

# **SANTA CLARA UNIVERSITY CLIMATE ACTION PLAN 2015**

## **PART I: ACADEMICS, OPERATIONS, AND ENGAGEMENT**

### **THE AMERICAN COLLEGE AND UNIVERSITY PRESIDENTS' CLIMATE COMMITMENT (ACUPCC)**

In 2007, SCU President Paul Locatelli, S.J. signed the American College and University Presidents' Climate Commitment ([ACUPCC](#)), agreeing to a) initiate the development of a comprehensive plan to achieve climate neutrality as soon as possible, b) initiate two or more tangible actions to reduce greenhouse gases while the more comprehensive plan is being developed, and c) make the action plan, inventory, and periodic progress reports publicly available by submitting them to the ACUPCC Reporting System for posting and dissemination.

In 2010, SCU President Michael Engh, S.J. re-committed to the ACUPCC and approved our first Climate Neutrality Action Plan which included:

- A target date for achieving climate neutrality as soon as possible.
- Interim targets for goals and actions that will lead to climate neutrality.
- Actions to make climate neutrality and sustainability a part of the curriculum and other educational experience for all students.
- Actions to expand research or other efforts necessary to achieve climate neutrality.
- Mechanisms for tracking progress on goals and actions.

### **MISSION SUSTAINABLE**

SCU's longstanding commitment to justice and sustainability is grounded in our tradition of Catholic social thought. SCU understands sustainability as finding the balance and illustrating the connections among a healthy environment, just societies, and a vibrant economy that meet all people's fundamental needs currently and in the future, especially those of the global poor. In 2004, a Comprehensive Policy on Sustainability articulated the University's commitment to sustainable campus stewardship, education, and outreach to the community in order to develop a culture of sustainability among all students, faculty, staff, and University partners. Our first Sustainability Coordinator was hired in 2006.

Due to our demonstrated commitment and distinct approach to justice and sustainability, SCU is recognized as a leader of sustainability in higher education:

- 2014 Acterra Award for Sustainability, the top-most of Acterra's Business Environmental Awards.
- Sustainability Tracking, Assessment, and Rating System (STARS): Gold in 2014, Silver in 2011.
- Princeton Review: 99 points (of 99) in 2014, 97 points in 2013.
- Sierra Magazine's Cool Schools: Ranked 37th of 164 schools in 2013. The 2012 and 2013 Cool Schools issues featured SCU (student-created solar-powered incubators and the Solar Decathlon team).
- 2014 California Sustainability in Higher Education Conference's Sustainability Champion Award to Lindsey Kalkbrenner, Director of the Center for Sustainability.

SCU also celebrates our change agents for sustainability within our campus community. Sustainability Champion Award Winners include:

- Joe Sugg, University Operations: Champion of Champions 2014

- Mako Ushihara, Housing: Staff Sustainability Champion 2014
- John Farnsworth, Environmental Studies and Sciences: Faculty Sustainability Champion 2014
- Lisa McMonagle, Class of 2015: Student Sustainability Champion 2014
- Campus Ministry: Group Sustainability Champion 2014
- Food Recovery Network Project, partnership between Dining Services and SLURP: Collaborative Project Award 2014
- 2013 Champions: Chris Young (Facilities), Stephanie Hughes (ESS), Andrew Noonan (% 2014), Campus Recreation
- 2012 Champions: Janice DeMonsi (Campus Recreation), Bill Mains (Undergraduate Business Programs), Engineers Without Borders (group)

## **LOOKING FORWARD**

This document is Part I of a two-part update to the 2010 Climate Neutrality Action Plan and is fundamental to supporting Goal 2 of the Integrated Strategic Plan: *"Strengthen SCU's culture of environmental sustainability by becoming a climate-neutral, zero-waste campus that serves as a living laboratory for developing global solutions rooted in Catholic social thought"*. Part I outlines SCU's plans to make climate neutrality and sustainability a part of the curriculum and educational experience for all students as well as to expand research efforts and community engagement to achieve climate neutrality and advance sustainability. Part II outlines SCU's carbon neutrality operational strategy (forthcoming).

This plan was designed to continue use of existing resources or potentially re-allocate internal resources to support these programs. Any new costs associated with activities in this document are noted following the activity.

To continue momentum and advance efforts supporting our award-winning program, staffing for the Center for Sustainability should be stabilized. There may be opportunities to name the Center for Sustainability as a way of cultivating a potential donor base that is interested in these issues.

# **ACADEMICS**

## **CURRICULUM**

**CONTEXT:** The Center for Sustainability inventories course offerings annually to measure the number of:

- **courses that include sustainability** (Courses that are primarily focused on a topic other than sustainability, but incorporate a unit or module on sustainability or a sustainability challenge, include one or more sustainability-focused activities, or integrate sustainability issues throughout the term) and
- **sustainability-focused courses** (Courses in which the primary and explicit focus is on sustainability and/or on understanding or solving one or more major sustainability challenge (e.g. the course contributes toward achieving principles outlined in the [Earth Charter](#)). Courses might not cover "sustainability" as a concept, but should address more than one of the three dimensions of sustainability (i.e. social wellbeing, economic prosperity, and environmental health).

Students have numerous opportunities to engage in sustainability through the SCU curriculum. Over 150 undergraduates have declared the Sustainability Pathway. Undergraduates can major in environmental studies or sciences in the College of Arts and Sciences; graduates can major in sustainable energy or earn a certificate in renewable energy within the School of Engineering.

Across the University, thirty-five academic departments (77 percent of SCU's academic disciplines) offer at least one class related to sustainability, and over 778 courses are related to sustainability (638 undergraduate; 140 graduate courses).

The Experiential Learning for Social Justice (ELSJ) requirement was introduced as a part of SCU's new Undergraduate Core Curriculum in Fall 2009. The goal of the ELSJ requirement is to promote a lifetime awareness of and commitment to social justice as a sustainable value.

**GOAL: Continue to expand on the number of opportunities for students to engage in sustainability through the SCU Curriculum.**

## **SHORT-TERM TACTICS**

- Encourage departments and/or schools to regularly track sustainability course offerings and department- or school-wide learning outcomes, perhaps linking their results to Program Review. This can be done with the support of the Center for Sustainability and the Provost's Faculty Associate for Curriculum Development.
- Integrate sustainability as a component of the 6-quarter experience, e.g. sophomore eco-reps in RLC's.
- Continue to increase the number of sustainability-related sections taught.
- Identify sustainability-focused ELSJ opportunities (Arrupe placements, immersion trips, study abroad, etc.).

## **LONG-TERM TACTICS**

- Incorporate sustainability-focused learning objectives into any future revisions of the core curriculum, to the extent possible.
- As graduate schools develop their core curriculum, they will consider including sustainability-focused learning objectives into graduate schools' core curricula to make their programs more distinctive.

## **FACULTY POSITIONS AND PROFESSIONAL DEVELOPMENT**

**CONTEXT:** In the last five years, SCU has hired nine tenure-track faculty in sustainability-related areas, including environmental studies and sciences, public health, ethnic studies, economics, and engineering.

Our sustainability-across-the-curriculum program is called “The Penstemon Project.” Over 100 faculty members have participated in the Penstemon Project since 2006 and have incorporated sustainability into at least one of their courses. In 2013-14, we initiated two-year pilot project to encourage colleges/schools and departments to set their own internal goals for the number of courses that will include sustainability. The goal for this organizational-unit pilot is to encourage participation from six departments or colleges/schools.

**GOAL: Continue to foster schools’ and departments’ abilities to support faculty development around sustainability.**

### **SHORT-TERM TACTICS**

- Expand faculty professional development efforts to support integration of sustainability learning across the undergraduate and graduate curricula through new faculty orientation, faculty development workshops, creating a repository of common teaching materials, etc.
- Continue to increase the number of faculty positions in each school that are sustainability related.
- Through participation in the Penstemon Project, departments and/or schools will set their own goals to expand sustainability course offerings and learning objectives.

### **LONG-TERM TACTIC**

- Each school will consider a model similar to the Leavey School of Business to name a lead administrator or administrative structure in support of sustainability curriculum and research development within their unit.

## **STUDENT SUSTAINABILITY LITERACY**

**CONTEXT:** The Class of 2018 is the first class to respond to this question on their undergraduate admission application about the University’s mission: “What aspect of SCU’s strategic vision appeals to you? Why?” Responses have included student reflections on the meaning of sustainability.

**GOAL: Begin to measure student literacy of justice and sustainability, especially before and after their SCU education.**

### **SHORT-TERM TACTIC**

- Include a question or two in the NSSE survey to measure student literacy of sustainability.
- Continue to increase campus literacy of sustainability by developing a forum or space to discuss interdisciplinary issues and diverse perspectives surrounding sustainability issues.

## **USING THE CAMPUS AS A LIVING LABORATORY**

**CONTEXT:** Courses and projects utilize the SCU campus as a living environment for multidisciplinary learning, applied research and practical work that advances sustainability on campus. This includes substantive work (e.g. class projects, thesis projects, term papers, published papers) that involves active and experiential learning and contributes to positive sustainability outcomes on campus and in the community. This academic year, many courses are using the campus as a living laboratory to develop sustainable solutions in the following areas: air/climate, buildings, food, energy, landscaping, purchasing, transportation, waste, water, coordination/planning/governance, diversity, affordability, health/wellbeing, investment, and public engagement.

The Forge Garden, SCU's 1/2 acre organic garden, serves as a campus space for course research, service learning, sustainable food production, and engages students, employees, and community members to explore environmental impacts and social justice surrounding the food system. This academic year, 61 classes have been held at the forge, representing over 1,217 student class-hours from the College of Arts and Sciences (art, biology, communication, English, environmental studies and sciences, liberal studies, and religious studies), the School of Engineering, Leavey School of Business, as well as the Experiential Learning for Social Justice program.

**GOAL: Support solutions-based coursework and research to solve local and global problems using the campus as a demonstration test-bed.**

### **SHORT-TERM TACTICS**

- With the update of the Campus Master Plan and the 2020 Integrated Strategic Plan, new facilities will be conceived of as contributing to a living laboratory on campus, for example: net-zero energy and climate-neutral buildings. Aspects of the facilities will be used in instructional ways, for example, the STEM buildings, Law School building, and new residence halls.
- Use the Penstemon Project to train faculty in applied pedagogies that model how to use campus as a living laboratory.
- Continue to use the Forge Garden as an outdoor learning space.
- Implement an online solution (Google business solutions) for making projects available, and for tracking progress.
- Gather evidence on pilot projects, and develop new ones, that focus faculty and staff expertise on helping to address directly SCU's campus sustainability challenges, as well as local, regional, and global sustainability challenges.

### **SUSTAINABILITY RESEARCH**

Sustainability research should lead to solutions that simultaneously support social justice and wellbeing, prosperity, and ecological health. It includes academic research that:

- Explicitly addresses sustainability and/or furthers our understanding of the interconnectedness of social, economic and environmental issues;
- Contributes directly toward solving one or more major sustainability challenge (e.g. contributes toward achieving principles outlined in the [Earth Charter](#)); and/or

- Engages community members with the aim of combining knowledge and action to achieve positive social, economic and environmental outcomes (e.g. participatory and community-based research and engaged scholarship).

**CONTEXT:** Ninety-nine faculty and staff participate in sustainability research, both in terms of publications and grants (representing 34 departments). Over 179 students participate in sustainability research, as reported by faculty and staff via the Center for Sustainability curriculum and research survey in December 2013.

The Sustainability Research Initiative aims to establish a vibrant, productive, collaborative research community with projects related to justice and sustainability. The Initiative includes research grants (up to \$90,000 each year for three years), professional development grants for faculty and staff (up to \$5,000 each year for three years), and a research retreat each year. The Initiative is funded by the President's Office. Over \$200,000 in Sustainability Research and Professional Development Grants have been awarded to faculty and staff to support sustainability research, including faculty and staff in the Leavey School of Business, Campus Ministry, and the Office of Marketing and Communications.

The Environmental Ethics Fellowship, a program of the Markkula Center for Applied Ethics, explores the ethical dimensions of sustainability. The Fellowship in Environmental Ethics has been awarded annually to an outstanding Santa Clara University undergraduate since 2006. Past projects include developing a Carbon Footprint Calculator for college students to measure their impact, specific to their campus. The students also wrote instructions for other campuses to develop their own calculators. The tool has been replicated in at least two other campuses.

**GOAL: Continue to support the growth in numbers of faculty and students involved in sustainability research.**

## **SHORT-TERM TACTICS**

### **FACULTY**

- Create reading groups and information-sharing systems based on sustainability-related issues.
- Continue to provide sustainability research grants to support faculty research focused on justice and sustainability issues.
- Encourage faculty to integrate global justice and sustainability issues into their research, for example, exploring poverty alleviation, food access, or climate change.

### **STUDENTS**

- Explore the development of a revolving loan fund for student research and programming around sustainable solutions. *(New cost: \$10,000 annually)*
- Expand sustainability research fellowship programs.
- Expand the School of Engineering's Senior Design concept to a university-wide experience in which cross-school and cross-department interdisciplinary teams develop local and/or global solutions in benefit of humanity. For example, develop energy-efficiency solutions regarding sustainable recreation in Malley Center, and apply to Silicon Valley business' employee recreation centers.

- Build upon the enthusiasm of the Solar Decathlon to develop an AJCU-wide challenge for students to develop projects to build a more humane, just, and sustainable world. For example, students from AJCU institutions can compete to design a mobile application to benefit humanity.

## **ENGAGEMENT**

### **CAMPUS ENGAGEMENT**

**CONTEXT:** SCU is developing change agents for sustainability within our student body and University employees. Departments and programs including Campus Ministry and Campus Recreation have integrated sustainability into their programming, priority areas, as well as staff and student employee training.

Sustainability is integrated into several student leadership training systems, and most student leaders receive sustainability training during their formation period. This includes Orientation Leaders, Student Ambassadors, Community Facilitators, and leaders of registered student organizations. Associated Student Government has a dedicated Senator-At-Large position for Sustainability.

Peer-to-peer leadership has been essential to the growth and development of a culture of sustainability at SCU. Over 50 members of the University community are Sustainability Liaisons, learning about and educating their peers about sustainable behaviors. Liaison groups are specific for: SCU employees, Community Facilitators, student organization leaders, and off-campus student residents. (Workplace Sustainability Liaisons has representatives from almost every School and Center of Distinction). Each liaison group meets monthly and discusses how sustainability relates to their respective areas of campus. Liaisons leave their meetings with specific actions to accomplish in their departments before the next month's meeting.

The Center for Sustainability engages the campus community via several campus programs encouraging sustainable behaviors: Energy Challenge, Swap for Good, and the Eco Fashion Show. Campus Ministry offers the Mission Sustainable Challenge to engage participants in the spirituality of sustainability.

**GOAL: Expand the campus community's ability and desire to partake in sustainable behaviors as well as their understanding of how they can contribute to developing a more humane, just, and sustainable world.**

### **SHORT-TERM TACTICS**

- Expand justice and sustainability education during New Employee Orientation orientation.
- Develop tools and templates to enable departments to incorporate SCU's sustainability goals into departmental strategic plans, new employee departmental training, student and employee job descriptions, student, faculty, and staff performance evaluations, team development and/or team building activities.
- Continue to expand the number of departments incorporating sustainability into planning, training, and programming.

### **LONG-TERM TACTICS**

- Identify sustainability representatives for every School, Center of Distinction, and all organizational units.
- Each department will consider a model similar to Campus Ministry or Campus Recreation to incorporate SCU's sustainability goals into strategic planning, and employee training, development, and/or team building.

## **SUSTAINABILITY COMMUNICATIONS**

**CONTEXT:** The Center for Sustainability creates a monthly e-newsletter highlighting innovative programs, individuals contributing to a culture of sustainability on campus, news and upcoming events, and tips for practicing sustainable behaviors. SCU is active on social media, and has several dedicated sustainability channels, including Facebook, Twitter, Instagram, YouTube, Pinterest.

**GOAL: Improve internal communications about SCU's sustainability initiatives to further expand the campus and community's understanding of SCU's strengths in this area.**

### **TACTICS**

- Develop a marketing plan to engage SCU communicators in telling our sustainability story. For example, provide Undergraduate Admission, the Alumni Office, Development, etc. a steady stream of information to use in their communications outlets. Encourage use of #sustainable SCU and/or #missionsustainable for consistency.
- Create a permanent link or section on the SCU homepage for showcasing SCU's sustainability achievements.
- Support campus departments showcasing their sustainability initiatives on their web pages, beginning with departments that have Workplace Sustainability Liaisons and/or existing sustainability programs and priorities.

## **COMMUNITY ENGAGEMENT**

**CONTEXT:** SCU partners and shares best practices with several local, state, and national organizations, including the Silicon Valley Leadership Group, Sustainable Silicon Valley, California Higher Education Sustainability Conference, the Association of Jesuit Colleges and Universities, and the Association for the Advancement of Sustainability in Higher Education.

SCU's Global Social Benefit Institute (GSBI) is a hub for global, innovation-based entrepreneurship in service to humanity. GSBI programs have helped social entrepreneurs in over 55 countries since 2003 with impressive outcomes: Nearly 100 million people's lives have been positively impacted by these enterprises.

Bronco Urban Gardens (BUG) is a food justice outreach program serving urban schools in the Greater Washington Community of San Jose. Since 2009, BUG has built and maintained several school gardens, providing science-based garden and food education to students, teachers, and families. BUG also connects SCU students with these communities by serving as Experiential Learning for Social Justice placement sites for SCU students. This academic year, BUG has worked with over 200 youth in three school gardens.

The SCU Thriving Neighbors Initiative promotes strategic ties between Santa Clara University and the Greater Washington Community of San Jose in order to advance prosperity and education of both SCU students and neighborhood students as whole persons in whole communities. Thriving Neighbors will bring SCU schools, departments, and community programs together with neighborhood residents, leaders, businesses, schools, non-profit partners, and government to create mutually beneficial, interconnected, and multidisciplinary solutions.

**GOAL: Continue to be a leader by using our strengths and distinctiveness to foster a culture of sustainability in our community and among our peer institutions.**

### **SHORT-TERM TACTICS**

- Improve our ability to document student, faculty, and staff sustainability-related community activities.
- Continue to leverage our expertise in justice and sustainability, technology, and innovation, as the Jesuit University in Silicon Valley, to provide leadership in these areas among AJCU.
- Build upon existing partnerships with local faith-based organizations, e.g. the Silicon Valley Interfaith Council and Local Religions Project to incorporate sustainability discussions and initiatives.
- Support employees participation in sustainability discussions among their professional organizations and conferences.
- When SCU hosts conferences, continue to showcase and incorporate our approach to justice and sustainability.
- Expand our relationships with Silicon Valley businesses by highlighting their ethics, compassion, justice, and sustainability initiatives via social media.
- Continue to build on partnerships BUG has developed in the Greater Washington Community and further collaborate with the Thriving Neighbors Initiative.
- Further integrate sustainability into existing community programs, e.g. the Thriving Neighbors Initiative and Neighborhood Prosperity Initiative via social, economic, and environmental projects.

### **LONG-TERM TACTICS**

- Develop a sustainability award based on ethics, compassion, justice, and sustainability for Silicon Valley businesses.

## **OPERATIONS - Zero Waste**

### **WATER**

**CONTEXT:** Since 2005, Santa Clara's water conservation initiatives have produced a 29 percent decrease in potable water consumed per person.

### **BUILDINGS**

**CONTEXT:** Residence halls are equipped with front-loading washing machines, using 35-50 percent less water than top-loading models. Low-flow showerheads are used in 95 percent of residence halls. Low-flow toilets and sink faucet aerators have been installed across campus. Almost every urinal on campus is waterfree, each saving 40,000 gallons of water annually. Several buildings are testing dual-flush toilets or recycled-water toilets.

**GOAL: Continue to reduce potable water usage in campus buildings.**

### **SHORT-TERM TACTICS**

- Document fixtures on campus (faucets, showerheads, toilets): locations, type, flow rate, usage (high / medium / low).
- Develop a plan to prioritize high-use fixtures and upgrade 100% of high-use fixtures to the best-available fixtures. Determine preferred fixtures according to SCU standards, i.e., automatic vs. manual faucets in public restrooms vs. residence rooms, preferred flow rate for showerheads, etc. Pilot test the most efficient fixtures in one to two residence halls with meters to measure usage.
- Install water meters in Benson Memorial Center and one to two residence halls.
- Develop behavior change educational programming focused on water conservation for campus residents, non-residents, faculty, and staff.

### **LONG-TERM TACTICS**

- Upgrade 100 percent of medium-use fixtures to the best-available fixtures.
- Install water meters in every residence hall and incorporate data into culture-changing educational programming.

### **LANDSCAPING**

**CONTEXT:** Over 85 percent of campus landscaping is irrigated with recycled water, accounting for roughly 40 percent of total campus water use. This is water that has been used once (as potable water), undergone tertiary treatment by South Bay Water Recycling, and pumped back to SCU in purple pipes for irrigation use. SCU first began using recycled water in 2003.

**GOAL: Continue to reduce stormwater run-off and reduce potable water usage in campus landscaping as much as possible.**

### **SHORT-TERM TACTICS**

- Expand the use of recycled water for irrigation to remaining areas where recycled water is feasible (excludes Buck Shaw Stadium, Softball field, and areas not currently serviced by South Bay Water Recycling, i.e. University Villas and Schott Stadium).
- Continue to improve stormwater capturing by meeting or exceeding state stormwater quality provision C.3. as required.

### **LONG-TERM TACTIC**

- Support technology improvements and policy development for recycled water use in other areas beyond landscaping (fountains and toilets). Reliability and quality of recycled water must be proven before we can further expand our use into these areas.

## **PURCHASING**

**CONTEXT:** All computers purchased through our PC Replacement Project are EPEAT Gold. During each PC Replacement cycle, we donate our old systems and ask receiving organizations to responsibly dispose of these systems at their end-of-life. All paper purchased for University copiers and printers contains at least 30 percent recycled content. Almost half (49 percent) of all University-owned vehicles are hybrid or electric.

**GOAL: Improve the University's impacts on the local and global community associated with procurement (extraction, production, distribution, consumption, and disposal).**

### **TACTICS**

- Develop a guide which can be used by SCU purchasers to define sustainable suppliers.
  - The guide will include definitions of third-party certifications that meet our justice and sustainability criteria as well as tools for prioritization of criteria.
- Once the purchasing guide is created, purchasers can make decisions based on the sustainability criteria outlined in the guide (assuming competing vendors are providing products of equal quality, reliability, and cost).

## **FOOD PURCHASING**

**CONTEXT:** Implemented in 2010, Bon Appetit's Flavor First report accurately tracks Dining Services' sustainability efforts when it comes to Circle of Responsibility initiatives and food standards. New Circle of Responsibility initiatives since 2010 are Crate-free pork and cage-free eggs (2012), Humane ground beef (2012), Fish to Fork (2011), Eat Local Challenge (2012) and Focusing on Food Recovery (2013). In 2013, Dining Services added Agro Eco coffee to the Sunstream Café. They are a model of best practice for farming and fair trade.

Dining Services by Bon Appetit promotes the Low Carbon Diet to educate guests on making climate-friendlier food choices. Messages include: don't waste, buy seasonal and regional, do not buy processed and packaged foods, reduce beef and cheese, and opt for local fish only. In 2012, Bon Appetit company-wide reduced beef purchases by 33 percent, cheese by 10 percent, tropical fruit by 50 percent, and food waste by one-third.

**GOAL: Continue to improve upon dining services' food purchasing principles. Model how a successful sustainable food system operates, to serve quality, nutritious food, and educate guests on making sustainable food choices.**

### **SHORT-TERM TACTICS**

- Commit to purchasing 20 percent “Real Food” by 2017. (As defined by the Real Food Challenge).
- Continue to improve upon food purchasing as measured by Bon Appetit Management Company’s food policies and Flavor First database.
  - 20 percent Farm to Fork
  - 100 percent Cook from Scratch
  - 100 percent Seafood Watch

### **LONG-TERM TACTIC**

- Commit to purchasing at least 25 percent “Real Food” by 2020. (As defined by the Real Food Challenge).

## **WASTE**

**CONTEXT:** SCU has achieved a 59 percent waste diversion rate (more than triple 2005 levels), a 17 percent decrease in total waste leaving campus (includes recyclables and compostables), and a 59 percent decrease in landfill waste per person. This is primarily due to the following actions:

- Since 2009, containers, labels, and instructional signs have been replaced throughout campus (including residence halls) to standardize the University's waste diversion system. Colors on signs and container labels: Recycling = Blue; Landfill waste = Black or Red; Compost = Green.
- SCU has expanded its recycling and composting collection to include plastics #1-7, paper, aluminum, glass, electronic and universal waste, yard waste and food waste, as well as hard-to-recycle products through the TerraCycle program.
- All exterior campus events include at least one waste recovery station, which always includes compost, recycle, and landfill bins.
- Every landfill waste receptacle is paired with a recycling receptacle throughout campus (in offices, outside, in academic buildings, and in residence halls). All residence halls have standard compost, recycling, and landfill waste receptacles in convenient locations. Paper towels are collected for composting in most residence halls’ restrooms.
- Multiple departments and student organizations promote donation of items and waste diversion during the move-out period at the end of the year.

**GOAL: Achieve “Zero Waste” (diverting at least 90 percent of waste from the landfill) by expanding current reuse, recycling, composting, and waste diversion practices. This includes all waste generated in campus buildings and outdoor events.**

### **SHORT-TERM TACTICS**

- Develop educational programs, training templates, and follow-up/check-in mechanisms for building managers and supervisors of campus employees who manage waste on a regular basis, especially

those in custodial, Benson and Adobe kitchens, Catering, Residence Life, and contractors who handle custodial duties.

- Continue to improve signage and container placement (e.g., in buildings, exterior locations, and Benson dock). Explore options for permanent external compost collection bins. Document current waste diversion rates of external containers.
- Continually monitor waste diversion systems:
  - Conduct quarterly waste characterizations
  - Monitor campus building interiors to ensure consistent signage, container locations, etc.
  - Spot-check to ensure correct systems are in place for campus employees who manage waste on a regular basis.
- Develop behavior change educational programming focused on reducing waste sent to landfills. Potential programs might include a residence hall waste diversion challenge, encouraging use of [online program](#) for sharing of surplus items that are no longer needed, and or expanding the Swap for Good program to include pooling resources (e.g. decorations and event supplies).

### **LONG-TERM TACTICS**

- Continue to explore alternative technologies and programs to minimize waste leaving campus.
- Place permanent external compost collection containers in strategic areas on campus.

### **PACKAGING AND FOOD WASTE**

**CONTEXT:** Dining Services removed bottled water from the Marketplace in 2011 and provides dispensed water for free at all cafes and catering functions. Dining Services converted many of our disposables to compostable or recyclable materials; 90 percent of all disposables now are compostable.

**GOAL: Model how a university can reduce our use of resources while being mindful of social, environmental, and economic issues related to packaging and food waste.**

### **TACTICS**

- Encourage the use of reusable serviceware wherever possible, and continue to use compostable/recyclable disposables at all other events.
- Develop behavior change educational programming focused on eliminating consumer demand of bottled water. Implement targeted programs to educate users about social issues, energy issues, etc. surrounding bottled water.
- Increase convenience of filling stations throughout campus, especially in residence halls and where food is purchased.
- Document every department that has a water delivery subscription. Work with those that also have a sink in their break area to rely on tap (or filtered tap) water instead, as a cost savings and sustainability strategy.
- Provide more reusable bottles (for free) and for sale at more locations throughout campus.
- Reduce the proportion of shelf space stocked with bottled water to 20 percent or less. This applies to all venues across campus except: does not include Cellar Market store or MarketPlace. MarketPlace is already completely bottled water-free.
- Pilot Food Recovery Network food waste donation program. If successful, expand via FRN and/or similar programs with the goal to of donating 100 percent of all donatable food waste.

- Dining Services will recommit to advertising quarterly programs for students to donate excess dining points to local community-organizations
- Catering will proactively offer free water in compostable or recyclable cups for all events.

## **OPERATIONS - CLIMATE NEUTRALITY**

**CONTEXT:** Since 2005, SCU has achieved a 40 percent decrease in greenhouse gas emissions per person. The success is in part due to a comprehensive energy conservation and efficiency initiative, rideshare programs, incentives for biking, carpooling, and using public transportation, as well as eleven electric-vehicle charging stations. In 2012, SCU generated 1,517,354 kWh of on-site photovoltaic electricity and 41,381 therms of on-site solar thermal power.

Greenhouse gas emissions are measured according to scope.

- Scope 1: purchased natural gas and campus fleet gasoline and diesel usage
- Scope 2: purchased electricity
- Scope 3: student, faculty, and staff commute as well as business travel

**GOAL: Santa Clara University will become a carbon neutral, net-zero energy campus.**

### **TACTICS**

- Continue to reduce Scopes 1, 2, and 3 greenhouse gas emissions as much as possible.
- Continue to expand on-site photovoltaic and solar thermal technologies where feasible.
- Continue to explore new technologies for renewable energy generation on campus.
- Continue to develop a campus microgrid.
- Generate and/or purchase 100 percent of SCU's energy needs from renewable sources.
- Purchase renewable energy certificates (RECs) and/or offsets as needed to achieve balance of emissions for climate neutrality.

### **ENERGY EFFICIENCY**

**CONTEXT:** New buildings showcase how sustainability is embedded in the culture of the campus: The Admission and Enrollment building (LEED Gold, pending) is the focal building for all students various points in their academic careers; Graham Hall (LEED Gold, pending) is Santa Clara's first sustainable residence hall. Since 2008, all new construction and major renovations has been Leadership in Energy and Environmental Design (LEED) Gold or equivalent.

Every campus building is operated and maintained according to our sustainable building policy which identifies best practices for energy consumption and monitoring, use of environmentally preferable materials, indoor environmental quality, and water consumption and monitoring.

Since 2005, SCU has achieved a 28 percent reduction in electricity consumption per square foot of building space. This is primarily due to the following actions:

- Upgraded building systems as well as interior and exterior lighting systems (including increased use of occupancy sensor light switches and upgrades to high-efficiency LED exterior lights).
- Adjusted building temperature setpoints to 68°F for heating and 78°F for cooling during occupied periods; 60° F for heating and 85° F for cooling overnight (11 pm to 7 am).
- Encouraging only Energy Star appliances for University and residential use.
- Information Technology implemented SyAM to minimize electricity consumption of office computers. In its first year, this project saved over 378 mWh of electricity and \$45,000.
- The Utilities Department monitors electrical demand and initiates load shedding actions as necessary. By shedding electrical load during peak conditions, we can (and have) achieved up to a 10 percent reduction in the Peak Demand costs for the year.
- Facilities adjusted the building cleaning schedule to reduce night lighting and heating/cooling requirements for custodial services.
- Installed several sub-meters on campus buildings to monitor electricity and gas consumption to inform building users about their consumption.
- Remodeled Benson's kitchen into a high-efficiency space, utilizing energy-efficient LEDs and motion-sensor lighting.

**GOAL: Systematically improve energy efficiency of existing buildings and design new buildings to be as energy efficient as possible in order to reduce greenhouse gas emissions associated with Scopes 1 and 2.**

#### **TACTICS**

- Continue to improve energy efficiency of building systems, including laboratory spaces, as well as interior and exterior lighting systems and controls. Continue to improve efficiency of water treatment system for labs.
- Continue to improve building shells (roofing, exterior paint, windows, insulation).
- Add building energy meters and review usage to determine priority areas for efficiency upgrades.
- Purchase new technology that promotes energy efficiency and conservation, as appropriate.
- Encourage adoption of further energy saving strategies that promote a shift in campus culture, for example, encouraging the use of smart powerstrips that automatically turn off peripheral office equipment, and the preference of shared printers to eliminate of desktop printers.
- Design new buildings to be net-zero energy.

#### **TRANSPORTATION AND CAMPUS FLEET**

**CONTEXT:** Nearly half of University-owned vehicles operate on electricity or are gasoline-electric hybrids. Bicycle racks are located outside every campus building and 63 percent of students use sustainable commuting options. Innovative alternative transportation programming for students, faculty, and staff includes Zipcar (a car-sharing service), Zimride (a private ride-sharing network), free parking for carpools, a bicycle commuter incentive program, reduced-cost mass transit passes for employees, and eleven electric vehicle charging stations.

**GOAL: Continue to reduce greenhouse gas emissions associated with Scope 3.**

**TACTICS**

- Continue to expand the proportion of University-owned electric or hybrid vehicles.
- Continue to increase the number of electric car charging locations, as needed.
- Continue to promote a culture of sustainable transportation and commuting.
- Explore options for emissions reductions and/or offsets associated with University-sponsored travel.

**CONTRIBUTORS**

**Contributors for Academics:**

Lynsey Cumberland-Palmer, student, class of 2014

John Farnsworth, Senior Lecturer, Env. Studies & Sciences. Faculty Associate, Curriculum Development

Leslie Gray, Associate Professor, Env. Studies & Sciences. Faculty Associate, Academic Programs

Bill Mains, Director, Sustainability and Leadership Development, Undergraduate Business Programs

Ed Maurer, Associate Professor, Civil Engineering

Aaron Poor, student, class of 2016

Amy Shachter, Senior Associate Provost, Research and Faculty Affairs

Lindsey Kalkbrenner, Director, Center for Sustainability

**Contributors for Engagement:**

Janice DeMonisi, Director of Recreation, Athletics & Recreation

Heather Dumas-Dyer, Director, Residence Life

Lori Durako, Assistant Director for Student Leadership, Center for Student Leadership

Colleen Henn, student, class of 2016

Julia Claire Landry, Campus Minister, Campus Ministry

Bill Mains, Director, Sustainability and Leadership Development, Undergraduate Business Programs

Jennifer Merritt, Director of Community-Based Learning, Ignatian Center for Jesuit Education

Cara Uy, Sustainability Coordinator, Center for Sustainability

Lindsey Kalkbrenner, Director, Center for Sustainability

**Contributors for Operations - Zero Waste:**

Kelsey Baker, student, class of 2014

Jane Barrantes, Assistant Vice President, Auxiliary Services

Harry Fong, Assistant Vice President, Finance

Carl Fussell, Director, Information Technology

Stephanie Hughes, Adjunct Lecturer, Environmental Studies and Sciences

Charles Lewis, Assistant General Manager, Dining Services

Bob Lubecky, General Manager, Dining Services

Mako Ushihara, Director, Conference Services and Housing Building Operations, Housing

Makena Wong, student, class of 2017

Chris Young, Assistant Director, Buildings and Grounds, Facilities

Lindsey Kalkbrenner, Director, Center for Sustainability

**Contributors for Operations - Climate Neutrality:**

Don Akerland, Director, Projects and Planning  
Jeffrey Charles, Director, Facilities  
Nicholas Leasure, student, class of 2014  
Joe Sugg, Assistant Vice President, University Operations  
Chris Watt, Director, Utilities  
Tseming Yang, Professor, Law School  
Lindsey Kalkbrenner, Director, Center for Sustainability

## **ATTACHMENTS**

- Santa Clara University Comprehensive Policy on Sustainability:  
<https://docs.google.com/a/scu.edu/file/d/0BxZOXdOoMWzpaUdadG9zdDcxM0U/edit>
- Santa Clara University 2010 Climate Neutrality Action Plan:  
<http://scu.edu/sustainability/upload/SCU-Climate-Action-Plan-011510.pdf>
- American College and University Presidents' Climate Commitment Implementation Guide:  
[http://www.presidentsclimatecommitment.org/files/documents/ACUPCCImplementationGuide\\_V2.1.pdf](http://www.presidentsclimatecommitment.org/files/documents/ACUPCCImplementationGuide_V2.1.pdf)
- American College and University Presidents' Climate Commitment letter:  
<http://www2.presidentsclimatecommitment.org/html/commitment.pdf>
- "Weaving a Culture of Sustainability: Santa Clara University's Evolving Story" from *Sustainability in Higher Education: Stories and Strategies for Transformation*:  
<https://drive.google.com/a/scu.edu/?tab=mo#folders/0BxZOXdOoMWzpcVdLMWtHY3FabUE>