CARBON ZERO

A CRITICAL ANALYSIS OF STRATEGIES FOR IMPLEMENTING CARBON NEUTRALITY AT UCSB BY 2025

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SIGNIFICANCE

CARBON NEUTRALITY: bring net carbon emissions to zero

Why does it matter?

• Sustainability leadership
• Long-term cost savings
UC CARBON NEUTRALITY INITIATIVE (CNI)

The University of California (UC) CNI commits all ten UC campuses and five medical centers to emit net zero greenhouse gas emissions.
**WHAT IS INCLUDED IN THE CNI?**

<table>
<thead>
<tr>
<th>Scope</th>
<th>Direct On-Site Emissions</th>
<th>21%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scope 1</strong></td>
<td>Indirect Emissions</td>
<td>34%</td>
</tr>
<tr>
<td></td>
<td>(Purchased Electricity)</td>
<td></td>
</tr>
<tr>
<td><strong>Scope 3</strong></td>
<td>Travel &amp; Commuting</td>
<td>45%</td>
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</tbody>
</table>

2025

2050

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**Introduction**

**Phase 1**

**Phase 2**

**Phase 3**

**Phase 4**
WHAT IS INCLUDED IN THE CNI?

- **Scope 1**: Direct On-Site Emissions (21%)
- **Scope 2**: Indirect Emissions (Purchased Electricity) (34%)
- **Scope 3**: Travel & Commuting (45%)

2025

2050
STRATEGIC COMMUNICATION CHALLENGES

Ownership
Engagement
Complexity
Culture

UC
UCSB
Students

Introduction  Phase 1  Phase 2  Phase 3  Phase 4
Carbon Zero Goal:

Reconcile top-down “edict” with bottom-up coalition-building to engage campus decision-makers and students
How can UCSB move the CNI through the UCSB decision-making process given current attitudes and challenges?
How can UCSB move the CNI through the UCSB decision-making process given current attitudes and challenges?

Phase 1: Informational Interviews
Phase 2: Semi-Structured Interviews
Phase 3: Focus Groups/Survey
Phase 4: Strategy

Campus Decision-Makers
How can UCSB move the CNI through the UCSB decision-making process given current attitudes and challenges?

PHASE 1: Informational Interviews
PHASE 2: Semi-Structured Interviews
PHASE 3: Focus Groups/Survey
PHASE 4: Strategy

Campus Decision-Makers
Students

Results from 900+ individuals
PHASE 1: INFORMATIONAL INTERVIEWS

**METHOD:** Informational interviews with key informants (n= 15)
Three Key Findings:

1. Understand how policies and the decision-making process works
2. Layout of individuals and departments in charge of CNI-related decision-making
3. Gap in communication between students and administrators
METHOD: Semi-structured interviews with key decision-makers (n = 25)
INTERVIEW APPROACH

Key Themes:

- Attitudes
- Challenges & Barriers
- Solutions
- Student Engagement
INTERVIEW FINDINGS

Attitudes

• Generally aware and supportive of the CNI
INTERVIEW FINDINGS

Challenges & Barriers

- Low engagement
- Unclear value to UCSB or individual
- Competing financial priorities

Photo courtesy of UCSB Current. Photo credit: Spencer Bruttig
Opportunities in green buildings to align student interests and campus priorities

Unite CNI with core mission of teaching & research

Increase engagement, especially among students
“Does student opinion matter for administrators during the decision-making process?”

- Highly Matters
- Somewhat Matters
- Matters
- Unsure
PHASE 3: STUDENT ENGAGEMENT

METHOD: Focus groups, campus-wide survey to all students (n = 893)
STUDENT INTEREST IN CNI TOPICS

- Solar Power
- Energy Efficiency
- Divestment
- Green Buildings
- Transportation
- Personal Actions
- Environmental Justice
- Purchased Goods
- Policies
- Financial Strategies

Number of Students
STUDENT INTEREST IN CNI TOPICS

- Solar Power
- Energy Efficiency
- Divestment
- Green Buildings
- Transportation
- Personal Actions
- Environmental Justice
- Purchased Goods
- Policies
- Financial Strategies

Number of Students

Introduction  Phase 1  Phase 2  Phase 3  Phase 4
WILLINGNESS TO TAKE ACTION TO SUPPORT THE CNI
STUDENT INCENTIVES & ACTION

Student Incentives to Support the CNI

<table>
<thead>
<tr>
<th>Incentive</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposure to Progress Data</td>
<td>450</td>
</tr>
<tr>
<td>Learning Skills</td>
<td>400</td>
</tr>
<tr>
<td>Paid Fellowship/Internship</td>
<td>400</td>
</tr>
<tr>
<td>Events/Prizes/Food</td>
<td>400</td>
</tr>
<tr>
<td>Class Credit</td>
<td>300</td>
</tr>
<tr>
<td>Extra Credit</td>
<td>300</td>
</tr>
<tr>
<td>Competitions</td>
<td>200</td>
</tr>
<tr>
<td>University Recognition</td>
<td>150</td>
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Number of Students
STUDENT INCENTIVES & ACTIONS

Student Incentives to Support the CNI

- Exposure to Progress Data
- Learning Skills
- Paid Fellowship/Internship
- Events/Prizes/Food
- Class Credit
- Extra Credit
- Competitions
- University Recognition

Number of Students

Actions Students Take to Support a Cause

- Sign a Petition or Document
- Attend an Informal Event
- Work on a Project (internship etc.)
- Take a Class in the Subject
- Join a Student Organization
- Attend a Demonstration/March
- Serve as a Student Representative

Number of Students
EFFECTIVE METHODS OF COMMUNICATION

- Social Media
- Emails
- From Friends
- In-class Announcements
- Flyers and Signs
- Events
- Course Material Demonstrations
- Seminars
- Canvassing and Tabling

Number of Students
PHASE 4: RESEARCH SYNTHESIS

METHOD: Data synthesis and development of tools for students and staff
LESSONS LEARNED: DECISION-MAKERS

Decision-Makers:

Focus on student engagement
  • Share progress data
  • Specific & targeted outreach
  • Align projects & interests
  • Committee representation

Photos courtesy of UCSB Instagram
LESSONS LEARNED: STUDENT ENGAGEMENT

Students:

Leverage their unique pathways to change

• Replicate bottom-up engagement through informal communication
• Target audiences willing to engage with the CNI and appeal to their interests
• Influence via committees
**STUDENT ENGAGEMENT TOOL**

Segment student audience to target outreach

<table>
<thead>
<tr>
<th>Graduate Status</th>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Engineering &amp; Math</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>1</td>
</tr>
<tr>
<td>Graduate</td>
<td>6</td>
</tr>
</tbody>
</table>

- Topics of interest
- Preferred methods of communication
- Incentives
- Preferred routes of action
STRATEGIC COMMUNICATION RECOMMENDATIONS

CNI Strategic Planning

Recreational Center Example
- First priority solar site
- Student Affairs building
- Available funding
- Aligns with student interests
CARBON ZERO CONCLUSION

UCSB Carbon Neutrality

Green Buildings
Targeted Outreach
Sustained Engagement
Strategic Planning
Solar
Energy Efficiency

Introduction  Phase 1  Phase 2  Phase 3  Phase 4
THANK YOU!

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Photo courtesy of Chabinyc Research Group