will enable members of the College community to engage in a variety of programs that benefit campus sustainability, reduce waste, be more energy efficient and reduce personal and institutional carbon footprint and to educate by example, for a sustainable future for our students and community .

4.1.2 Appoint a Sustainability Director and Establish an Office of Sustainability

It is recommended to hire a full time position to oversee sustainability planning and implementation, and to advocate for sustainability in the District.

A point person, whose main job is sustainability planning and coordination, will greatly benefit Cabrillo in a variety of ways. Resource management would increase, transportation programs could be developed, outreach to the community and on campus would expand, more grants could be obtained and managed, project management capacity would increase and best practices be more fully integrated into the curriculum and campus culture. Many colleges and universities have created Sustainability Offices that are dedicated to institutionalize sustainability, improve environmental performance, create centralized communication, outreach, and education, reduce GHGs, and to integrate sustainability into the classroom.

When it comes to sustainability, there is a lot to do. Technical problems must be assessed, presentations and outreach programs for both the institution and community developed, and events must be created and managed in a holistic manner in order to integrate the practice of sustainability campus-wide. Hiring a jack-of-all-trades type of person, who has both technical and social organizing skills as well as intimate knowledge of Cabrillo is a next step forward for sustainability on our campus.

4.1.3 Appoint a Campus Sustainability Committee

The Sustainability and Climate Planning Subcommittee has been formed as a subcommittee of the Facilities Planning Committee, and has been meeting monthly since 2014.

Much of the sustainability progress made may be attributed to the advocacy of sustainability that each individual member of the Sustainability and Climate Planning subcommittee continually shows. This subcommittee has been the backbone of sustainability efforts at Cabrillo. They are a great central hub for information, resources, and ideas about sustainability at Cabrillo.

The Sustainability Council is a student club. They have discussed a proposed \$1 per student per semester sustainability contribution. If this measure was to be accepted by the Student Senate and passed by vote of the student body, the Sustainability Council and Student Senate would manage and distribute this contribution in order to increase environmental performance at Cabrillo. This money could be used to fund student led sustainability initiatives, conference attendance and to pay for memberships of nationally renowned sustainability organizations, such as Second Nature who runs the American College & University President's Climate Commitment.

4.1.4 Funding and Resources to Support Sustainability Activities

Strive to locate local, state, and national funding and resources that will promote energy reduction and resource conservation. Consider starting a Green Revolving Fund, which is a way to sustain energy efficiency projects based on the dollar savings created by the project.

Cabrillo is often eligible to apply for local, state, and national funding for sustainability. The California Energy Commission, the California Conservation Corps, and PG&E, are all examples of organizations that may provide resources which could benefit Cabrillo. Applications and proper management of these funds and resources will push the college towards its sustainability and energy goals much faster than compared to the absence of these funds.

A Green Revolving Fund is an internal fund that provides financing to parties within an organization to implement energy efficiency, renewable energy, and other sustainability projects that generate cost-savings. These savings are tracked and used to replenish the fund for the next round of green investments, thus establishing a sustainable funding cycle while cutting operating costs and reducing environmental impact. Financing a Green Revolving Fund is an effective, efficient way to invest in sustainability while incentivizing projects that save a lot of money.

4.1.5 Employ Sustainability Professionals, as Required

When tackling energy, water, and waste projects that require professional input, vet professionals for interest and capability in adhering to sustainable practices.

Sustainability professionals may range through a variety of disciplines. Sustainability professionals could be, but are not limited to, electricians, architects, landscapers, and energy engineers. These professionals will likely be required for several projects if we are to reach our sustainability and energy goals.

4.1.6 Integrate Sustainability Planning into Campus Master Plan

Consider integrating the Sustainability Plan with the Facilities Master Plan.

As a document which has strong ties to facilities planning, the Facilities Planning Committee (FPC) should be aware of Cabrillo's Sustainability Plan. The FPC should feel free to vet and offer recommendations to edit the Sustainability Plan, in order to make sustainability goals more feasible.

4.1.7 Consider Sustainability in Endowment and Fund Balances Investments

Consider divesting from fossil fuels. Consider forming scholarships for students to support their sustainability research and endeavors.

Scholarships are handled through the Cabrillo Foundation which has a significant endowment. Through careful fiscal management Cabrillo has some general fund savings. These funds, if divested from fossil fuel investments, would serve to educate and create a sustainable future. Hundreds of colleges, foundations, and governments have begun the process of divesting their funds from fossil fuels, including Foothill DeAnza Community College District Foundation, Peralta Community College District, the California Public Employees' Retirement System (CalPERS and CalSTRS).

4.2 ENERGY EFFICIENCY

4.2.1 Energy Efficiency and Emissions Reduction Goals

Cabrillo has a Board approved Energy Plan from 2009. Cabrillo is a signatory of the American Colleges and University President's Climate Commitment (ACUPCC). Explore and strive to meet the goals in line with Cabrillo's ACUPCC goals.

Cabrillo's Board adopted an [Energy Plan from 2009](#). This plan outlines Cabrillo's path toward energy efficiency and renewable energy. This plan is a fantastic roadmap for how energy reductions at Cabrillo could be reduced. Much of this plan has goals and projects that have yet to be completed. It is recommended to continue to work toward the goals outlined in the Sustainable Energy Plan.

As part of Cabrillo's membership with the American Colleges and Universities Presidents' Climate Commitment, we have created emissions reductions goals. Cabrillo should strive to meet the goals below.

15% reduction in Purchased Electricity Emissions	by 2020	relative to baseline emissions in 2008
20% reduction in Total Scopes 1, 2, 3 Emissions	by 2020	relative to baseline emissions in 2008
50% reduction in Total Scopes 1, 2, 3 Emissions	by 2030	relative to baseline emissions in 2008
80% reduction in Total Scopes 1, 2, 3 Emissions	by 2050	relative to baseline emissions in 2008

4.2.2 Develop Mechanisms for the Implementation of Energy Efficiency Projects and Equipment

Consider hiring an Energy Coordinator and/or support outside of Cabrillo.

It has been recommended previously, in the [2009 Energy Plan](#), that we hire a dedicated energy coordinator. An energy coordinator would be somebody who could get to intimately know the ins and outs of campus energy usage. This person could have the technical knowledge to implement and direct energy efficiency projects that can increase human comfort and save money. This person would have the expertise to evaluate feasibility of projects; including economics (savings to investment, payback period, etc.), kilowatt hours reduced, GHG emissions reduced, maintenance savings, increased comfort, (through efficient HVAC, better insulation, etc.) increased lighting quality, increased dependability of equipment, (Longer lasting lights, early retirement of inefficient equipment), etc.

4.2.3 Conduct Comprehensive Facility Audit and Prioritization Plan

The Energy Coordinator or outside support should conduct a campus-wide audit and prioritization survey which will target buildings that offer the greatest potential for energy savings.

A comprehensive energy audit would set a baseline for what projects could show the most economic and impactful money and energy savings. Professional audits will clearly spell out which energy efficiency measures are feasible and worth the money.

Cabrillo needs a large influx of sustained capital in order to maintain safe, operable, and efficient workspace, classrooms, and facilities. Prioritizing energy projects for buildings on campus can inform Cabrillo's Facilities department about which projects are the most favorable to execute. Energy plays a significant role in evaluating Cabrillo's Total Cost of Ownership. Every year, Cabrillo spends approximately 1 million dollars on energy. The Total Cost of Ownership study and data should take into account the possibilities for savings by changing business as usual practices. Projects that may cost more initially, but can recoup their expense in reduced energy consumption, maintenance, or other costs over the next 20 years should be considered. A full-scale, holistic facility audit would help bring light to interrelated projects which could radically decrease our Total Cost of Ownership.

4.2.4 Implement New and Existing Audit Recommendations

Finance favorable energy efficiency projects from the Green Revolving Fund and return savings to the fund for future projects.

Implementing the [2009 Energy Plan](#) and new audit recommendations is the tangible way that College will realize its sustainability goals. This will require time, money, and dedication from a variety of stakeholders present at Cabrillo.

4.2.5 Implement Ongoing Energy Monitoring

An important next step for energy efficiency is to install metering infrastructure for the entire campus. Monitored data from energy meters enhance energy efficiency decision making as well as provide data for determining progress toward goals .

Initially, we can use energy data to trend usage across days, weeks, months, and years. This data can create a baseline which can be analyzed for potential energy efficiency projects. With granular data, we can target specific measures such as behavioral measures, HVAC, lighting, etc. Post-energy efficiency measures, monitoring will enable the College to analyze energy savings to see if the project lived up to it's potential. This information can be used to determine whether similar energy efficiency projects across campus are feasible and impactful.

4.2.6 Participate in Demand Response Programs

FP&PO should continue to work with PG&E with their Demand Response Program.

From the PG&E website, "Our Demand Response programs offer incentives to businesses who reduce the energy use of their facilities during times of peak demand." Cabrillo should continue to work with PG&E in order to reduce the energy load on the grid during times of peak demand, in order to reduce our energy consumption and to save money.

4.2.7 Identify and Take Advantage of Grant and Incentive Programs

It is recommended to consult with the Sustainability and Climate Planning Subcommittee in order to

locate grants, incentives, and other resources available for energy, water, waste, and outreach projects.

Leveraging grant and incentive money is a difficult task. There are many options for Cabrillo to win grant awards for sustainability, but this process is not facilitated enough by Cabrillo to meet our sustainability goals at this time. The Sustainability and Climate Planning Subcommittee often times has knowledge of available grants and resources eligible for access by Cabrillo. Cabrillo staff, faculty, and students should feel free to inquire about such grants and resources. Chasing down grants and incentives should also be part of the job description for an Energy Coordinator at Cabrillo. Alternatively, acquiring energy efficiency grants and incentives could be added to current staff job descriptions.

4.2.8 Establish an Energy Efficiency Purchasing Policy

It is recommended to purchase EnergyStar branded equipment.

Any new equipment purchasing should strive to ensure that energy efficient purchases are being made. Energy Star branded products are a trusted designation that promotes the procurement of energy efficient products. Energy Star has a huge variety of products, ranging from appliances, electronics, office equipment, building products, lighting, water heater, commercial foodservice equipment, and heating and cooling.

<https://www.energystar.gov/>

4.3 FACILITIES OPERATION

4.3.1 Encourage and Support Energy Efficiency Training of Staff

Provide training in order to promote energy saving behaviors.

Staff at Cabrillo often times have access to the energy systems throughout our campus such as thermostats, lighting, computers, HVAC controls, and lab equipment. Staff should be aware of energy saving behaviors that can be applied when at work at Cabrillo. For example, faculty and staff should be trained to be mindful of leaving computers, lights, and lab equipment on when not in use. Thermostats should be set to reasonable levels, and turned off when rooms are not in use. Facilities should encourage a no-idling campaign. Most people do not know that idling for more than 10 seconds will not save gas, when compared to turning off the engine and restarting it. <http://www.thehcf.org/antiidlingprimer.html>

4.3.2 Fine-Tune Building Management Systems

Monitor and fine-tune Cabrillo's Building Management System (BMS) in order to maximize human comfort and efficiency.

A comprehensive Energy Management System (EMS) which integrates any existing Building Management System (BMS) should be employed. An EMS system and trained operator would be able to monitor and control HVAC, lighting, and other energy using equipment. Temperature set points and operating times can then be

fine-tuned in order to optimize human comfort and efficiency of these systems.

4.3.3 Activate Energy-saving Features for Appliances and Computers

It is recommended to instate the Power Saving power option for all computers at Cabrillo as a default. Where possible, install virtual machines rather than PCs. Look into IT Energy Management.

Computers throughout campus are set to a preferred default energy mode. This mode may not always be the most energy efficient for the use of that computer. Alternatively, the Power Saver setting will turn off a display after 5 minutes of inactivity, and put the computer to sleep after 15 minutes of inactivity. The Power Saving mode could be instated for all computers at Cabrillo as a baseline, and users could tweak their settings as necessary.

There is software which monitors and controls electrical use of devices connected to an IT network, this includes laptops, monitors, IP phones, wireless access points, copiers and printers. The software can intelligently switch on and off devices based on trends that it calculates. This software could help to reduce thousands of kWhs, and potentially hundreds of thousands of dollars. See chart below for a quote from Cisco Systems, Inc.

License type/duration	Cost	Savings kWh	Savings \$	ROI	PG&E rebate	ROI with rebate
5 year cloud	\$120,500	2,400,000	\$374,160	3.1	\$37,500	3.4
3 year cloud	\$83,450	1,440,000	\$224,496	2.7		
1 year cloud	\$35,000	480,000	\$74,832	2.1		

4.3.4 Pursue Monitoring-Based Commissioning (MBCx)/Retro-commissioning (RCx)

Energy consultants should consider utilizing MBCx or RCx incentive programs when researching potential energy projects.

MBCx and RCx are both PG&E incentive programs which pay back a portion of projected energy savings after energy efficiency measures are commissioned in a building. MBCx and RCx are powerful tools to enhance the financial feasibility of energy projects. Energy consultants should be aware of these programs, but should be reminded that we strongly prefer to utilize any and all existing rebate or incentive programs.

4.4 SUSTAINABLE BUILDING PRACTICES

4.4.1 *Establish a Green Building Standard for New and Existing Buildings*

When constructing or renovating existing buildings, it is recommended to follow the guiding principles set forth by the US Green Building Council.

Cabrillo will adhere to [Guiding Principles for Sustainable Existing Buildings put forth by the US Green Building Council \(USGBC\)](#). We recognize that in addition to environmental and economic benefits to providing sustainable facilities it is actually part our mission to educate future generations. Facilities are therefore part of our curriculum.

Building Renovations

At this point in time Cabrillo is due for significant building renovation projects. The USGBC Guiding Principles for Sustainable Existing Buildings provides a way to insure that these renovations will make the campus more sustainable.

4.4.2 *Use an Integrated Systems Approach in Building Design*

Consider designing major systems that span across several buildings, instead of one.

When designing new buildings, major systems can utilize economies of scale to serve several buildings by designing large systems that span across several buildings, instead of one.

4.4.3 *Hire Sustainable Building Design Professionals*

All architectural firms, consultants, and energy engineers hired by Cabrillo College should be experienced in sustainable building design processes to assist in constructing energy and resource efficient buildings.

Cabrillo should prefer LEED accredited individuals for work involving design of systems at Cabrillo.

4.5 ON-SITE GENERATION AND RENEWABLE ENERGY

4.5.1 *Evaluate Clean Cogeneration and Renewable Energy Generation*

Install photovoltaic and, possibly, wind generation systems on our campus. Cabrillo has an excellent site for solar photovoltaics, and preliminary feasibility reports indicate that solar would perform exceptionally at Cabrillo.

Solar Photovoltaics (PV) are playing a huge role in creating sustainable, cheap, and carbon-free electricity. Cabrillo College has huge potential for PV and passive solar design systems. Cabrillo has great sunny exposure and many previously developed areas, such as parking lots, that would optimal for placing a PV system. As of 2016, Cabrillo is planning on utilizing Proposition 39 funds to purchase a PV system for Parking Lot J. This

system will serve as a pilot project, and will show the capabilities of a large-scale PV system installed at Cabrillo.

[A feasibility report, regarding a large-scale PV system was prepared for Cabrillo. Click here to view that report.](#)

4.5.2 Evaluate Load Shifting Technologies

Load shifting technology can more evenly distribute Cabrillo's electrical load, alleviating demand charges from PG&E.

Load shifting technology will become more important as more and more appliances and vehicles become electric. Load shifting technology, in basic terms, is a battery array that charges when utility rates are low or solar power is being generated, and expends energy when utility rates are high or it is dark. Usually, this means charging a battery at night, and dispensing that energy back into the grid during peak demand hours (usually within noon to 6pm). The dispensation of energy from the battery reduces the load coming from the utility, therefore reducing demand charges. Charging many electric vehicles all at once can cause a spike in Cabrillo's electrical usage. Load shifting technology may counter this spike, therefore reducing the demand charges associated with spikes in electrical usage. An initial quote from [GreenCharge network can be found by following the link](#). GreenCharge estimates that \$177,000 dollars could be saved over a 10 year period of time.

4.5.3 Minimize Greenhouse Gas Intensity of Purchased Electricity

When available, consider a low-carbon intensity energy mix from PG&E. Alternatively, look into Community Choice Aggregation (CCA), which can allow customers to purchase 100 percent renewable energy from a 3rd party energy supplier.

PG&E is looking into providing a 100 percent renewable energy option. If purchasing a clean energy mix from PG&E is an option, Cabrillo should seriously look into the environmental benefits of switching from a dirty energy mix to a clean energy mix.

Similarly, a CCA acts like a utility, allowing customers to purchase 100 percent clean electricity from a PV solar site. Many jurisdictions have this option, and the Monterey Bay Community Power is currently studying the feasibility of offering CCA for the residents of Santa Cruz.

4.6 TRANSPORTATION, COMMUTING, AND CAMPUS FLEET & TRAVEL

4.6.1 Understand Commute and Travel Patterns

Continue collecting transit data for staff, faculty, & students. Solicit help from the Office of Planning and Research in order to study commute choices and patterns.

Transportation accounts for approximately 50 percent of Cabrillo's carbon footprint. There is enormous potential to prevent a tremendous amount of carbon dioxide and particulates from entering our atmosphere by taking action to lessen single-person car trips to campus.

In spring 2015, travel data was compiled by the Office of Planning and Research. [Follow the link to view the data.](#) From this data, we can make informed decisions how to combat inefficient travel behaviors, such as driving alone. 54.5 percent of students drive alone, according to the survey. This data is powerful when targeting behaviors that could have significant impact on Cabrillo's carbon footprint.

4.6.2 Encourage and Enhance Public Transportation and Ridesharing Options

Advocate for a transportation fee to provide every registered Cabrillo student with sustainable transportation options.

Cabrillo, as a college, should negotiate and advocate for sustainable transportation options for all students, and employees. Making sure there are adequate bus and carpool opportunities is crucial to our mission of equitable education. Offering a no or low cost bus pass for all Cabrillo commuters will almost certainly increase bus ridership and decrease carbon emissions.

4.6.3 Encourage and Enhance Bicycling Options

Provide support to expand services for the Bike Co-op. Support community bicycling lane installation. Continue to provide excellent bicycle locking infrastructure.

The Bike-Co-op is committed to bicycling advocacy throughout Cabrillo and in the bicycling community. They offer a multitude of services, free of charge, in order for cyclists to have a safe and operational bicycle. Additionally, the Bike Co-op offers bicycles for sale at reduced costs. The Bike Co-op should continue to be supported fully by the college.

4.6.4 Improve Campus Fleet & Travel

When possible, replace on-campus vehicles with hybrid or electric models. Encourage policies that reduce or eliminate the need for gasoline and diesel trucks.

Currently, many FP&PO staff need the utility of a gasoline powered pick-up truck in order to maintain the college. Hybrid trucks are a great alternative option that would save on gasoline used by idling and driving around campus for maintenance reasons. Extra funding should be made available in order to purchase hybrid or electric trucks.

Electric charging stations are a necessity for a college that is planning to utilize electric vehicles. Charging stations will promote electric vehicle purchasing, ownership, and use from commuters and for inter-campus operations. Installation of charging stations is a great way to incentivize carbon-free travel to Cabrillo. Cabrillo can be a leader in facilitating the transition to electric vehicles by installing charging stations.

4.6.5 Enhance Student Distance Learning

Promote online education initiatives.

“The California Virtual Campus (CVC) provides complete, timely, and accurate information about online courses and programs in California higher education with a strong emphasis on the California Community College” -California Community Colleges Online Education Initiatives Website

Distance learning alleviates the need for any sort of transportation to and from a class.

[View the link from California Community Colleges Online Education Initiative](#) to learn more.

4.6.6 Support Rideshare Program with Incentives

A funded, college sanctioned program in ridesharing could cut carbon emissions related to transportation immensely. Program should be tailored to college campus and be app driven.

Currently, there is no centralized system to facilitate carpooling for students, staff, and faculty to and from Cabrillo. There are several websites and iDevice applications that can serve the purpose of facilitating carpooling to and from campus. The college should choose a particular system and promote and incentivize participation.

4.7 WATER, WASTEWATER, AND SUSTAINABLE LANDSCAPING

4.7.1 Create and Meet Water Conservation Goals

Review and approve Cabrillo's Water Efficiency Program. This plan outlines Cabrillo's historical usage, and recommends water efficiency goals.

[Please view link for Cabrillo’s proposed Water Efficiency Program.](#)

This program explains the need for water efficiency at Cabrillo, and how water efficiency goals may be obtained.

4.7.2 Implement Water Conservation Strategies

Cabrillo's Water Efficiency Program has several strategies laid out in order to reduce the impact of water usage at Cabrillo.

[Please view link for Cabrillo’s proposed Water Efficiency Program.](#)

This program explains the need for water efficiency at Cabrillo, and how water efficiency goals may be obtained.

4.8 SOLID WASTE REDUCTION AND MANAGEMENT

4.8.1 Create Waste Reduction Goals

UCSC has done fantastic work with reducing its landfill impact. Cabrillo should form and utilize a relationship with UCSC in order to inform and guide us in our journey to zero unnecessary waste at Cabrillo.

Currently, recycling at Cabrillo is mainly handled by contracted service providers, Bayside Center and Hope Services. They service both upper and lower campus, collecting the paper and cans/bottles bins. Bayside then sorts the contents of the cans/bottles bin, collecting cans and plastics #1 and #2, while recycling the rest. We have recently launched an education initiative in hopes of increasing diversion. This initiative includes: new labeling on all outside bins, flyers/posters for inside classrooms, emails sent out to all staff, faculty, and students reminding them of what is acceptable to recycle and what is not. We would like to include a standardized reminder on all syllabi that should be read at least once a semester to students. Ideally, to maximize efficiency in our recycling program we need to educate from the top down -- starting with our staff and faculty then expanding to our student body as a whole.

Our previously mentioned goal dictates that we should be diverting 75 percent of waste from landfills by 2020. This means that 75 percent of waste materials will need to be diverted from traditional disposal such as landfilling or incineration to be recycled, composted, or re-used.

A student employment position has been making great strides toward increasing the efficiency of our recycling program. This position should be continued and charged with meeting our diversion rate goals.

4.8.2 Reduce the Waste Stream to the Landfill

Our goal should be to keep everything that is recyclable or compostable out of the landfill. Adopting low-packaging products for sale will also reduce landfill impact.

Recently, a recycling survey was submitted to staff and students. The results show that a majority of students, staff, and faculty are in favor of composting. Currently, Cabrillo does not have a large commercial composting contract with GreenWaste. If we were to instate one, Cabrillo would realize a significant increase in our diversion rate.

4.8.3 Reduce single-use plastic food and beverage container.

Create a reduction plan which eventually eliminates the need for single use beverage bottles and food containers.

A purchasing plan that eventually eliminates the need for single use beverage bottles and food containers would have a significant impact on our waste diversion rate. A good place to start would be

to ban plastic water bottles on campus. They are an unnecessary item which causes environmental impact, and could easily be replaced with more sustainable options such as reusable water bottles. Cabrillo students are working with [Take Back the Tap](#), which will guide us in our mission to reduce single use bottles.

4.9 GREEN PURCHASING

4.9.1 Sustainable Food Purchasing

Cabrillo will adopt a sustainable food purchasing policy. This policy will include language for locally sourced and organic food purchasing. The goal is to have a majority of purchases be locally sourced.

Cabrillo is advised to adopt a sustainable food purchasing policy. This policy, as a goal, should require 50 percent of food purchases to be locally sourced with an emphasis on organic. The goal is to have purchases be close to 100 percent locally sourced by 2025. Locally sourced, for Cabrillo, will be defined as within 100 miles of Santa Cruz County. This will enable Cabrillo to start making food purchasing choices based off of what naturally grows in our locality. GHG emissions reductions will be a result of lower food transportation mileage. Additionally, unnatural inputs to produce foods *not* sourced locally have an associated GHG footprint, due to intensively adding resources (water, fertilizers, pesticides) to the crop or livestock that is for that products growth.

4.9.2 Green Purchasing Practices

Cabrillo is advised to adopt a sustainable purchasing policy following the US EPA comprehensive procurement guidelines as a minimum. Paper products should be 100 percent recycled. Cabrillo should develop a 'Green Cleaning' program utilizing cleaning products that are certified green and sustainable.

The Student Senate has lead the way by passing a sustainable purchasing policy for student clubs in 2011. This policy of using biodegradable products for serving food should be extended to include all campus organizations.

4.9.3 Socially Responsible Purchasing

Cabrillo recognizes the importance of socially responsible purchasing by doing business with vendors that adhere to fair trade and fair labor practices, pay living wages, and are otherwise socially responsible. Fair trade, sustainable coffee should be available for purchase at the campus café. The campus bookstore is recommended to belong to buying groups that pledge to socially and ethically responsible practices. All items sold through the bookstore should be produced using fair labor practices.

Sustainable and socially responsible purchasing goes hand in hand. Looking into the process and human economics behind the production of projects that are purchased need to be checked in order to verify

that basic human rights are being met behind the production of these products.

For instance, fair trade and sustainable coffee should be available for purchase at campus cafés and the campus bookstore. All aspects on campus that procure anything should enact policy to socially and ethically responsible practices.

4.10 STUDENT AND CURRICULUM DEVELOPMENT

4.10.1 Create a Subcommittee in the Academic Senate Devoted to Sustainability

Consider incorporating existing Sustainable Curriculum Working Group into Faculty Senate.

Creating subcommittees for sustainability inside existing shared governance structures of Faculty & Student Senates and partnering them to accomplish specific tasks will build the campus culture of sustainability. The Sustainable Curriculum Working Group has been meeting since 2008, and have been striving to help faculty include sustainability into their courses.

4.10.2 Provide Professional Development opportunities for sustainable curriculum development.

Create opportunities for students and faculty to attend and present at statewide and national sustainability conferences such as AASHE, CHESC, and This Way to Sustainability.

Providing a space on campus (Office of Sustainability) for their work and projects will unify and further the effectiveness of their efforts, see 4.1.2.

4.10.3 Utilize Different Pathways to Integrate Sustainability into the Curriculum

Engage faculty & staff to serve as advisors and support student sustainability related clubs.

Sustainability as a campus-wide effort is not currently addressed specifically in various program plans and therefore needs to be addressed and accepted in this overarching plan.

4.10.4 Create a Subcommittee in the Student Senate Devoted to Sustainability

Reinstate a subcommittee in the student senate, in order to participate in the shared governance structure of Cabrillo. Providing meeting space in an Office of Sustainability could increase subcommittee attendance and effectiveness.

4.10.5 Offer Training Opportunities for Students

Offer Cooperative Work Experience Education (CWEE), Environmental Science 50 (ES50 - Local Sustainability Research and Solutions) or other course opportunities for sustainability service learning.

These classes will provide hands-on experience within the realm of sustainability. Hands-on experience with sustainability is an effective way to bridge the gap between learning goals at Cabrillo and the world of sustainability in a work environment. The Pacific Energy Center offers free trainings on energy and water efficiency, solar PV, and a myriad of other energy classes. Providing transport for free Pacific Energy Center trainings would enable students to be exposed to a great resource when it comes to learning about energy.

4.10.6 Develop an Interdisciplinary Sustainability Certificate

Coordinate members of Student & Faculty Senate and Sustainability committees to plan and develop a Sustainability certificate.

The Sustainable Curriculum Working Group is currently researching what other two-year colleges have in place for a sustainability certificates. These guidelines will be used to create one at Cabrillo College.

4.10.7 Develop Sustainability Curriculum In all Disciplines

Provide professional development for faculty. Count courses with sustainability content and post offerings online.

Continue to hold sustainability-related events during fall and spring FLEX weeks as well as throughout the year. Assist faculty in sustainable curriculum development. Assess course content for themes in sustainability and post lists of courses on the GreenSteps website to meet student demand.

4.10.8 Promote use of Online Resources

Provide professional development and encourage faculty to use online course management systems to deliver course content and assessments rather than paper handouts.

Paper carries a sizable carbon footprint and copy machines add to emissions with energy use. Online materials can be accessed by all students on campus.

4.11 CAMPUS AND COMMUNITY OUTREACH & AWARENESS

4.11.1 Maintain a Website Dedicated to Campus Sustainability

Cabrillo's online sustainability outreach campaign has been branded "Green Steps." This is an official Cabrillo website, and should notify the Cabrillo community about progress and events related to sustainability.

<http://greensteps.cabrillo.edu/>

4.11.2 Promote Sustainability Events

Include events such as hosting speakers for Earth Week, scheduled presentations and speakers on

campus, including during flex weeks and All College Day. Collaborate with other colleges and universities to create opportunities for presentations. Bike to Work Day, Earth Week, Sustainability Day. Work with campus student clubs at Cabrillo, and with other institutions.

4.11.3 Campus Specific Outreach & Awareness

Work with faculty, students, and staff to create and place information about campus sustainability efforts. Create opportunities for students to engage in sustainability events. Solicit articles written by The Voice that include sustainability initiatives.

4.11.4 Broader Community Specific Outreach & Awareness

Work with Cabrillo marketing and local media to publicize Cabrillo's sustainability efforts. Participate with local, regional, and national initiatives, such as Monterey Bay Regional Climate Compact, Second Nature (ACUPCC), and Association for the Advancement of Sustainability in Higher Education.

Provide funding for Cabrillo Sustainability and Climate Planning committee members to attend conferences such as California Higher Education Sustainability Conference, California Student Sustainability Convergence, AASHE, and This Way to Sustainability.

4.11.5 Sustainability Blog

The Sustainability Director could maintain a blog on the GreenSteps.Cabrillo.edu website to provide the campus and broader community with information on progress, events, projects etc.

4.11.6 Assess Sustainability and Climate Literacy of Students & Faculty

Create an online "what you know about sustainability" survey for students and faculty.

During Welcome Week, advertisements for an online "what you know" survey can be displayed and students and faculty will be urged to participate. Data from this survey may be used in order to start educational outreach campaigns based off of what students don't know about sustainability.

4.12 CREATE A CLIMATE ACTION PLAN

4.12.1 Make a Commitment to Reduce Greenhouse Gas Emissions

Cabrillo is a signatory of the American Colleges and University President's Climate Commitment (ACUPCC). Explore and strive to meet the goals in line with Cabrillo's ACUPCC goals.

[Please follow this link to view Cabrillo's climate goals, through the ACUPCC.](#)

Interim Milestone Emission-Reduction Target	Target Date	Baseline
15% reduction in Purchased Electricity Emissions	By 2020	relative to baseline emissions in <u>2008</u>
20% reduction in Total Scopes 1, 2, 3 Emissions	By 2020	relative to baseline emissions in <u>2008</u>
50% reduction in Total Scopes 1, 2, 3 Emissions	By 2030	relative to baseline emissions in <u>2008</u>
80% reduction in Total Scopes 1, 2, 3 Emissions	By 2050	relative to baseline emissions in <u>2008</u>

4.12.2 Perform a Greenhouse Gas Inventory

Cabrillo's last greenhouse gas (GHG) inventory was completed in 2014. As conditions change at Cabrillo, so will our GHG emissions. GHG reports should be completed every 3 years by the Sustainability Director and the Sustainability and Climate Planning Subcommittee.

[Please click here to view Cabrillo's 2014 GHG inventory.](#)

4.12.3 Regularly Monitor and Report Progress to Campus

Annual greenhouse gas (GHG) emissions, electricity, natural gas, vehicle miles traveled, flights, and paper use, should be tracked and data compiled. Reports submitted to meet ACUPCC requirements

are [public on this website](#) .

This could be another responsibility for the proposed Sustainability Director working with the Planning and Research Office.

SECTION 5. MEASURE AND REPORT PERFORMANCE

The purpose of this section is to describe a proposed plan for regular measurement, data compilation and reporting of progress towards reaching the Sustainability Plan goals.

As with any successful program, the ongoing progress and performance of sustainability plan activities should be *monitored and compared to goals and criteria*. This will require continuous participation of the Sustainability Director, Campus Sustainability and Climate Planning Subcommittee, college staff, and other participants in the process. To communicate results and ensure transparency and accountability, the *results of the Sustainability Plan activities should be communicated to the larger campus community on a regular basis*.

The following section describes the planned process for measuring and reporting sustainability activities and achievements.

5.1 MEASURING PERFORMANCE

In order to monitor the College’s progress towards its sustainability goals, the Sustainability Director, Sustainability and Climate Planning Subcommittee, Facilities Planning and Operations, and the Planning and Research Office should collect information on the following key metrics at the regular intervals described below.

Area of Sustainability	Performance Metric	Measurement Frequency
Total Energy Use	Change in total annual electricity and gas use.	Annual
Energy Use Intensity	Change in total annual electricity and gas use per square foot of building space.	Annual
Renewable Energy Use	Change in total annual renewable energy use and/or percent of total annual energy use that is generated from renewable sources	Annual
Water Use	Change in total annual water use.	Annual
Water Use Intensity	Change in total annual water use in gallons/month	Monthly
Waste Diversion and Management	Percentage of waste diverted and increase or decrease from the previous year.	Annual
Transportation Efficiency	Total VMT reduced or number of single occupancy vehicles reduced.	Bi-Annual
Greenhouse Gas Emissions	Total and change in annual campus greenhouse gas emissions in metric tons CO ₂ e.	Bi-Annual
Area of Sustainability	Performance Metric	Measurement Frequency

Greenhouse Gas Emission Intensity	Total and change in campus greenhouse gas emissions in tonnes CO ₂ e per student.	Bi-Annual
Green Curriculum	Sustainability Literacy Assessments	Annual
Campus Outreach & Awareness	Work with PRO to include sustainability related questions in Campus Climate and other surveys. Topics to include: commute, recycling, water use, food, paper use, etc.	Rotate topic surveys 2 per year.
Avoided Costs	Total dollars saved as a result of sustainability actions.	Annual

5.2 REPORTING PERFORMANCE

Cabrillo is a signatory of the American College and University Presidents' Climate Commitment (ACUPCC), and has been regularly submitting requisite reports since 2008. Campus sustainability information, calendars, meeting agendas and notes are posted on the greensteps.cabrillo.edu website.

In order to keep the campus community informed of the progress of the Sustainability Plan activities, the Sustainability and Climate Planning Committee will create a webpage on the above linked website dedicated to this Plan and its progress. Activities, metrics, and progress towards goals will be summarized as in the past in our bi-annual ACUPCC Progress Reports available publicly on the [Second Nature Reporting website](#).

On an ongoing basis, the Campus Sustainability Director will regularly update the campus of projects and progress by maintaining a sustainability blog, which can be found through the GreenSteps.Cabrillo.edu website. All students, faculty, and staff will be encouraged to contribute to this blog by emailing its administrator, with events, projects, and any other campus sustainability news.

5.3 CAMPUS WORKSHOPS

The Campus Sustainability Subcommittee will hold periodic workshops open to all campus members throughout the planning and implementation phases of the project. This will be designed to encourage a two-way dialogue where information is provided to the campus community and feedback is solicited and incorporated into the plan.