



Caltech Facilities Department Sustainability Statement

The Facilities Department is committed to reducing its ecological footprint in a fiscally and socially responsible way while executing its mission to support research and education at Caltech.

The Facilities Department will execute their mission while adhering to guidelines in the following six initiative categories. The goals within each initiative will be updated periodically.

Energy

The Facilities Department will identify and recommend sources of high quality, reliable, and environmentally preferable energy to support research and education while working with the campus community to improve efficiency and reduce demand.

Strategies in progress:

Efficiency & Conservation

- Upgrade steam main feed line
- Integrate building data into comprehensive energy management system
- Expand Caltech Energy Conservation Investment Program (CECIP)

Energy Generation & Procurement

- Integrate alternative low carbon energy sources (i.e. fuel cells) where feasible
- Integrate renewable energy sources (i.e. photovoltaics) where feasible
- Operate and maintain efficient stationary combustion

Strategies Planned:

Efficiency & Conservation

- Monitor and optimize demand management
- Implement second phase of ultralow temperature freezer energy efficiency program
- Expand building sub-metering

Energy Infrastructure

- Assess infrastructure for upgrades and improvements
- Develop integrated energy plan

Water

The Facilities Department will be a responsible steward of water resources by focusing on efficiency, cultivating climate adapted landscape, minimizing potable water use, and maximizing use of reclaimed water.

Strategies in Progress:

Efficiency & Conservation

- Transition to drought tolerant and climate adapted vegetation
- Increase building sub-metering and integrate with building management system
- Integrate remaining vegetated space to weather informed irrigation system
- Install pint flush urinals, high efficiency toilets, and low flow fixtures

Strategies Planned:

Capture and reuse

- Investigate non-potable water reuse on campus
- Employ active storm water retention/collection methods
- Establish sustainability council water working group

Materials

The Facilities Department will reduce waste through responsible procurement practices and encourage materials reuse and recycling.

Strategies in Progress:

Diversion

- Increase campus municipal solid waste and hazardous waste diversion rates
- Implement new recycling campaign for municipal solid waste

Procurement

- Develop campus wide Environmentally Preferable Purchasing (EPP) guidelines
- Implement Green Cleaning Policy

Cradle to Cradle

- Cultivate strategic partnerships with vendors that consider full life cycle impacts of products

Strategies Planned:

Diversion

- Develop on-campus resources for surplus exchange and material reuse

Procurement

- Develop tracking mechanisms to account for locally and sustainably sourced food
- Determine percentage of centralized purchasing that is recycled content products, EPEAT computers and electronics, and energy star appliance

Built Environment

The Facilities Department will ensure existing and future facilities meet and maintain a high level of energy, water, and resource efficiency.

Strategies in Progress:

Integrated Design

- Incorporate LEED, Labs 21, and Living Building Challenge principles into Institute Design Guidelines

Green Building Best Management Practices

- Consider lifecycle costs during design, construction and operation of buildings
- Ensure that new buildings and major renovations meet LEED-NC Gold certification requirements
- Retrofit existing core campus buildings to achieve a high degree of compliance with the Water Efficiency and Energy and Atmosphere categories in the LEED-EBOM guidelines

Biodiversity and Habitat

- Transition to drought tolerant or climate adapted vegetation
- Maintain permanent open space
- Expand integrated pest management plan

Strategies Planned:

Green Building Best Management Practices

- Conduct comparative operational performance study of recent certified LEED buildings
- Investigate synergies between LEED-EBOM and LEED-NC requirements

Biodiversity and Habitat

- Determine campus tree canopy coverage
- Expand use of compost material produced on campus as mulch

Transportation

The Facilities Department will maintain a fuel-efficient fleet of vehicles and actively promote and enhance alternative transportation options for the Caltech community.

Strategies in Progress:

Access to alternative transportation

- Promote a bike and pedestrian friendly campus
- Maintain bike sharing program
- Implement alternative transportation incentive programs: vanpools, car sharing, bike/walk, discounted metro passes, fuel efficient vehicle discounts
- Decrease drive alone rates

Strategies Planned:

Access to alternative transportation

- Expand Zipcar membership
- Identify opportunities to integrate electric vehicles into the campus grid

Campus Fleet

- Calculate average fleet fuel efficiency
- Promote adoption of campus policy to convert fleet vehicles to high fuel efficiency vehicles
- Develop electric cart sharing program

Emissions, Effluents & Waste

The Facilities Department will explore, evaluate, and implement innovative techniques for minimizing the impact of campus emissions, effluents, and waste streams.

Strategies in Progress:

GHG reduction & AB32 Compliance

- Update and maintain an accurate greenhouse gas inventory annually
- Execute mitigation projects identified by the GHG Reduction Committee
- Procure compliance instruments in accordance with AB32 regulations

Water Quality

- Implement passive waste water treatment

Municipal Solid Waste

- Increase diversion rates from landfill and energy from waste transformation

Hazardous Materials/Toxics

- Maintain chemical hazardous waste tracking & e-waste recycling program
- Increase diversion rates

Strategies Planned:

Water Quality

- Explore active waste water treatment
- Develop metrics that contextualize local and regional water impacts

Hazardous Materials/Toxics

- Expand scope and vendor transparency of hazardous waste tracking