



# Sustainable Practices

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<b>Contact:</b>	Matthew St. Clair
<b>Title:</b>	Director of Sustainability, UCOP
<b>Email:</b>	<a href="mailto:Matthew.StClair@ucop.edu">Matthew.StClair@ucop.edu</a>
<b>Phone #:</b>	(510) 987-3897

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## I. POLICY SUMMARY

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The Sustainable Practices Policy (“Policy”) establishes goals in nine areas of sustainable practices: green building, clean energy, transportation, climate protection, sustainable operations, waste reduction and recycling, environmentally preferable purchasing, sustainable foodservice, sustainable water systems.

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## II. DEFINITIONS

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**Adjusted Patient Day:** Inpatient Days x (Gross Patient Revenue/Inpatient Revenue) where Gross Patient Revenue is Outpatient Revenue + Newborn Revenue + Inpatient Revenue.

**Addressable Spend:** Spend that can be impacted through sourcing activities. For the purposes of this policy, addressable spend relates to the spend within a specific product or service category.

**Allowable Thermal Residual Conversion:** Consistent with CalRecycle and the Southern California Conversion Technology Project, residual conversion includes: thermal, chemical, mechanical, and/or biological processes capable of converting post-recycled residual solid waste into useful products and chemicals, green fuels like ethanol and biodiesel, and clean, renewable energy. It does not include combustion.

Examples include the transformation of post-recycled residual materials into usable heat or electricity through gasification, pyrolysis, distillation, or biological conversion other than composting. To count as allowable residual conversion, the process must include an integrated materials recovery facility (MRF) or equivalent sorting system to recover recyclables and compostable material prior to conversion. Materials that are otherwise landfilled or incinerated, including biomass conversion operations that exclusively incinerate organic materials, landfill-gas-to-energy (LFGTE) facilities, and other facilities that do not employ integrated materials recovery or equivalent sorting and recovery systems may not be considered to be converted residual waste.

**Average Vehicle Ridership (AVR):** Calculated by dividing the number of all person trip arrivals by the number of private vehicle trips, with adjustments for telecommuting, compressed work weeks and zero emission vehicles (based on the South Coast Air Quality Management District method).

**CBC:** California Building Code, Title 24 portion of the California Code of Regulations

**Climate Neutrality:** Climate neutrality means that the University will have net zero climate impacts from greenhouse gas (GHG) emissions attributed to scope 1 direct emission sources and scope 2 indirect emission sources as defined by The Climate Registry, and specific scope 3 emissions as defined by the American College and University Presidents’ Climate Commitment (ACUPCC). This neutrality will be achieved

by minimizing GHG emissions from these sources as much as possible and using carbon offsets or other measures to mitigate the remaining GHG emissions.

**Combustion:** As defined by CalRecycle, combustion is a rapid conversion of chemical energy into thermal energy. The reaction is exothermic. Organic matter is oxidized with sufficient air (or oxygen) for reactions to go to completion. The carbon and hydrogen are oxidized to carbon dioxide and water, respectively.

**Construction and Demolition Waste (C&D):** Waste generated by construction projects that do not occur every year or are not a result of regular operations and maintenance. Examples include building renovations or new construction.

**Diversion from Landfill:** Institution diverts materials from the landfill, combustion or other non-allowable thermal conversion by recycling, composting, donating, reselling or reusing. Campuses will be able to include up to 10% of their diversion through combustion to the end of FY2021/22 after which the UC will no longer accept combustion as a form of diversion. No campus will increase the percentage of combustion reported as diversion from reported FY2015/16 levels. Up to 10 percent of total waste generated per campus may be disposed through allowable thermal residual conversion after FY2021/22. To count, (non-combustion) waste converted through thermal processes must include an integrated materials recovery facility (MRF) or equivalent sorting system to recover recyclables and compostable material prior to conversion. The total value of converted materials counted as diversion from landfill is not to exceed 10%.

**Domestic Water:** Potable and non-potable water provided for domestic indoor (e.g., toilets, urinals, showers, and faucets) and outdoor (e.g., landscape irrigation) use.

**Economically and Socially Responsible (EaSR) Spend:** Spend on products or services supplied by a business holding one of the UC-recognized certifications listed in the UC Sustainable Procurement Guidelines.<sup>1</sup>

**Environmentally preferable products:** Designation for those products whose manufacture, use, and disposal results in relatively less environmental harm than comparable products.

**Expanded Polystyrene (EPS):** As defined by the City of San Francisco, blown polystyrene and expanded and extruded foams which are thermoplastic petrochemical materials utilizing a styrene monomer and processed by any number of techniques including but not limited to, fusion of polymer spheres (expanded bead polystyrene), injection molding, foam molding, and extrusion-blown molding (extruded foam polystyrene).

**Fleet:** University-owned or operated vehicles and mobility equipment (e.g., passenger vehicles, trucks, vans, shuttles, agricultural vehicles, marine equipment, etc.) including

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<sup>1,2,3,4</sup> University of California. 2018. The University of California's Sustainable Procurement Guidelines.

vehicles operated under contract with the University **and for which the University/Campus maintains operational control.**

**Full Time Equivalent (FTE):** A full-time equivalent employee is the hours worked by one employee on a full-time basis and can be used to convert the hours worked by several part-time employees into the hours worked by full-time employees. A full-time employee is assumed to work 40 hours in a standard week.

**Green Spend:** Spend on products meeting the UC “Preferred Level” of environmental sustainability criteria as laid out in the UC Sustainable Procurement Guidelines.<sup>2</sup>

**Gross Square Foot:** Pursuant to the definition in the Facilities Inventory Guide<sup>3</sup>, gross square footage is the Outside Gross Area, or OGSF50, and equals the sum of Basic Gross Area (the sum of all areas, finished and unfinished, on all floors of an enclosed structure, for all stories or areas which have floor surfaces) + 50% Covered Unenclosed Gross Area (the sum of all covered or roofed areas of a building located outside of the enclosed structure). OGSF50 is also known as “California Gross.”

**Green Lab Assessment Programs:** A program that works with individual laboratories and researchers to inform, collect best practices, and assess areas for improvement in research efficiency, including engagement, and targeted initiatives around efficiency in natural resources and other environmental issues. This assessment program could be based on the My Green Labs (MGL) Systemwide Checklist or another similar tool. The MGL checklist was developed based on best practices from several UC campuses as well as the expertise of My Green Lab.

**Industrial Water:** Water provided for specific industrial applications such as heating, cooling, or lubricating equipment.

**LEED™:** Leadership in Energy and Environmental Design. LEED is a registered trademark of the U.S. Green Building Council (USGBC). This trademark applies to all occurrences of LEED in this document. LEED is a green building rating system developed and administered by the non-profit U.S. Green Building Council. The four levels of LEED certification, from lowest to highest, are Certified, Silver, Gold, and Platinum. LEED has several rating systems. This Policy refers to the following rating systems:

**LEED for Interior Design and Construction (LEED-ID+C)** for renovation projects;

**LEED for Building Operations and Maintenance (LEED-O+M)** for the ongoing operational and maintenance practices in buildings; and,

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<sup>3</sup> Facilities Inventory Guide, Attachment 8, Appendix C, pages 13-15.

**LEED for Building Design and Construction (LEED-BD+C)** for new buildings and major renovations of existing buildings.

**Location:** As used in this Policy, means any or all campuses, medical centers, and the Lawrence Berkeley National Laboratory as referred to in the “Scope” above.

**Low-emissions vehicle (LEV):** As defined by the current California Air Resources Board (CARB) LEV program standards, a vehicle that emits relatively low levels of GHG emissions from the onboard source of power and may include subcategories as defined by CARB.

**Municipal Solid Waste:** Garbage, refuse, sludges, and other discarded solid materials resulting from residential activities, and industrial and commercial operations which are legally accepted in CalRecycle permitted landfills. Municipal Solid Waste does not include any regulated hazardous/universal waste, medical waste or other material used as Average Daily Cover (ADC); however, it does include construction and demolition waste, diverted recyclables and organic waste. Non-medical center waste targets refer to municipal solid waste only.

**Operating Room Setback:** (also referred to as "night setback" or "unoccupied setback") is an energy-saving strategy that reduces the amount of air supplied to an OR when the room is not in use. Heating, ventilation and air conditioning (HVAC) system setback may also allow temperature or humidity settings (or both) to widen during times the room is not in use.

**Organic:** As defined by CalRecycle, material containing carbon and hydrogen. Organic material in municipal solid waste includes the biomass components of the waste stream as well as hydrocarbons usually derived from fossil sources (e.g., most plastics, polymers, the majority of waste tire components, and petroleum residues).

**Policy Exception Authority:** The responsible authority for granting exceptions to item III.G.5.a. in the Sustainable Procurement section of this Policy will be the Chief Procurement Officer for a non-UC Health systemwide or Office of the President contract and otherwise by the senior procurement officer of the campus.

**Post-Consumer Waste (PCW):** Waste produced by the end-user of a product. Post-consumer waste is differentiated from pre-consumer waste, which refers to waste produced in the manufacture of a product.

**Potable Water:** Water that meets state water quality standards for human consumption.

**Reclaimed or Recycled Water:** Wastewater treated with the intention of reuse, including:

- Direct Potable Reuse: Treated wastewater reused for human consumption.
- Indirect Potable Reuse: Treated wastewater blended with groundwater or other water sources reused as potable or non-potable water.

- **Non-Potable Reuse:** Treated wastewater reused for purposes other than human consumption, such as irrigation, fire suppression, and industrial processes.

**Renewable power:** Energy generated from inexhaustible sources, such as the sun or wind, or from sources that can quickly be replenished, such as biomass. For the purposes of this Policy, an energy source is renewable if it has been designated as such by the California Energy Commission ([Renewables Portfolio Standard Eligibility](#)).

**Required Level Green Spend criteria:** The minimum certification standard required for a product or service category. Required Level Green Spend criteria is laid out in the UC Sustainable Procurement Guidelines.<sup>4</sup>

**Research Group:** When counting the number of laboratories assessed via a green lab assessment program, a laboratory will be counted as a research group rather than by physical rooms. As defined in the Laboratory Hazard Assessment Tool, (LHAT) a group includes the workers that report to one Principal Investigator (PI) or Responsible Person. While some PI's may have multiple groups, one assessment for the purposes of this Policy will include all the people working under one PI or Responsible Person, and all of the rooms they occupy or share, and field sites, if any. Total number of PI's and Responsible People will be tracked according to LHAT or similar tracking method at campuses not using LHAT. LHAT includes research and teaching laboratories.

**Savings by Design:** An energy efficiency program offered by California's four investor-owned utility companies and the Sacramento Municipal Utility District. Savings By Design provides design assistance, energy analysis, life-cycle costing, and financial incentives for new construction and major renovation projects. The Savings By Design program is also known as the Non-Residential New Construction Program.

**Single Pass Cooling:** Single Pass or Once Through cooling systems flow water through a piece of equipment to absorb heat and dispose the water down the drain without recirculation. Replacing and managing these types of systems is a recommended best practice by the International Institute for Sustainable Laboratories (formerly Labs 21), US Office of Energy Efficiency & Renewable Energy, and the EPA. Equipment typically using this type of cooling includes hydraulic equipment, distillation condensers, refrigeration condensers, air compressors, vacuum pumps, electron microscopes, mass spectrometers, lasers, helium recovery, and electro magnets.

**Single-Occupancy Vehicle (SOV):** Vehicle driven by a single driver with no passengers. SOV percentages may separate the percentage of vehicle trips occurring in zero- or low-emission vehicles from carbon-fuel vehicles (e.g., SOV-standard fuel and SOV-alternative fuel).

**Solicitation:** The process of seeking information, bid proposals, and quotations from suppliers.

**Sterilized Water:** Water that has been cleaned to remove, deactivate, or kill microorganisms present that may be harmful to humans; primarily used in medical facilities and research.

**Stormwater:** Water that originates during precipitation events.

**Strategic sourcing:** A process designed to maximize the purchasing power of large, decentralized organizations, such as the University of California, by consolidating and leveraging common purchases.

**Sustainable Procurement:** [Modified from the UK Government's Sustainable Procurement Task Force (2012)] Purchasing that takes into account the economic, environmental and socially responsible requirements of an entity's spending. Sustainable Procurement allows organizations to procure their goods and services in a way that achieves value for money on a whole-life basis in terms of generating benefits not only to the organization, but also to society and the economy, while remaining within the carrying capacity of the environment.

**Sustainable Spend:** The intersection of Green and Economically and Socially Responsible (EaSR) Spend. UC Sustainable Spend is defined as spend that meets the criteria and requirements for Green Spend as well as EaSR Spend as laid out in the UC Sustainable Procurement Guidelines.<sup>5</sup>

**Sustainable Water Systems:** Water systems or processes that maximize water use conservation or efficiency, optimize water resource management, protect resources in the context of the local watershed, and enhance economic, social and environmental sustainability while meeting operational objectives.

**Takeback program:** A program that allows customers to return used products or materials to either the producer or distributor for responsible re-use or recycling consistent with applicable state and federal laws. These programs encourage responsible design for disassembly and recyclability, and protect the environment by keeping bulky or toxic products and packaging out of the waste stream.

**TDM:** Transportation Demand Management. TDM is the application of strategies and policies to reduce travel demand (specifically that of single-occupancy private vehicles). TDM programs may include: car sharing (car share), carpools (rideshare), vanpools, bus pools, shuttles, transit, bicycle circulation systems, pedestrian circulation systems, emergency rides home, telecommuting, flexible schedules, parking management (amount, access, fees), etc.

**Total Cost of Ownership (TCO):** An analysis of cost that considers not only purchase price, but also any costs associated with the acquisition, use, and disposal of the product. These costs may include some or all of the following: freight, taxes and fees, installation, operation/energy use, maintenance, warranty, collection, end-of-life disposal or recycling, as well as social or environmental costs, such as the cost of purchasing pollution offsets or monitoring labor practices.

**Total Solid Waste:** total solid waste includes municipal solid waste as well as all forms of regulated waste, this includes but is not limited to: regulated medical waste, biohazardous waste, pharmaceutical waste, universal waste and construction and demolition waste. Unlike campus targets, UC Medical Center diversion rates and reduction targets use total solid waste rather than municipal solid waste.

**Vehicle Miles Traveled (VMT):** Number of miles driven by a given vehicle(s) over a given period of time.

**UC Green Laboratories Action Plan:** A document created with the goal of setting campus specific targets; documenting the strengths and areas for improvement within sustainable operations of research laboratories via a gap analysis; and outlining actions that can be implemented to further targets.

**USGBC:** U.S. Green Building Council. The USGBC is a membership-based non-profit organization dedicated to sustainable building design and construction, and is the developer of the LEED building rating system.

**Wastewater:** Water that is discharged from domestic, industrial, or other use.

**Weighted Campus User:** As defined in the current American Association for Sustainability in Higher Education (AASHE) STARS Technical Manual.<sup>6</sup> This calculation applies only to campuses and not to Health Locations or LBNL.

**Watershed:** In the context of this Policy, a watershed is the area of land that drains to a common waterway, such as a stream, lake, estuary, wetland, aquifer, bay, or ocean.

**Water systems:** Natural and/or human made systems that provide water to and support the functions of watersheds and/or human communities.

**Zero waste:** The University zero waste goal is made up of incremental waste reduction and waste diversion targets. The University recognizes the attainment of reduction goals stated in this Policy and a 90% diversion of municipal solid waste as minimum compliance standard to be defined as a zero waste for locations other than Health Locations.

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<sup>6</sup> American Association for Sustainability in Higher Education (AASHE) is a sustainability rating system for the higher education sector.

**Zero-emissions vehicle (ZEV):** As defined by the current California Air Resources Board (CARB) ZEV program standards, a vehicle that emits no tailpipe pollutants from the onboard source of power and may include subcategories as defined by CARB.

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### III. POLICY TEXT

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*The University of California (“University”) is committed to responsible stewardship of resources and to demonstrating leadership in sustainable business practices. The University’s locations should be living laboratories for sustainability, contributing to the research and educational mission of the University, consistent with available funding and safe operational practices. Policy goals are presented below in nine areas of sustainable practices.*

#### A. Green Building Design

##### New Buildings

1. All new building projects, other than acute care facilities, shall be designed, constructed, and commissioned to outperform the CBC energy-efficiency standards by at least 20% or meet the whole-building energy performance targets listed in Table 1 of Section V.A.3. The University will strive to design, construct, and commission buildings that outperform CBC energy efficiency standards by 30% or more, or meet the stretch whole-building energy performance targets listed in Table 1 of Section V.A.3, whenever possible within the constraints of program needs and standard budget parameters.
2. Acute care/hospital facilities and medical office buildings shall be designed, constructed, and commissioned to outperform ASHRAE 90.1 - 2010 by at least 30% or meet the whole-building energy performance targets listed in Table 2 in Section V.A.3.
3. No new building or major renovation that is approved after June 30, 2019 shall use onsite fossil fuel combustion (e.g., natural gas) for space and water heating (except those projects connected to an existing campus central thermal infrastructure). Projects unable to meet this requirement shall document the rationale for this decision as described in Section V.A.4.
4. All new buildings will achieve a USGBC LEED “Silver” certification at a minimum. All new buildings will strive to achieve certification at a USGBC LEED “Gold” rating or higher, whenever possible within the constraints of program needs and standard budget parameters.
5. The University of California will design, construct, and commission new laboratory buildings to achieve a minimum of LEED “Silver” certification as well as meeting at least the prerequisites of the Laboratories for the 21st Century

(Labs21) Environmental Performance Criteria (EPC)<sup>7</sup>. Laboratory spaces in new buildings also shall meet at least the prerequisites of Labs21 EPC. Design, construction, and commissioning processes shall strive to optimize the energy efficiency of systems not addressed by the CBC energy efficiency standards.

6. All new building projects will achieve at least two points within the available credits in LEED-BD+C's Water Efficiency category.

### **Building Renovations**

7. Major Renovations of buildings are defined as projects that require 100% replacement of mechanical, electrical and plumbing systems and replacement of over 50% of all non-shell areas (interior walls, doors, floor coverings and ceiling systems) shall at a minimum comply with III.A.4 or III.A.5, above. Such projects shall outperform CBC Title 24, Part 6, currently in effect, by 20%. This does not apply to acute care facilities.
8. Acute care facilities and medical office buildings undertaking major renovations as defined above will outperform ASHRAE 90.1- 2010 by 30%.
9. Renovation projects with a project cost of \$5 million or greater (CCCI 5000) that do not constitute a Major Renovation as defined in item III.A.6. shall at a minimum achieve a LEED-ID+C Certified rating and register with the utilities' Savings by Design program, if eligible. This does not apply to acute care facilities.

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<sup>7</sup> Labs21 is a voluntary partnership program that offers training and resources to support the design and operation of high-performance laboratories. Labs21 is co-sponsored by the Department of Energy and the Environmental Protection Agency. The Labs21 Environmental Performance Criteria (EPC) is a rating system that consists of prerequisites and credits in several laboratory-specific areas, including laboratory equipment water use, chemical management, and ventilation. Labs21 EPC is designed as a complement to LEED.

## **B. Clean Energy**

In support of the climate neutrality goals outlined in Section C of this policy, the University of California is committed to reducing its greenhouse gas emissions by reducing energy use and switching to clean energy supplies.

### **1. Energy Efficiency**

Each location will implement energy efficiency actions in buildings and infrastructure systems to reduce the location's energy use intensity by an average of at least 2 percent annually.

### **2. On-campus Renewable Electricity**

Campuses and Health Locations will install additional on-site renewable electricity supplies and energy storage systems whenever cost-effective and/or supportive of the location's Climate Action Plan or other goals.

### **3. Off-campus Clean Electricity**

By 2025, each campus and Health Location will obtain 100% clean electricity. By 2018, the University's Wholesale Power Program will provide 100% clean electricity to participating locations.

### **4. On-campus Combustion**

By 2025, at least 40% of the natural gas combusted on-site at each campus and Health Location will be biogas.

## **C. Climate Protection**

Each campus and the UC Office of the President will develop strategies for meeting the following UC goals:

1. Climate neutrality from scope 1 and 2 sources by 2025
2. Climate neutrality from specific scope 3 sources (as defined by the American College and University Presidents' Climate Commitment (ACUPCC)) by 2050 or sooner

And at minimum, meet the following intermediate goal in pursuit of climate neutrality:

3. Reduce greenhouse gas (GHG) emissions to 1990 levels by 2020, pursuant to the California Global Warming Solutions Act of 2006.

For purposes of this section, campuses shall include their Health Location for all goals. GHG emissions reduction goals pertain to emissions of the six Kyoto greenhouse

gasses<sup>8</sup> originating from all scope 1 and scope 2 sources as specified by the Climate Registry, and from scope 3 emissions as specified by the ACUPCC, which include air travel paid for by or through the institution; and commuting to and from campus on a day-to-day basis by students, faculty, and staff. These goals will be pursued while maintaining the research and education mission of the University.

Campuses subject to the United States Environmental Protection Agency (USEPA) Greenhouse Gas Reporting Program, California Air Resources Board (CARB) Mandatory Greenhouse Gas Emissions Reporting, and participation in the CARB Cap-and-Trade Program shall perform to those regulatory requirements.

#### **D. Sustainable Transportation**

The University will implement transportation programs and GHG emission reduction strategies that reduce the environmental impacts from commuting, fleet and business air travel related to achieving the Climate Protection section of this Policy (see Section III.C.).

1. Each location will reduce GHG emissions from its fleet and report annually on its progress. Locations shall implement strategies to reduce fleet emissions and improve fuel efficiency of all university-owned or operated fleet vehicles and equipment where practical options exist through acquisition and fleet operation protocols.
  - A. By 2025, zero emission vehicles or hybrid vehicles shall account for at least 50% of all new light-duty vehicle acquisitions.
2. The University recognizes that single-occupant vehicle (SOV) commuting is a primary contributor to commute GHG emissions and localized transportation impacts.
  - A. By 2025, each location shall strive to reduce its percentage of employees and students commuting by SOV by 10% relative to its 2015 SOV commute rates;
  - B. By 2050, each location shall strive to have no more 40% of its employees and no more than 30% of all employees and students commuting to the location by SOV.
3. Consistent with the State of California goal of increasing alternative fuel – specifically electric – vehicle usage, the University shall promote purchases and support investment in alternative fuel infrastructure at each location.

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<sup>8</sup> The six greenhouse gasses identified in the Kyoto Protocol are carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons.

- A. By 2025, each location shall strive to have at least 4.5% of commuter vehicles be ZEV.
- B. By 2050, each location shall strive to have at least 30% of commuter vehicles be ZEV.
4. Each location will develop a business-case analysis for any proposed parking structures serving University affiliates or visitors to campus to document how a capital investment in parking aligns with each campus' Climate Action Plans and/or sustainable transportation policies.

**E. Sustainable Building Operations for Campuses**

1. Each campus will submit for certification one pilot building at a LEED-O+M "Certified" level or higher.
2. Each campus shall register a master site to certify campus-wide LEED-O+M credits and prerequisites to streamline the certification of multiple buildings through the LEED-O+M rating system by July 1, 2015. Each campus shall certify their campus-wide credits as soon as possible after the master site has been registered.
3. Each campus shall seek to certify as many buildings as possible through the LEED-O+M rating system, within budgetary constraints and eligibility limitations.
4. All locations shall implement an ongoing Green Lab Assessment Program supported by a department on campus to assess operational sustainability of research groups and the laboratories and other research spaces they use by Summer 2018.
  - a. At least one staff or faculty member from the location must have the role of managing the Green Lab Assessment Program.
  - b. Any green lab assessment programs and related efforts will adhere to all relevant UC, state and national policies and laws. Safety will never be compromised to accommodate sustainability goals.
  - c. All locations shall submit a UC Green Laboratories Action Plan by Summer 2018.

**F. Zero Waste**

1. The University prioritizes waste reduction in the following order: reduce, reuse, and then recycle and compost.
2. The University supports the integration of waste, climate and other sustainability goals, including the reduction of embodied carbon in the supply chain through the promotion of a circular economy and the management of organic waste to promote atmospheric carbon reduction. In support of this

goal, waste reporting will include tracking estimated scope 3 greenhouse gas emissions.

3. The University will reduce per capita total municipal solid waste generation at all locations other than Health Locations as follows:
  - a. Reduce waste generation per capita to FY2015/16 levels by 2020
  - b. Reduce waste generation by 25% per capita from FY2015/16 levels by 2025
  - c. Reduce waste generation by 50% per capita from FY2015/16 levels by 2030
4. The University will achieve zero waste by 2020 at all locations other than Health Locations. Minimum compliance for zero waste is 90% diversion of municipal solid waste from landfill.
5. By 2020, the University will prohibit the sale, procurement or distribution of Expanded Polystyrene (EPS) other than that utilized for laboratory supply or medical packaging and products.
  - a. By 2018, no EPS shall be used in foodservice facilities for takeaway containers.

The University seeks to reduce, reuse and find alternatives for EPS and laboratory and medical packaging products.

## **G. Sustainable Procurement**

Recognizing the substantial impact that procurement decisions have on the environment, society, and the economy, the University of California will maximize its procurement of sustainable products and services. The goals outlined throughout these policy and procedures sections shall be applied within the constraints of research needs and budgetary requirements and in compliance with all applicable rules, regulations and laws.

1. The University values the health and wellbeing of its students, staff, faculty, visitors, and suppliers. The University seeks to provide healthy and accessible conditions for the communities it serves and this will be considered as a fundamental factor when making procurement decisions. Where functional alternatives to harmful products or impacts exist, they are to be strongly preferred.
2. Per III. F. 1..., the University prioritizes waste reduction in the following order: reduce, reuse, and then recycle. Accordingly, sustainable procurement will look to reduce unnecessary purchasing first, then prioritize purchase of surplus or multiple use products, before looking at recyclable or compostable products.

3. The University's sustainable purchasing requirements are<sup>9</sup>:
  - a. 100% compliance with Required Level Green Spend criteria within three (3) fiscal years of the addition of those products and/or product categories to the Guidelines.
  - b. 25% Green Spend as a total percentage of spend per product category; target to be reached within three (3) fiscal years after a category is added to the Guidelines.
  - c. 25% Economically and Socially Responsible Spend as a total percentage of addressable spend; target to be reached within five (5) fiscal years of adoption of this section in the Guidelines.
4. The University's sustainable purchasing reporting requirements are:
  - a. Reporting on percent Green Spend beginning at the close of the first full Fiscal Year after a category is added to the Guidelines.
  - b. Reporting on percent Economically and Socially Responsible Spend beginning at the close of Fiscal Year 2018/19.
  - c. Reporting on percent Sustainable Spend will be piloted by UCOP beginning at the close of Fiscal Year 2018/19.
5. Each University's Procurement department will integrate sustainability into its processes and practices, including competitive solicitations, in order to satisfy the sustainable purchasing goals outlined above for products, as well as for the procurement of services. The University will do so by:
  - a. Allocating a minimum of 15% of the points utilized in solicitation evaluations to sustainability criteria. Criteria may include, but is not limited to, sustainable product attributes, supplier diversity, supplier practices, contributions to health and wellbeing, and materials safety. This requirement will go into effect on July 1st, 2019. Exceptions to this policy may only be granted by the appropriate Policy Exception Authority. Decisions to grant an exception shall be made in the context of a locations need to support teaching, research and public service when there is a demonstrable case that the inclusion of a minimum of 15% of the points utilized in solicitation evaluation for sustainability criteria will conflict with the project teams ability to execute a competitive solicitation.
  - b. Supporting outreach, education and providing equal access to small, diverse, and disadvantaged suppliers for all applicable University procurement opportunities in accordance with BUS-43 policy.

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<sup>9</sup> Detailed criteria for Green Spend, Economically and Socially Responsible (EaSR) Spend, and their combined intersection, Sustainable Spend, can be found in the UC Sustainable Procurement Guidelines (Guidelines); University of California. 2018. The University of California's Sustainable Procurement Guidelines.

- c. Comparing the Total Cost of Ownership when evaluating costs for goods and services in the selection of suppliers, whenever feasible.<sup>10</sup>
  - d. Targeting sustainable products and services for volume-discounted pricing to make less competitive or emerging sustainable products and services cost-competitive with conventional products and services.
  - e. Leveraging its purchasing power and market presence to develop sustainable product and service options where not already available.
  - f. Requiring packaging for all products procured by the University be designed, produced, and distributed to the end user in a sustainable manner.
  - g. Contracting with suppliers of products (e.g. electronics, furniture, lab consumables) that have established (preferably non-manufacturer specific) end-of-life reuse, recycling, and/or takeback programs at no extra cost to the University, and in compliance with applicable federal, state, and University regulations regarding waste disposal.
  - h. Requiring sustainability related purchasing claims to be supported with UC-recognized certifications and/or detailed information on proven benefits, durability, recycled content, and recyclability properties, in accordance with the [Federal Trade Commission's \(FTC\) Green Guides](#) for the use of environmental marketing claims.
  - i. Working with its suppliers to achieve greater transparency and sustainable outcomes throughout the supply chain. This may include maximizing the procurement of products that optimize use of resources from extraction through manufacturing and distribution (e.g. EPA's SmartWay Program).
6. All procurement staff will consult the UC Sustainable Procurement Guidelines document for minimum mandatory sustainability requirements to be included in solicitations for a given product or service category.

## H. Sustainable Foodservices

### 1. Campus and Health Locations Foodservice Operations

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<sup>10</sup> Public Contract Code § 10507.8 states: "As provided for in this article, when the University of California determines that it can expect long-term savings through the use of life-cycle cost methodology, the use of more sustainable goods and materials, and reduced administrative costs, the lowest responsible bidder may be selected on the basis of the best value to the university. In order to implement this method of selection, the Regents of the University of California shall adopt and publish policies and guidelines for evaluating bidders that ensure that best value selections by the university are conducted in a fair and impartial manner."

Campuses and Health Locations shall develop sustainability goals and initiatives in each of the four categories of sustainable foodservice practices listed below.

a. Food Procurement

Each campus and Health Locations foodservice operation shall strive to procure 20% sustainable food products by the year 2020, while maintaining accessibility and affordability for all students and UC Health Location's foodservice patrons.

b. Education

Each campus and UC Health Locations shall provide patrons with access to educational materials that will help support their food choices.

c. Engagement With External Stakeholders

Campus and Health Location departments, organizations, groups, and individuals shall engage in activities with their surrounding communities that support common goals regarding sustainable food systems.

d. Sustainable Operations

Campus and Health Location foodservice operations shall strive to earn third-party "green business" certifications for sustainable dining operations.

**2. Retail Foodservice Operations:**

a. Retail foodservice tenants will strive to meet the policies in III.H.1.a-d. above. Given the constraints faced by nationally-branded franchises that must purchase food through corporate contracts, location departments managing retail foodservice tenants will have the option of meeting III.H.1.a. (procuring 20% of all sustainable food products by the year 2020) by aggregating the purchases of all retail entities under the jurisdiction of a single operational unit on location.

b. Locations will include Section H of this Policy in lease language as new leases and contracts are negotiated or existing leases are renewed. However, locations will also work with tenants to advance sustainable foodservice practices as much as possible within the timeframe of current leases.

## I. Sustainable Water Systems<sup>11</sup>

With the overall intent of achieving sustainable water systems and demonstrating leadership in the area of sustainable water systems, the University has set the following goals applicable to all locations:

1. Locations will reduce growth-adjusted potable water consumption 20% by 2020 and 36% by 2025, when compared to a three-year average baseline of FY2005/06, FY2006/07, and FY2007/08. Locations that achieve this target early are encouraged to set more stringent goals to further reduce potable water consumption. Each Campus shall strive to reduce potable water used for irrigation by converting to recycled water, implementing efficient irrigation systems, drought tolerant planting selections, and/or by removing turf.
2. Each location will develop and maintain a Water Action Plan that identifies long term strategies for achieving sustainable water systems. The next update of the plan shall be completed in December 2016.
  - A. Campuses will include in this update quantification of total square feet of used turf and under-used turf areas on campus as well as a plan for phasing out un-used turf irrigated with potable water.
3. Each Campus shall identify existing single pass cooling systems and constant flow sterilizers and autoclaves in laboratories and develop a plan for replacement.
4. New equipment requiring liquid cooling shall be connected to an existing recirculated building cooling water system, new local chiller vented to building exhaust or outdoors, or to the campus chilled water system through an intervening heat exchange system if available.
  - A. Once through or single pass cooling systems shall not be allowed for soft-plumbed systems using flexible tubing and quick connect fittings for short term research settings.
  - B. If no alternative to single pass cooling exists, water flow must be automated and controlled to avoid water waste.

## J. Sustainability at UC Health

1. UC Health locations will achieve Practice Greenhealth's award "Greenhealth Partner for Change". Locations will use the definitions in Practice

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<sup>11</sup> Related sections: Green Building Design policy III.A. 5, Green Building Design procedure V.A.4, and Sustainable Purchasing procedures V.G.10.e, V.G.15, V.G.16, and V.G.17.

Greenhealth to set medical-center-specific goals for waste diversion and reduction as well as water reduction. Award achievement and target setting will occur before the following dates:

Award Recognition from Practice Greenhealth by:

- August 31, 2017 for UC San Francisco Health and UCLA Health.
- August 31, 2019 – UC Irvine Health, UC San Diego Health and UC Davis Health.

Target commitments for water and waste by:

- January 1, 2020 – UC Irvine Health, UC San Diego Health and UC Davis Health.

2. UC San Francisco Health and UCLA Health have the following targets:

- By 2020, 50% of total solid waste diverted from landfill and incineration.
- By 2020, 40lbs of total solid waste per Adjusted Patient Day.
- In line with campus targets, UCLA and UCSF Medical Centers will reduce growth-adjusted potable water consumption 20% by 2020 and 36% by 2025, when compared to a three-year average baseline of FY2005/06, FY2006/07, and FY2007/08.

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## **IV. COMPLIANCE / RESPONSIBILITIES**

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### **A. Implementation of the Policy**

The Executive Vice President-Chief Operating Officer is the Responsible Officer for this Policy. The UC Sustainability Steering Committee, which is chaired by the Executive Vice President-Chief Operating Officer, provides oversight for all aspects of the Policy.

### **B. Revisions to the Policy**

The President is the approver of this Policy and has the authority to approve or delegate the approval of revisions to the Policy.

The systemwide Working Group corresponding to each section of the Policy recommends Policy revisions to the UC Sustainability Steering Committee and Executive Vice President-Chief Operating Officer. Proposed provisions accepted by the UC Sustainability Steering Committee and the Executive Vice President-Chief Operating Officer shall then be recommended to the President for approval or to the appropriate delegated authority, as stated above.

The Sustainable Practices Policy will be reviewed, at a minimum, once every three years with the intent of developing and strengthening implementation provisions and assessing the influence of the Policy on existing facilities and

operations, new capital projects, plant operating costs, fleet and transportation services, and accessibility, mobility, and livability. The University will provide for ongoing active participation of students, faculty, administrators, and external representatives in further development and implementation of this *Policy*.

### **C. Compliance with the Policy**

Chancellors and the Lawrence Berkeley National Laboratory Director are responsible for implementation of the Policy in the context of individual building projects, facilities operations, etc. An assessment of location achievements with regard to the *Policy* is detailed in an annual report to the Regents. The internal audit department may conduct periodic audits to assess compliance with this Policy. ([Annual Report on Sustainable Practices](#)).

### **D. Reporting**

On an annual basis, the President will report to the Regents' Committee on Grounds and Buildings on the University's sustainability efforts in each area of the *Policy*.

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## **V. PROCEDURES**

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### **A. Green Building Design**

#### **New Buildings and Major Renovations**

1. Projects will utilize the versions of the CBC energy efficiency standards and of LEED-BD+C that are in effect at the time of first submittal of "Preliminary Plans" (design development drawings and outline specifications) as defined in the *State Administrative Manual*.<sup>12</sup>
2. If eligible, all new buildings and major renovations (as defined in III.A) will register with the Savings By Design program in order to document compliance with the requirement to outperform CBC energy efficiency standards by at least 20%.
3. Projects other than acute care facilities that opt to use energy performance targets for compliance with III.A.1 will at a minimum use the whole-building energy performance target listed below that corresponds to the year of the project's budget approval. The whole-building energy performance target is expressed as a percentage of the sum of the Annual Electricity and Annual

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<sup>12</sup> The [State Administrative Manual](#) (SAM) is a reference source for statewide policies, procedures, regulations and information developed and issued by authoring agencies such as the Governor's Office, Department of General Services (DGS), Department of Finance (DOF), and Department of Personnel Administration.

Thermal targets (converted to kBtu/gsf-yr) published as Table 1, UC Building 1999 Energy Benchmarks by Campus, in Sahai, et al. 2014.<sup>13</sup>

Table 1

Calendar Years	Compliance Target	Stretch Target
2015-16	65%	50%
2017-18	60%	45%
2019-20	55%	40%
2021-22	50%	35%
2023-24	45%	30%
2025 or after	40%	25%

4. Decisions affecting energy efficiency, fossil fuel use, and connection to existing central thermal services shall be made in the context of the location's climate action plan. Where onsite fossil fuel combustion within the building is deemed necessary, the rationale for this decision shall be documented as part of the existing project approval process. The submittal should include the following:
  - a. An estimate of annual electricity and gas use for the project as well as the project's target design energy use in thousand British thermal units (kBtu) per square foot.
  - b. An explanation of why fossil fuel combustion is required for the project and what other alternatives were evaluated.
  - c. An analysis explaining why fossil-fuel combustion is the most cost-effective energy source for the identified project specific applications.
  - d. A plan to mitigate, by 2025, the associated greenhouse gas emissions in accordance with the location's Climate Action Plan.

This documentation is part of the broader project approval process and does not require separate UCOP approval. Draft information should be submitted prior to budget approval as part of a Project Planning Guide, Delegated Authority Project Certification Checklist or related ancillary document. This information should be updated prior to design approval.

5. Acute care facilities and medical office buildings opting to use energy performance targets for compliance with III.A.2 will at a minimum use the

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<sup>13</sup> Sahai, R., Kniazewycz, C., Brown, K, 2014. [Benchmark-based, Whole-Building Energy Performance Targets for UC Buildings](#). University of California Office of the President and California Institute of Energy and Environment.

whole-building energy performance target listed in table 2 below. The whole-building energy performance target is expressed as a percentage of the sum of the Annual Electricity and Annual Thermal targets (converted to kBTU/gsf-yr) based on ASHRAE (2012) Advanced Energy Design Guidelines.<sup>14</sup>

**Table 2**

	Acute Care			Medical Office Buildings		
	Benchmark Average	Target	Stretch Target	Benchmark Average	Target	Stretch Target
UC Davis Health	230	160	115	85	60	43
UC Irvine Health	230	160	115	80	56	40
UCLA Health	230	160	115	80	56	40
UC San Diego	230	160	115	80	56	40
UC San Francisco Health	230	160	115	80	56	40

Locations will demonstrate compliance based on the results of energy modeling that represents a best estimate of as-operated, whole-building energy use, before accounting for on-site energy generation. Targets are intended to be verifiable in actual operation following building occupancy.

Projects are also required to model and report on the following metrics:

- annual electricity consumption (kWh/gsf/yr)
- annual thermal consumption (therms/gsf/yr)
- peak electricity (W/gsf)
- peak chilled water (tons/kgf) (if applicable)
- peak thermal (therms/hr/kgf)

The following very high-intensity process loads may be subtracted out of the total building energy use intensity if they can be metered separately.

- Clean room
- Data center
- Micro-chip fabrication

<sup>14</sup> ASHRAE (2012) Advanced Energy Design Guidelines for Large Hospitals

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- Accelerator (e.g. laser, light source)
- Bio-safety level III Laboratory
- Magnetic Resonance Imaging (MRI)
- Positron Emission Tomography (PET)
- Computer Tomography (CT)
- Pharmacies

If a building has more than 6 Operating Rooms (ORs), additional ORs (defined as any ORs beyond the baseline of 6 ORs) may be subtracted out of total building energy use intensity if they meet the following two requirements:

1. OR heating, ventilation and air conditioning (HVAC) is metered separately; and,
  2. A commitment is made by an appropriate official within the hospital's administration to implement an OR HVAC setback program in the subtracted ORs.
6. Locations are encouraged to coordinate with local water districts in efforts to conserve water and to meet reduced water use goals of the local districts.

**Privatized Development**

7. All privatized development of New Buildings or Major Renovations on University-owned land, that are constructed in whole or in substantial part for University-related purposes (i.e., in furtherance of the University's mission, both programmatic and auxiliary uses), and build-to-suit projects not on University-owned land constructed for University-related purposes, shall comply with section III.A. of this *Policy*. The provisions of this subsection apply regardless of the business relationship between the parties (i.e., whether a gift, acquisition, ground lease and/or lease).

**Building Renovations**

8. At budget approval, all renovation projects should include a listing of sustainable measures under consideration.
9. For all improvement projects in spaces leased or licensed by the Regents to be used for University-related purposes for a term of greater than 12 months, locations shall strive to comply with the Policy requirements in III.A.6 and III.A.7, as appropriate.

**Waiver Conditions Applicable to all Projects**

10. Waivers will only be granted in exceptional circumstances and will not be considered if the project negatively impacts the ability to comply with the goals of this Policy, in particular the goal of achieving carbon neutrality by 2025.

11. Any proposed waiver from section III.A of the Policy may be requested administratively from the UCOP Executive Director of Capital Programs prior to first project approval.
12. New Building and Major Renovation projects applying for an exception from section III.A.3 of this Policy should strive to achieve a USGBC LEED “Certified” rating. New building and renovation projects that are unable to achieve a USGBC LEED “Certified” rating shall submit a request for an exception with a LEED scorecard and supporting documentation to the UCOP Executive Director of Capital Programs, showing the credits that the project would achieve.
13. Such waiver requests shall indicate the applicable section of the Policy and/or Procedures; the proposed solution; and demonstrate equivalency with Policy intent.

#### **General/Miscellaneous**

14. The University will develop a program for sharing best practices.
15. The University will incorporate the requirements of sections III.A. and V.A. into existing training programs, with the aim of promoting and maintaining the goals of the Policy.
16. The University planning and design process will include explicit consideration of lifecycle cost along with other factors in the project planning and design process, recognizing the importance of long-term operations and maintenance in the performance of University facilities.
17. The University will work closely with the USGBC, Labs21, the Department of Energy, the U.S. Environmental Protection Agency, state government, and other organizations to facilitate the improvement of evaluation methodologies to address University requirements.

#### **B. Clean Energy**

1. **Energy Efficiency:** The energy efficiency goal follows the spirit of the US Department of Energy’s Better Building Challenge. Each location’s percent reduction in energy use intensity (EUI) will be reported annually based on the sum of weather-adjusted energy use divided by the sum of the maintained gross square footage (OGSF50). The average annual reduction will be calculated by comparing the current year EUI to the EUI five years prior. UCOP will use energy usage data from the systemwide purchased utility database for reporting campus energy use intensity, based on the campus-specified set of utility accounts and associated maintained gross square footage. Electric and gas site energy will be converted to kBtu and normalized for weather.
2. **On-campus Renewable Energy**

- a. Each location will determine the appropriate mix of measures to be adopted within its clean energy portfolio. The capacity to adopt these measures is driven by technological and economic factors and each location will need to reevaluate its mix of energy measures on a regular basis.
  - b. Locations will periodically evaluate the feasibility of new on-site renewable electricity projects. The financial evaluation of these projects will fully account for the anticipated avoided costs associated with decreased on-site power production from combined heat and power plants and/or purchased electricity as well as the avoided cost of carbon.
3. Off-campus Clean Electricity
  - a. Clean electricity is defined as having a residual greenhouse gas emission factor that is less than 150 lbs CO<sub>2</sub>/MWh.
  - b. Clean electricity shall be procured through the following methods and reported on annually:
    - i. A location may opt-in to a utility provided green power program for its purchased electricity that meets the definition of clean electricity specified in V.B.3.a.
    - ii. The UC Wholesale Power Program, which will procure and supply to participating campuses 100% clean electricity by 2018.
    - iii. Those locations without access to a green power program may purchase Renewable Energy Credits (REC) to offset purchased electricity. In order to be counted, such RECs will be transferred to UC or retired on behalf of UC.
4. Where feasible, the University will seek to benefit from the economies of scale and to reduce risk by developing a portfolio for systemwide clean energy procurement contracts from which locations may benefit.
5. On-campus Combustion
  - a. The University will develop and procure biogas supplies under the direction of the Energy Services Unit Governing Board (The Governing Board). The Governing Board will establish acceptable pricing for biogas projects and determine how the biogas will be allocated to each location. Locations may also implement local projects to directly transport biogas to the location.

### C. Climate Protection

1. Each campus will maintain individual membership with The Climate Registry (TCR)<sup>15</sup>. Campuses shall include their Health Locations in their membership.
2. Each campus will complete a GHG emissions inventory annually. Campuses shall include their Health Locations in the annual inventory. To comply with TCR and American College and University Presidents Climate Commitment (ACUPCC) requirements<sup>16</sup>, inventories should contain emissions of the six Kyoto greenhouse gasses from: scope 1 and 2 emissions sources outlined in the TCR General Reporting Protocol; and scope 3 emissions sources outlined by the ACUPCC Implementation Guide. All UC campuses will report their updated emissions inventories through the ACUPCC on-line reporting tool at least biennially. Campuses must verify all emissions inventories through TCR, but campuses may either pursue verification annually (for the previous year's emissions inventory) or biennially (for the emissions inventories from the previous two years). Campuses subject to the United States Environmental Protection Agency (USEPA) Greenhouse Gas Reporting Program, California Air Resources Board (CARB) Mandatory Greenhouse Gas Emissions Reporting, and participation in the CARB Cap-and-Trade Program shall complete the relevant emissions inventories outlined in the USEPA and CARB reporting protocols.
3. Each campus will complete an update of its climate action plan for reducing GHG emissions to 1990 levels by calendar year 2020 (annual 2020 emissions to be reported in 2021); achieving climate neutrality for scope 1 and 2 sources by calendar year 2025 (annual 2025 emissions reported in 2026); and achieving climate neutrality for ACUPCC-specified scope 3 sources for calendar year 2050 (annual 2050 emissions reported in 2051). Campuses shall include their Health Locations in the action plan.
4. The Climate Change Working Group (CCWG), under the UC Sustainability Steering Committee and represented on the President's Global Climate Leadership Council, will monitor progress toward reaching the stated goals for GHG reduction, and will evaluate suggestions for strategies and programs to reach these goals. The CCWG will develop protocols to allow for growth adjustment, normalization of data, and accurate reporting procedures among the UC campuses, as required and applicable.

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<sup>15</sup> [The Climate Registry](#) is a nonprofit collaboration among North American states, provinces, territories and Native Sovereign Nations that sets consistent and transparent standards to calculate, verify and publicly report greenhouse gas emissions into a single registry.

<sup>16</sup> ACUPCC requirements are outlined at [Second Nature: The Presidents' Climate Leadership Commitments](#).

#### **D. Sustainable Transportation**

1. The Sustainable Transportation Working Group, with input from the Climate Change Working Group, will develop normalized data reporting protocols to track progress on the implementation of sustainable transportation programs. Annually, each location will collect and report:
  - a. Fleet efficiency metrics: fleet fuel consumption, total vehicle inventory, and total number and percent of new ZEV fleet acquisitions.
  - b. Commute data: employee and campus-wide mode split, average vehicle ridership (AVR), and percent of commuter alternative fuel vehicles.
  - c. Number and type of alternative fuel infrastructure (e.g. electric vehicle charging stations, natural gas, etc).
2. Due to the unique characteristics of each campus' fleet management protocols, each location shall develop a Fleet Sustainability Implementation Plan by January 1, 2018 to document the infrastructure and financial needs to implement a low-carbon fleet program and lower campus fleet carbon emissions through 2025. Location fleets shall implement practical measures to improve fleet emissions including, but not necessarily limited to, managing vehicle fleet size, eliminating non-essential vehicles, purchasing the cleanest and most efficient vehicles and fuels, and investing in clean shuttle operations.
3. To amplify the impact of campus programs, each location is encouraged to partner with local agencies on opportunities to improve sustainable transportation access to and around university facilities in addition to developing its own transportation programs.
4. Each location shall implement parking management and pricing strategies to support emissions reduction and sustainable transportation goals, including variable pricing and unbundling parking and housing costs.
5. The University will pursue strategic programs and data collection to offset greenhouse gas emissions related to business-related campus air travel.
6. This Policy shall be consulted for all new campus development – including acquisitions and leases – to evaluate how the development or acquisition would meet the transportation policies and goals of the campus and University.
7. Sustainable Transportation Working Group will coordinate the development of a system wide best practices guide for campus units implementing this Policy. Mechanisms for reducing transportation emissions include, but are not limited to:
  - a. Constructing additional on-campus housing (e.g., student housing and temporary housing for new faculty)

- b. Expanding TDM programs: car share, carpool/rideshare, vanpool, shuttles, transit, bicycle circulation system, pedestrian circulation system, emergency rides home, parking management and pricing, employee service and retail amenities, etc.
- c. Expanding intra-campus transportation programs such as shuttles, car share, bike share, bicycle and pedestrian infrastructure, etc.
- d. Encourage opportunities for employees to participate in flexible work schedules and/or telecommuting programs to provide alternative commute flexibility and options.
- e. Replacing fleet vehicles with newer, more fuel-efficient vehicles when ZEV are not available
- f. Rightsizing fleets (determining the appropriate fleet size, revising business practices to reduce need for travel)
- g. Reducing fleet vehicle miles traveled
- h. Increasing use of fuels with lower GHG emissions
- i. Installation of telematics and GPS to measure and help reduce fuel consumption by monitoring and reducing excessive idling and speeding.

**E. Sustainable Building Operations for Campuses**

1. The University will incorporate the Sustainable Building Operations policy requirements into existing facilities-related training programs, with the aim of promoting and maintaining the goals of the Policy.
2. The University will work closely with the USGBC to address the needs and concerns of campuses in the further development of USGBC programs, including the LEED-O+M rating system and the USGBC's "Application Guide for Multiple Buildings and On-Campus Buildings."
3. Locations will use the LEED-O+M certification process to advance the University's educational and research mission by using the buildings as living, learning laboratories.
4. Each location will assess at least three new research groups through their Green Lab Assessment Program by Summer 2018.
5. All locations shall complete a UC Green Laboratories Action Plan by summer 2018 to determine strengths and areas for improvement within the operations of research laboratories in respect to sustainability and carbon neutrality. A standard template for this with required sections will be maintained and updated by the Sustainable Operations Working Group and this plan will be updated on a four-year cycle (2018, 2022, 2026 and so on).

6. Each location will report annually on their Green Labs program progress including the number of researchers directly and indirectly engaged by the program each year.

**F. Zero Waste**

1. The University will voluntarily comply with Chapter 18.5, the “State Agency Integrated Waste Management Plan,” in California Public Resources Code Section 40196.3.
2. Waste reduction and recycling shall be prioritized in seeking LEED credits for LEED-BD+C, LEED-ID+C, and LEED-O+M projects.
3. By the end of 2018, locations other than Health Locations will submit new waste management plans including planned waste reduction strategies. Plans will include campus and regional waste management practices and options, evaluate progress towards policy goals and determine the associated costs of achieving policy goals. Waste management plans will be updated and submitted to the Associate Vice President of Energy and Sustainability, Office of the President on a 5 year cycle.
4. Exceptions will be considered for entities which represent less than 1% of the overall campus solid waste tonnage.
5. Reduction, reuse, recycling and composting are the primary methods to be counted toward the municipal solid waste diversion from landfill goals. The goal is to strive for the highest form of resource recovery methods and the best use of the materials. The hierarchy for resource recovery is as follows:
  - a. Source reduction: The reduction of waste is the highest form of resource recovery as it eliminates the products from being manufactured or transported in the first place.
  - b. Reuse: Reuse materials in their original form (e.g. use lumber for lumber, mugs instead of single use cups, reuse course readers in subsequent classes. These methods maintain the embodied energy in each material.)
  - c. Composting and recycling: Composting is the recycling of organics such as animal waste, bedding, greenwaste and foodwaste into compost and mulch. Recycling refers to the conversion of waste into basic materials so they can be made back into new products.
  - d. The methods of reusing and recycling waste vary and will evolve over time as technologies improve. The Solid Waste and Recycling Working Group – comprising waste and recycling professionals from each location – will continue to evaluate recycling methods and recommend their appropriateness for counting toward diversion goals.
6. Waste Reduction: For the purposes of measuring waste reduction, reporting will be in waste generated per capita per day. Waste generated includes municipal solid waste that goes to landfill and all waste that is diverted

through recycling, organics or conversion technologies. Not included in waste reduction calculations are:

- a. Waste generated as part of major construction and demolition projects;
  - b. Organic waste generated due to landscape management; Agricultural and animal related waste.
7. Per capita metrics will be understood in the context of business operations and activities:
- a. Campuses will use Weighted Campus User
  - b. LBNL will use Full Time Equivalent

Other locations should use the per capita metric that best supports their business operations.

8. Where significant data methodology errors are found in benchmark years, an appropriate alternative methodology will be determined by agreement with UCOP and the Solid Waste and Recycling Working Group.
9. Reporting of solid waste and recycling data will follow ULEs Environmental Claim Validation Procedure for Zero Waste to Landfill (UL2799: 2017-03-22 : 3rd Edition) and should be applied in principle to future standards/ editions. Where there discrepancies between UC policy definitions and goals and UL2799 and subsequent editions, the policy language will apply.

#### **G. Sustainable Procurement**

1. This section V.G. shall be applied within the constraints of research needs and budgetary requirements and in compliance with applicable rules, regulations and laws.
2. The University will work to remove harmful chemicals from products brought onto campus by increasing the purchase of products and materials that disclose known hazards (e.g. in compliance with the requirements of LEED BD+C [v4 Building product disclosure and optimization - material ingredients](#) - or updated equivalent) and choosing products with reduced concentrations of chemical contaminants that can damage air quality, human health, productivity, and the environment.
3. The University will require suppliers to clearly identify products with UC-recognized certifications, as defined by the Guidelines, in both hosted and punchout catalog e-procurement environments.
  - a. Commodity/Contract Managers will work with all contracted suppliers to ensure that contract items that meet the UC criteria for Green and EaSR Spend as outlined in the Guidelines will be prioritized in all product searches.

- b. Unless locations request otherwise, products that do not meet the University's minimum criteria requirements will be blocked in all hosted catalogs and punchout catalogs upon contract award.
4. The University will require all strategically sourced suppliers to report annually on their sustainable business operations, and quarterly on the University's sustainable purchasing activity. Quarterly sustainable spend reports will be collected by the appropriate University of California Procurement Services department. Quarterly spend reports must be filterable, include all products and services purchased, use an Excel compatible software, include information on a single sheet and include the following fields:
  - i. Campus
  - ii. Department and/or delivery location
  - iii. SKU and/or manufacturer number
  - iv. Item description
  - v. 8-digit UNSPSC code
  - vi. Product category/Title of UNSPSC code
  - vii. Quantity
  - viii. Unit of measure
  - ix. Price
  - x. Third-party sustainability attribute or certification as recognized in the Guidelines
5. UC locations, not including UC Health locations or the Lawrence Berkeley National Lab, will report annually to the UC Office of the President (UCOP) their percent Green Spend and EaSR Spend for product and service categories defined in the Guidelines. For the first two (2) years of reporting, reports on Green Spend will include at minimum a location's share of products purchased from system wide strategically sourced suppliers, with reports to be provided by the suppliers to UCOP and locations. EaSR Spend reporting will be compiled at the campus level, with the support of UCOP. Reports will be reviewed by each location for accuracy and signed by the location's Chief Procurement Officer, with reporting due 60 days after fiscal close. Reporting procedures will be reviewed after two (2) years of reporting under this policy.

6. The University Standards for all packaging materials will be outlined in all solicitations. Suppliers will be required to demonstrate how their standards and practices for packaging materials meet the UC Standards.
  - a. Additional consideration in bid evaluations will be given to suppliers who meet more than one criteria listed in 8 (a) - (e) for packaging, and with preference given to bids meeting 8 (b).
  
7. In accordance with section III.F.5., the University has disallowed the use of expanded plastic foam materials (such as Expanded Polystyrene (EPS), Expanded Polyethylene (EPE), Expanded Polyurethane and expanded plastic foam hybrids) by 2020.
  
8. The University requires that all packaging be compliant with the Toxics in Packaging Prevention Act (AB 455) as to be free of any intentionally introduced lead, cadmium, mercury or hexavalent chromium, and containing no incidental concentrations of these regulated metals greater than 100 parts per million (ppm) by weight. In addition, the University requires that all packaging meet at least one of the criteria listed below:
  - a. Uses bulk packaging;
  - b. Uses reusable packaging (e.g. totes reused by delivery service for next delivery);
  - c. Uses innovative packaging that reduces the weight of packaging, reduces packaging waste, or utilizes packaging that is a component of the product;
  - d. Maximizes recycled content and/or meets or exceeds the minimum post-consumer content level for packaging in the [U.S. Environmental Protection Agency Comprehensive Procurement Guidelines](#);
  - e. Uses locally recyclable or certified compostable material.
  
9. Suppliers, when interacting with the University, shall be prohibited from providing hard copies of presentations or other materials. Suppliers will be required to present all information in electronic format that is easily transferable to University staff, who may choose to print their own copies in accordance with UC Policy if necessary. Materials may be provided if specifically required or requested by a UC representative.

All recyclers of the University's electronic equipment must be e-Steward certified by the Basel Action Network (BAN) ([www.ban.org](http://www.ban.org)). In cases where the

University has established take-back programs with a manufacturer, the University will encourage the manufacturer to become a BAN-certified e-Steward Enterprise ([e-Stewards for Enterprises](#)).

## H. Sustainable Foodservices

### Campuses and Health Locations

1. Campus and Health Locations foodservice operations subject to this Policy shall include both self-operated and contract-operated foodservices.
2. In the context of this Policy, sustainable food is defined as food and beverage purchases that meet one or more of the criteria listed below, which are reviewed annually by the UC Sustainable Foodservices Working Group (under the UC Sustainability Steering Committee).
  - i. Locally Grown<sup>17</sup>
  - ii. Locally Raised, Handled, and Distributed
  - iii. Fair Trade Certified<sup>18</sup>
  - iv. Domestic Fair Trade Certified
  - v. Shade-Grown or Bird Friendly Coffee
  - vi. Rainforest Alliance Certified
  - vii. Food Alliance Certified
  - viii. USDA Organic
  - ix. AGA Grassfed
  - x. Grass-finished/100% Grassfed
  - xi. Certified Humane Raised & Handled
  - xii. American Humane Certified
  - xiii. Animal Welfare Approved
  - xiv. Global Animal Partnership (steps III, IV, V)
  - xv. Cage-free

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<sup>17</sup> Resulting from regional constraints, campus definitions of “Locally Grown” and “Locally Raised, Handled, and Distributed” may vary; however, “Locally Grown” and “Locally Raised, Handled, and Distributed” distances shall not exceed 500 miles.

<sup>18</sup> Fair Trade Certified products must be third party certified by one of the following: IMO Fair For Life, Fairtrade International (FLO), Fair Trade USA.

- xvi. Protected Harvest Certified
  - xvii. Marine Stewardship Council
  - xviii. Seafood Watch Guide “Best Choices” or “Good Alternatives”
  - xix. Farm/business is a cooperative or has profit sharing with all employees
  - xx. Farm/business social responsibility policy includes (1) union or prevailing wages, (2) transportation and/or housing support, and (3) health care benefits
  - xxi. Other practices or certified processes as determined by the location and brought to the Sustainable Foodservices Working Group for review and possible addition in future Policy updates.
3. With the goal of achieving 20% sustainable food purchases, all Food Service Operations should track and report annually the percentage of total annual food budget spent on sustainable food.
  4. If cost effective, each campus and Health Location will certify one facility through a third-party green business certification program through one of the following: (1) city or county’s “green business” program, (2) Green Seal’s Restaurants and Food Services Operations certification program, or (3) the Green Restaurant Association certification program.
  5. Campuses, Health Locations, and retail foodservice operations will provide an annual progress report on these goals. Annual reports should include the individual campus and Health Location’s goals as well as the progress and timelines for the programs being implemented to reach those goals.
  6. Campuses and Health Locations are encouraged to form a campus-level foodservices sustainability working group to facilitate the campus goal setting and implementation process.
  7. The stakeholders who are involved with the implementation of the Sustainable Foodservice section of this Policy will participate in a system-wide working group to meet, network and to discuss their goals, best practices, and impediments to implementation.
  8. Campuses and Health Locations are encouraged to implement training programs for all foodservice staff on sustainable foodservice operations, as well as, where applicable, on sustainable food products being served to patrons, so that staff can effectively communicate with the patrons about the sustainable food options.
  9. Campuses and Health Locations are encouraged to participate in intercollegiate and national programs that raise awareness on dietary health, wellness and sustainability (e.g. the MyPyramid.gov Corporate Challenge and the Real Food Challenge).

10. Campuses and Health Locations are encouraged to develop health and wellness standards for food service operators, including eliminating the use of trans-fat oils or products made with trans-fat.
11. Campuses and Health Locations are encouraged to undertake additional initiatives that encourage healthy and sustainable food services operations. Examples include tray-less dining, beef-less or meat-less days, and preservative minimization programs.

## **I. Sustainable Water Systems**

### **Reporting Methods**

1. Explicitly identify the geographic and operational areas comprising the scope of location water usage (e.g., the campus as defined by its Long Range Development Plan boundary, excluding third-party operated facilities).
2. Locations with Health Locations may choose to report Health Locations data and progress toward the target separately from the main campus.
3. All locations shall report water usage in a tabular format using the following methods:
  - a. Measure per capita water consumption by Weighted Campus User (WCU) for main campuses and Adjusted Patient Day (APD) for Health Locations. If necessary, WCU and APD may be combined using the following calculation:  $[(APD/360) * 1.5] + WCU$ ;
  - b. Potable water usage for a baseline period that is three consecutive fiscal years including FY 2005/06, 2006/07, and FY 2007/08:
    - i. Total location potable water usage, in gallons, for each of the three years comprising the baseline period,
    - ii. WCU, or APD, for each of the three years comprising the baseline period,
    - iii. Baseline Potable Water Usage: calculate the baseline metric as follows: Step 1: Divide each year's total water use in gallons by that year's WCU or APD population. Step 2: Average the three gallons/population calculations to derive the Baseline Potable Water Usage for the location,
    - iv. Multiply the Baseline Potable Water Usage figure by 0.64 to derive the location's 2025 Potable Water Usage Target, and
    - v. Unless impracticable, provide average gallons of potable water usage per baseline year per gross square foot of location built space for which potable water consumption is being reported, mirroring (c) above;

- c. Potable water usage for the most recent fiscal year<sup>19</sup>:
  - i. If using only the most recent fiscal year, and not an average, list in the table the following:
    - 1. Total location potable water usage, in gallons, for the most recent fiscal year,
    - 2. WCU or APD for the most recent fiscal year,
    - 3. Divide the gallons by the WCU or APD to derive the Current Potable Water Usage, and
  - ii. If feasible, provide average gallons of potable water usage per gross square feet for either the three most current fiscal years, if that is the method adopted, or for the single most current fiscal year, again using the methodology described above;
- d. Total location non-potable water usage, in gallons, for the most recent fiscal year.
- e. Report, or estimate if metered data is not available, water usage in the following use categories at a minimum: buildings, landscape, and central plant including cooling towers, identifying the quantities of potable and non-potable used for these purposes.

### **Reporting Schedule**

- 4. Each location prepared a Water Action Plan as specified below and submitted it to the Office of the President by December 2013.
- 5. Beginning the following year, each location will provide an annual progress report on implementing its Water Action Plan to include progress on its water usage reduction.

### **Water Action Plans**

- 6. Each Water Action Plan and the water conservation and water efficiency strategies it contains will take into account relevant regional conditions and regulatory requirements, will recognize historical progress, and will acknowledge current location best practices being implemented.
- 7. Each Water Action Plan will include a section on Water Usage and Reduction Strategies that:
  - a. Describes the applicable types of water comprising water systems, including but not limited to potable water, non-potable water, industrial water, sterilized water, reclaimed water, stormwater, and wastewater;

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<sup>19</sup> An average of the three most current fiscal years is allowed but not required.

- b. Reports water usage in accordance with the methods set forth in these procedures;
  - c. Considers setting more stringent potable water reduction goals if the location has already achieved a 36% below baseline reduction in per capital potable water consumption;
  - d. Outlines location-specific strategies for achieving the target for reduced potable water consumption;
  - e. Encourages implementation of innovative water-efficient technologies as part of capital projects and renovations (e.g., installation of WaterSense certified fixtures and appliances, graywater reuse, rainwater harvesting, and watershed restoration);
  - f. Addresses use of non-potable water sources, and how those sources factor into overall sustainable water systems strategy;
  - g. Analyzes the identified water use reduction strategies using a full cost approach by considering:
    - i. Projected costs and savings of the identified water use strategies,
    - ii. Indirect costs and savings associated with reduced energy consumption due to the energy use embodied in water use,
    - iii. Savings associated with reduced or avoided infrastructure costs, and
    - iv. Other avoided costs; and
  - h. Sets a timeline for the strategies being implemented to reach the water usage reduction target.
8. Each Water Action Plan will include a section on Stormwater Management developed in conjunction with the location stormwater regulatory specialist that:
- a. Addresses stormwater management from a watershed perspective in a location-wide, comprehensive way that recognizes stormwater as a resource and aims to protect and restore the integrity of the local watershed(s);
  - b. References the location's best management practices for preventing stormwater pollution from activities that have the potential to pollute the watershed (e.g., construction; trenching; storage of outdoor equipment, materials, and waste; landscaping maintenance; outdoor cleaning practices; vehicle parking);
  - c. Encourages stormwater quality elements such as appropriate source control, site design (low impact development), and stormwater treatment measures to be considered during the planning stages of projects in order to most efficiently incorporate measures to protect stormwater quality;

- d. If feasible, cites relevant and current location stormwater-related plans and permits in an appendix or reference list accompanying the Water Action Plan; and
  - e. Includes, to the extent feasible, full cost evaluation of stormwater management initiatives similar to the approach in the Water Usage and Reduction Strategies section above.
9. Each location's Water Action Plan will include a section on Education and Outreach that:
- a. Presents potential opportunities to serve as a living laboratory for sustainable water projects;
  - b. Supports efforts of students, faculty and staff to implement sustainable water systems on campuses and other locations;
  - c. Identifies opportunities for pilot projects that illustrate the University's commitment to sustainable water practices through teaching, research, and service; and
  - d. Identifies opportunities for new practices that could create behavior change with regard to water use and watershed management.
10. Each location's Water Action Plan will include a section called Irrigation and Landscape that includes:
- a. Total square feet of turf area and breaks out used and under used turf areas, and;
  - b. A description and plan to reduce irrigation with potable water.

**J. Sustainability at UC Health**

- c. The UC Health Sustainability Working Group, with input from relevant working groups for each subject area, will develop normalized data reporting protocols to track the implementation of sustainability programs at UC Health locations. Annually, the UC Health Sustainability Working Group will report to the University of California Health Center Chief Operating Officer Group and the University of California Sustainability Steering Committee.
- d. UC Health locations will participate in Practice Greenhealth's reporting program and report at a minimum metrics for energy, carbon, water and waste. To meet the reporting requirements, reporting to Practice Greenhealth will reflect UC Health location boundaries and will use either adjusted patient encounters or adjusted patient days as appropriate to reflect non-licensed patient encounters. Reporting to Practice Greenhealth will be based on the most recently complete fiscal year. Beginning in the 2018/19 fiscal year, these reports will be used for the

Annual Report on Sustainable Practices that is presented to the UC Regents.

- e. UC Health locations may discretionarily submit additional facility-specific applications to Practice Greenhealth for award consideration in addition to a total site/campus application. The stated policy goal of achieving Practice Greenhealth Partner for Change Awards may be at the campus or facility level.
4. UC Health locations will set targets for their facilities for waste diversion and reduction as well as for water reduction in accordance with the schedule outlined in section III.D. If targets require a comparison to a baseline dataset, Practice Greenhealth's 2017 report will be used as a baseline. These targets will be recommended to the system wide Sustainability Steering Committee for addition to the Policy at the meeting following the due dates listed in section III.D.

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## VI. RELATED INFORMATION

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- [UC Sustainability Website](#)
- Annual progress reports to The Regents: [Annual Report on Sustainable Practices](#)
- UC Code of Conduct for Trademark Licensees: [Trademark Licensing Code of Conduct](#)
- [UC Sustainable Procurement Website](#)
- [UC Procurement Services Website](#)
- [UC Sustainability Website](#)
- [Annual Report on Sustainable Practices](#)
- [Trademark Licensing Code of Conduct](#)
- [BFB-BUS-43 Materiel Management](#)
- [BFB-BUS-38: Disposition of Excess Property and Transfer of University-Owned Property](#)
- [Public Contract Code: Materials, Goods, and Services, Section 10507.8](#)
- [Public Contract Code: Construction](#)

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## VII. FREQUENTLY ASKED QUESTIONS

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Not applicable.

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## VIII. REVISION HISTORY

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### **XX 2018:**

Policy expanded to include UC Health and revised to update the following sections with new goals and clarifying language: definitions, green building design, clean energy, zero waste, and sustainable procurement.

### **June 2017:**

Policy remediated for accessibility according to Web Content Accessibility Guidelines (WCAG) 2.0

Policy revised to reflect the University Carbon Neutrality Initiative, adding definitions of green lab assessment programs, “research group” as defined by the Laboratory Hazard Assessment Tool (LHAT), and the inclusion of the UC Green Laboratories Action Plan. Changes were also made to the sections for Sustainable Building Operations for Campuses.

### **June 2016:**

Policy revised to update the following sections with new goals and clarifying language: definitions, green building design, sustainable transportation, and sustainable water systems.

### **June 2015:**

Policy revised to update the following sections: sustainable building operations, sustainable foodservices practices, green building design, and clean energy.

### **July 2011:**

Policy revised to update the following sections: green building design, climate protection practices, sustainable operations, environmentally preferable purchasing, and sustainable foodservice practices.

### **September 2009:**

Policy expanded to include sustainable foodservice

### **March 2007:**

Policy expanded to include sustainable operations, waste reduction, and environmentally preferable purchasing; renovations guidelines added to green building section, climate protection section refined

### **January 2006:**

Policy expanded to include transportation and climate protection

**University of California Policy**  
**Sustainable Practices**

**June 2004:**

President formally issued the “Presidential Policy on Green Building Design and Clean Energy Standards.” This Policy was subsequently renamed the Policy on Sustainable Practices

**July 2003:**

The Regents approved sustainability policy principles ([UCOP Sustainability](#))