Agenda

- Introductions – 5 min Gail
- Stand up for Science! – 5 min Gail
- Sustainability Budget Submittal – 10 min Gail
- Sustainability Awards Ceremony – 5 min Lyan
- Strategic Priority #6 Achieving Carbon Neutrality – Gail
- Last Words – Jodi/Dan – 5 min
Stand Up for Science
7th Annual Sustainability Awards Ceremony

Annual recognition event

- Academic Senate Sustainability Committee
- Advisory Committee on Sustainability
- Sustainability Steering Committee
- Workgroups
- All certified Office/Labs/Clinic-Units/Event Planners
- Sustainability Award winners
## Work Groups Budget Ask

<table>
<thead>
<tr>
<th>WG</th>
<th>rank</th>
<th>Tactic</th>
<th>Budget Ask</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Building</td>
<td>3</td>
<td>LEED Building Educational materials</td>
<td>$15,000</td>
</tr>
<tr>
<td>Climate Change</td>
<td>1</td>
<td>Building Energy Information and Analytics</td>
<td>$30,000</td>
</tr>
<tr>
<td>Water Conservation</td>
<td>2</td>
<td>Water Outreach Campaign</td>
<td>$2,250</td>
</tr>
<tr>
<td>Zero Waste</td>
<td>1</td>
<td>MU Zero Waste Building Pilot Program</td>
<td>$33,250</td>
</tr>
<tr>
<td><strong>TOTAL REQ</strong></td>
<td></td>
<td></td>
<td><strong>$80,500</strong></td>
</tr>
<tr>
<td><strong>FUNDED</strong></td>
<td></td>
<td></td>
<td><strong>$50,000</strong></td>
</tr>
</tbody>
</table>
1. BACKGROUND

**Scope:** Major Carbon Emissions from energy usage from UCSF owned buildings and fleet vehicles

In 2015, UC was the first major university to have a policy goal of achieving carbon neutrality by 2025. Past campus funding and operation decisions did not incorporate carbon emissions. In recognition of rising energy costs, air pollution, and climate change impacts, the UC President’s leadership and participation at the Paris Climate Conference has made supporting carbon neutrality a high priority for UC. During a time of unprecedented campus growth and with a short time frame to achieve the goal, FAS has made this a strategic priority.

2. CURRENT CONDITION

UCSF identifies and measures all carbon emission sources and continues to explore all possible strategies to reduce those emissions, which includes existing utility-funded partnerships and currently identified and funded strategies. Concurrent efforts to develop strategies to address Space Utilization, Central Plant operations, Zero Carbon Electricity, and outreach are underway and being monitored.

UCSF has identified all contributing factors listed here that need to be included to go beyond our current efforts to reach our goal. They are prioritized in the following table with the top four selected for the GAP Statement (Gap).

The top four contributing factors currently do not go far enough in planning and operations to reduce carbon emissions to meet 025 goals.

3. TARGET CONDITION (GOALS)

<table>
<thead>
<tr>
<th>Metric (Public)</th>
<th>Baseline</th>
<th>1-Year Target</th>
<th>3-Year Target</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zero carbon electricity over total electricity (leading)</strong></td>
<td>27.8%</td>
<td>32.8%</td>
<td>49.4%</td>
</tr>
<tr>
<td><strong>Metric Tons of CO2 emitted (lagging)</strong></td>
<td>114,586</td>
<td>113,356</td>
<td>68,541</td>
</tr>
</tbody>
</table>

*Target is calculated on a CF basis, so won’t be complete until Dec 31 and confirmed mid-year following.

4. GAP ANALYSIS

**Root Cause 1:** Funding model algorithm does not include Total Cost of Ownership in the Business Case Analysis with carbon and O&M costs for bldg projects

**Root Cause 2:** No priority for energy staffing or funding to implement SEP projects

**Root Cause 3:** Environmentally Preferable Purchasing (EPP) policy to ensure energy efficiency, TCO, and metrics to track policy compliance

**Root Cause 4:** Vehicle fleet purchasing policy does not encourage or enforce dept. to purchase zero carbon vehicles

**Root Cause 5:** UCSF has not explored sustainable development with donors.

5. EXPERIMENTS (PROPOSED COUNTERMEASURES)

- **RC #1:** Include analysis of carbon implications, operations, and renewal in the TCO of the BCA for all applicable construction projects
- **RC #2:** Explore options and develop staffing BCA to approve and implement SEP-funded energy-efficiency projects
- **RC #3:** Modify UCSF and/or UC policy on Sustainable Practices to require strong EPP with guidance, metrics, and compliance
- **RC #4:** Implement a Transportation policy for depts. to purchase zero carbon vehicles with marketing campaign
- **RC #5:** Define “sustainable development” for UCSF and its major building donors

6. ACTION PLAN

<table>
<thead>
<tr>
<th>Action Item</th>
<th>Responsibility/Owner</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>RC #1: Establish a Task Force to provide guidance on meeting the carbon neutrality goal, TCO and O&amp;M in the BCA for new construction, renovation, and infrastructure projects, and highlight these tradeoffs to decision-makers</td>
<td>Robert Stickney</td>
<td>FY2019</td>
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<tr>
<td>RC #2: Explore and propose funding options in BCA to staff 1 FTE per 1M square feet to implement SEP projects</td>
<td>Jon Giacomi</td>
<td>FY2018</td>
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<tr>
<td>RC #3: Work with UCOP and cross-functional team to recommend policy statement &amp; gain support from stakeholders to establish strong EPP policies.</td>
<td>Jim Hine</td>
<td>FY2019</td>
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<tr>
<td>RC #4: Implement a new procurement policy and incentives for depts. to purchase zero carbon vehicles with marketing campaign</td>
<td>Erick Villalobos</td>
<td>July 2018</td>
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<tr>
<td>RC #5: Explore carbon implications of campus growth with research in sustainable development in higher education and share results with Development.</td>
<td>Lori Yamauchi</td>
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Owner will conduct periodic "checks" with each A3 team to ensure countermeasures achieve the expected results. Currently, efforts underway for the other contributing factors to develop solutions for Space, Central Plant, Zero Carbon Electricity and Outreach are outside the scope of this A3-T but will be monitored to evaluate results to target and shared with FAS.
1. BACKGROUND

**Scope:** Major Carbon Emissions from energy usage from UCSF owned buildings and fleet vehicles

In 2015, UC was the first major university to have a policy goal of achieving carbon neutrality by 2025. Past campus funding and operation decisions did not incorporate carbon emissions. In recognition of rising energy costs, air pollution, and climate change impacts, the UC President’s leadership and participation at the Paris Climate Conference has made supporting carbon neutrality a high priority for UC. During a time of unprecedented campus growth and with a short time frame to achieve the goal, FAS has made this a strategic priority.

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UCSF has identified all contributing factors listed here that need to be included to go beyond our current efforts to reach our goal. They are prioritizes in the following table with the top four selected for this A3.

<table>
<thead>
<tr>
<th>Ranked by Impact</th>
<th>Include Funding for Life of Bldg</th>
<th>Energy Staffing (FTE)</th>
<th>Energy efficient purchasing</th>
<th>ZEV/ Hybrid by 2025</th>
<th>Outreach (people)</th>
<th>Wet Lab Space Utilization</th>
<th>Central Plant Emissions</th>
<th>Zero Carbon Electricity</th>
</tr>
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<tr>
<td>Current Condition</td>
<td>not included</td>
<td>1 FTE</td>
<td>no data available</td>
<td>33% of fleet</td>
<td>4000 reached</td>
<td>56% lab sf</td>
<td>~50% total emissions</td>
<td>27.8% total electricity</td>
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Problem Statement (Gap)

The top four contributing factors currently do not go far enough in planning and operations to reduce carbon emissions to meet the 025 goals.

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**Root Cause 4.** Vehicle fleet purchasing policy does not encourage or enforce dept. to purchase zero carbon vehicles.

**Root Cause 5.** UCSF has not explored sustainable development with donors.

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**Funding Models (1)**

We don’t consider Total Cost of Ownership (TCO) in Business Case Analysis (BCA) which need to include operations and cost of carbon in new buildings or renewal of old buildings.

**Energy Staffing (2)**

We have Strategic Energy Partnership (SEP) funded projects in line but not enough staff to implement. UCOP recommends 1 FTE per 1M sf.

**Procurement Guidelines (3)**

No Environmentally Preferable Purchasing (EPP) policy to ensure energy efficiency, TCO, and metrics to track policy compliance.

**Transportation Systems (4)**

No policy or incentives exists to require departments to purchase EV or Zero carbon vehicles.

**Other/Policy (5)**

We don’t define UCSF’s sustainable development and donors are unaware of impact of carbon on health.
5. EXPERIMENTS (PROPOSED COUNTERMEASURES)

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7. STUDY, REFLECT, PLAN NEXT STEPS (PDCA)

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LEAN A3 Catchball

Definition:
Lean thinking changes the focus of management from optimizing separate technologies, assets, and vertical departments to optimizing the flow of products and services through entire value streams that flow horizontally across technologies, assets, and departments to customers.

Purpose of Catchball
- Feedback, clarity incorporation into strategy
  - Use yellow stickers for Questions
  - Use blue stickers for Advice