



University of California, Santa Barbara  
Donald Bren School of Environmental Science and Management

## Campus Climate<sup>o</sup> Neutral II

*What factors determine whether or not American public universities take advantage of opportunities to reduce greenhouse gas emissions, especially when doing so is likely to save them money?*

*A theoretical case study of the University of California, Santa Barbara*

A Group Project submitted in partial satisfaction of the requirements for the degree of Master of Environmental Science and Management

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May 2007

**What factors determine whether or not American public universities take advantage of opportunities to reduce greenhouse gas emissions, especially when doing so is likely to save them money? A theoretical case study of the University of California, Santa Barbara**

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The Group Project is required of all students in the Master of Environmental Science and Management (MESM) program. It is a four-quarter activity in which small groups of students conduct focused, interdisciplinary research on the scientific, management, and policy dimensions of a specific environmental issue. The final Group Project report is authored by MESM students and reviewed by the faculty advisor(s) and the Dean of the Donald Bren School of Environmental Science and Management.

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May 2007

## ACKNOWLEDGEMENTS

We would like to extend our sincerest thanks to our faculty advisor, Oran Young, for his invaluable guidance.

We would also like to thank our client, Dan Worth, *National Association of Environmental Law Societies*; the members of Campus Climate Neutral I: Fahmida Ahmed, Jeff Brown, Dave Felix, Todd Haurin, and Betty Seto; and Bren School faculty and staff members Monica Bulger, Magali Delmas, Maria Gordon, Bruce Kendall, Matt Kotchen, and Bob Wilkinson. The following UCSB and UC faculty and staff members and students also generously shared their knowledge and time: Meta Clow, *Campus Policy and Records Management Coordinator, Administrative Services*; Jon Cook, *Acting Director of Physical Facilities*; Jim Dewey, *Associate Director of Energy and Utilities, Physical Facilities*; Marc Fisher, *Associate Vice Chancellor of Campus Design & Facilities, Facilities Management*; Ed France, *Alumnus*; Liz Hammel, *Planning Assistant, Capital Development, Budget & Planning*; Janet Kayfetz, *Lecturer, Computer Science*; Todd Lee, *Assistant Chancellor of Budget and Planning*; Martie Levy, *Director of Capital Development, Budget & Planning*; Mo Lovegreen, *Executive Officer, Geography*; Gene Lucas, *Executive Vice Chancellor*; Katie Maynard, *Sustainability Coordinator*; Perrin Pellegrin, *Sustainability Manager, Physical Facilities*; George Pernsteiner, *former Vice Chancellor of Administrative Services*; Matthew St. Clair, *Sustainability Specialist, UC*; Byron Sandoval, *Superintendent of Custodial Services, Physical Facilities*; Bryant Wieneke, *Executive Assistant to the Provost, College of Letters & Science*; Alan Williams, *Director of Financial & Administrative Services, Facilities Management*; and John Woolley, *Chair of Political Science*.



Goleta Beach, View from UCSB  
(Courtesy of Marie-Claire Munnelly)

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## ABSTRACT

Adequately addressing the impending problems caused by climate change requires major behavioral changes at all organizational levels, including universities. But, curiously, we cannot count on organizational change to occur just because it benefits society and saves the organization money. Our objective is revealing the factors determining whether universities take advantage of opportunities for reducing greenhouse gases (GHGs). To uncover these factors, we analyzed three different decisions involving GHGs at UCSB by conducting interviews and reviewing campus documents. We then viewed the three decisions through three theoretical lenses: pluralism, bureaucratic politics, and external pressures. Each lens calls attention to influential factors in the university decision-making process; together these factors help explain whether and why a university is addressing its GHG emissions. Although decision making at universities is often labyrinthine and sluggish due to the emphasis placed on process, consensus building, and layered rules and regulations, this complexity doesn't prevent policy change—although universities, by design, are not nimble, they are not entirely opposed to change either. We conclude that the presence of a champion, the champion's level of power, coalition building, and the framing of the issue are the most critical factors in determining the success of GHG policies.



## EXECUTIVE SUMMARY

### Introduction

Adequately addressing the impending problems caused by global warming requires major behavioral changes at all levels, from individual action to international cooperation. At the organizational level, universities play a significant part in tackling climate change, not only because of their individual contributions to climate change, but also, even more significantly, because of the role universities play in educating and shaping future citizens.

Campus Climate Neutral I (CCN I), a 2006 Donald Bren School of Environmental Science and Management Group Project, encouraged the University of California, Santa Barbara (UCSB), to be a leader in addressing the impacts of climate change. The group conducted a greenhouse gas (GHG) emissions inventory of the campus and recommended several GHG mitigating measures, including upgrading heating, ventilation, and air conditioning (HVAC) systems and installing energy-efficient fume hoods. CCN I concluded that UCSB, by implementing the group's recommendations, would reduce emissions while saving money at the same time. For example, CCN I calculated that UCSB, by committing to climate neutrality in 2006, could reach the neutrality *and* save a net present value of \$4.3 million by the year 2020.

CCN I's findings did not, however, penetrate to the level of immediate University action. The fact that GHG reductions are dually beneficial to both society and UCSB and that UCSB administrators did not act on all of CCN I's recommendations led us (CCN II) to our central question:

***What factors determine whether or not American public universities take advantage of opportunities to reduce GHG emissions, especially when doing so is likely to save them money?***

### Methods

To uncover the factors that influence the decision-making process and determine whether or not universities seize emissions-reducing opportunities, we conducted a theoretical case study of UCSB. The book *Essence of Decision: Explaining the Cuban Missile Crisis* by Graham T. Allison inspired the design of the case study. We first identified several theoretical models or lenses to explain the behavior of large organizations. Next, we selected three different lenses—pluralism, bureaucratic politics, and external pressures—that appeared to be the most relevant to public universities and would best explain the reasons behind decisions made. Each lens calls attention to influential factors in the university decision-making process:

#### Pluralism:

- Multiple stakeholders
- Champions

- Coalitions

Bureaucratic Politics:

- Hierarchical decision structure
- High emphasis on process
- Path dependence
- Risk aversion

External Pressures:

- Influence of the system structure
- Budgetary constraints
- Public relations

Using multiple models to analyze decisions enabled us to distinguish the various theoretical decision-making frameworks at play and helped explain these processes at UCSB.

To answer our question and understand the decision-making process more concretely, we analyzed three different decisions involving GHGs at UCSB:

- CCN I—In the Spring of 2006, CCN I presented their conclusions on how UCSB can reduce GHG emissions and save money to senior administration, the Subcommittee on Sustainability, and the Campus Planning Committee (CPC). The CPC has not yet voted on whether or not to commit to a GHG emissions reduction target.
- LEED (Leadership in Energy and Environmental Design) Silver—In February 2004, Chancellor Yang approved a policy calling for UCSB to establish the LEED Silver standard for all new buildings beginning July 1, 2004.
- LEED Portfolio—In November 2006, UCSB committed to participate in the pilot phase of the U.S. Green Building Council's LEED Portfolio Performance Program.

We gathered information about the decision-making processes by conducting interviews and reviewing campus documents. We then applied our lenses to each decision, looking for the presence and strength of the theoretical decision-making factors (characteristics) of each lens.

## **Results**

We tabulated the results of the analyses into a matrix and evaluated them to identify the most influential factors in a generic decision:

- Champions
- Coalitions
- High emphasis on process
- Risk aversion
- Budgetary constraints

In analyzing the cases, we detected several factors that are not characteristics of our theoretical decision-making models:

- Campus culture

- Issue-attention cycle
- Issue framing
- Power or position of the proponent

Not only did we find factors outside our theoretical lenses, but we also did *not* find a factor we expected when our study began. Our literature review indicated organizational arthritis (rigidifying effects due to the layering of rules and regulations) would have more of an impact on decision making than we observed in our case study.

### **Discussion**

Of the nine factors (five highlighted by our lenses and four outside our lenses), our analysis revealed four to be the most significant. These four, in order of importance, are our weighted findings: 1) Champions, 2) Coalitions, 3) Issue framing, and 4) Power or position of the proponent. To determine these weighted findings, we looked for common threads throughout the decisions made. Consideration was also given to which components were absolutely necessary for moving the decision from inception through implementation. Together, the presence or absence of these factors in the decision-making process can help explain whether or not a university is addressing its GHG emissions and why.

All our findings can be generalized to an extent since, based on the literature, all nine of the significant factors highlighted by our analysis could apply to American public universities. However, UCSB and the University of California (UC) system do have some unique qualities that may limit the direct applicability of our results. There are two significant features distinguishing the UC system from other major public research universities, namely its employment of shared governance and its status as a constitutionally designated public trust. With shared governance, faculty members share in guiding the operation and management of the university. Although all UC campuses employ shared governance, the faculty at UCSB is unusually powerful. Thus, at UCSB, it is important to include faculty when seeking champions and building coalitions. The UC's designation as a public trust keeps UC free of political influence and means that the UC Regents, rather than State legislators, allocate State funding. This should be noted when dealing with budget constraints. In addition, because UCSB is one of ten campuses in the UC system, neither UCSB nor any other individual UC schools make decisions without considering how these decisions might impact the other schools in the system as well as the system as a whole. Finally, campus culture varies between universities. This affects which policies will succeed and also influences how policies should be framed.

### **Recommendations**

Based on our research, we offer the following recommendations to other groups working to reduce GHG emissions at their universities:

1. Follow a decision from inception to implementation. It is important to understand both the written and unwritten rules of the university decision-making structure when trying to implement policy change.

2. Recruit a powerful champion. An issue has more weight when someone who wields influence supports it.
3. Assign the responsibility of reducing GHGs to someone on campus. Incorporating the issue into a job description ensures it will outlast any person filling the job.
4. Form a broad coalition. Coalitions are instrumental in building momentum behind the issue from different campus sectors and, because they represent broad support of the issue, they help university leaders fend off potential criticism for supporting an issue.
5. Frame the issue in the language of the university. Writing and talking about the proposal in language that suits the campus culture enhances the way university constituents view the issue.
6. Set a practical emissions target. Start with realistic, campus-appropriate goals in order to achieve real action toward reducing emissions.
7. Secure additional funding. Since budgetary constraints are an ongoing concern, seeking financial resources from private sources or a student fee-based revolving fund, for example, may be helpful for successfully implementing GHG reduction measures.

### **Conclusion**

Although decision making at universities is often a labyrinthine and sluggish process due to the emphasis placed on procedures, consensus building, and layered rules and regulations, American public universities are not arthritic. While they are not nimble, universities are not completely resistant to making changes in order to address problems caused by climate change. Then again, because universities are risk averse, constrained by funding, and concerned about public relations, change is usually a long process. Universities are not necessarily the birthplaces of social innovation they are commonly believed to be. Universities, unlike corporations, are not designed to respond quickly to market shifts and the university decision-making process is not structured to move quickly but rather incorporates “planned slowness.”

Efforts to change university policies can succeed, but only when those promoting change understand how the decision-making processes work and work with the system. Strategic use of champions, coalitions, issue framing, and power or position can push issues through the system more efficiently. More case studies could identify additional factors and add to the robustness of or refine these results. We wish all CCN groups success in applying our results to persuade policy makers at their universities to make the sound decision of reducing campus GHG emissions.

## CHAPTER 1: INTRODUCTION

Adequately addressing the impending problems due to climate change requires major behavioral changes at all levels, from individual actions to international cooperation. At one organizational level, universities play a significant part in tackling climate change not only because of their individual contributions, but also, more significantly, because of the role they play in educating and shaping future citizens. Managing the impacts of climate change and pulling on the reigns of greenhouse gas (GHG) emissions are two critical challenges facing us today, providing the opportunity for critical global collaboration. The role of universities as educators, innovators, and role models implores them not just to educate students about climate change, but also to act on opportunities to reduce GHG emissions.

Over the next century, the Earth's average temperature is expected to rise between 1.1° and 6.4°C (Alley et al., 2007) affecting, in particular, weather patterns and severity, coastal, island, and arctic communities, agriculture, ecosystems, and the global economy. The consequences of a “worst case scenario” materializing should command policy makers to take immediate and prudent action against the reality of global warming. Hedging against risk is a prudential approach common in other policy areas (Stern, 2006), and this approach shouldn't differ when it comes to addressing global warming. While it is difficult to put a dollar figure on the costs of mitigating climate change now versus paying for the damages in the future, the potential costs and social catastrophes from doing nothing should obligate risk-averse governments and responsible societies, including universities, to act now.

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### PROJECT HISTORY

Recognizing the important role universities can play in addressing climate change through influencing society and by educating future decision makers, the National Association of Environmental Law Societies (NAELS) launched a campaign fostering bottom-up climate leadership through its Campus Climate Neutral (CCN) program. The purpose of CCN is to train the next generation of climate leaders while immediately engaging faculties and administrations. NAELS is helping establish CCN projects at universities throughout the country by supporting and connecting students, and providing a procedural template for implementing GHG reductions and global climate solutions. Last year, NAELS sponsored a CCN project (CCN I) at the University of California, Santa Barbara (UCSB) and is sponsoring the second stage of the project (CCN II) this year.

### CCN I RELEVANT FINDINGS

During the first phase of CCN at UCSB, CCN I conducted a GHG emissions inventory, recommended GHG mitigating measures to UCSB administrators, and conducted a

financial analysis of the different GHG reduction mechanisms. Using the number of GHG emissions reduced per dollar spent as the criterion, CCN I recommended multiple GHG cutting measures such as installing Energy Star computer settings, upgrading HVAC (heating, ventilation, and air conditioning) systems, and installing more energy efficient fume hoods. The net present value (NPV) in 2006 of immediately committing to the California GHG emission targets, the Kyoto Protocol, or climate neutrality would save UCSB \$2.4, \$5.7, or \$4.3 million respectively over the next 14 years (Ahmed, Brown, Felix, Haurin, & Seto, 2006).

The net present value (NPV) in 2006 of immediately committing to the California GHG emission targets, the Kyoto Protocol, or climate neutrality would save UCSB \$2.4, \$5.7, or \$4.3 million respectively over the next 14 years (Ahmed, Brown, Felix, Haurin, & Seto, 2006).

In addition to their quantitative analysis, CCN I made a concerted effort to involve key campus players throughout the process and to bring their conclusions to the attention of senior UCSB administrators, including Chancellor Henry Yang. Such intentions included several meetings, collaborations, and presentations attended by the Chancellor, Executive Vice Chancellor (EVC), Facilities managers, and the Campus Planning Committee (CPC). However, in the end, while CCN I's findings were well received in principle, they did not penetrate to the level of university action.

#### PROJECT FOCUS

Initially the objectives of the project were fostering the implementation of CCN I's recommendations, identifying additional GHG reduction mechanisms, and assessing energy use in science laboratories at UCSB. However, our preliminary research showed several of CCN I's recommendations were already being implemented or were included in future projects (although targeting GHG emissions was not specifically the goal of the University). Furthermore, our initial investigation provided insight into the different constraints (e.g. financial and bureaucratic) on UCSB. We concluded that pushing for implementation and making additional recommendations would be all for naught unless we understood campus decision making and its evaluative criteria. Reducing UCSB's GHG emissions requires more than sound analyses and remedial prescriptions. Inherently, recommendations are subjective. In order to be successful, we realized the next pragmatic step was viewing GHG reductions from the administration's perspective and then pushing for changes. Because of this new understanding, the focus of our project shifted from pushing policies to studying the decision making processes of the UCSB and identifying the determinants of and, ultimately, identifying the necessary ingredients for successful implementation of policies addressing GHG emissions.

From financial, social, and educational perspectives, implementation of policies reducing UCSB's GHG emissions while simultaneously saving the organization money seems quite rational. Although UCSB is currently taking, and has taken, many energy-conserving steps, CCN I's analyses suggest the more reductions in GHG emissions, the more money UCSB saves. However, CCN I's findings did not result in immediate and aggressive action toward reducing UCSB's GHG emissions. Why is UCSB taking certain actions and not others? What are the driving forces behind university decisions, and



how are these decisions made? The fact that GHG reductions are dually beneficial, benefiting both society and UCSB (saving UCSB money), and that UCSB administrators did not act on all of CCN I's recommendations, led us (CCN II) to our central question:

***What factors determine whether or not American public universities take advantage of opportunities to reduce GHG emissions, especially when doing so is likely to save them money?***

#### GENERAL APPROACH

The primary goal of our study is identifying the significant factors determining whether or not public universities take actions that reduce GHG emissions (and often save money). We do not debate the roles of universities in addressing social issues nor do we question whether or not reducing GHGs saves UCSB money. For additional information on these topics, please see CCN I's group project: *Changing the Campus Climate: Strategies to Reduce Greenhouse Gas Emissions at The University of California, Santa Barbara* (Ahmed et al., 2006).

We would like to think the purpose of American public universities—educating students, preparing students to become citizens, and contributing to universal knowledge—is uncompromised and is the driving force behind all decisions. In reality, however, university objectives are significantly influenced by constraints, such as finances, affecting both priorities and management structure. The University of California (UC), for example, is funded through the discretionary budget of the State of California, a budget that fluctuates with the state's financial conditions. Simply, in general, if the California economy is doing well, the more funding the UC receives (Lee interview, 2006). Currently, the UC system receives around 31% of its funding from the State of California (UCOP, 2006). Other state universities receive considerably less from their state government. This fact evoked many to re-characterize state-funded universities as “state-located” universities (Lucas interview, 2006). The amount of funding from the sources of public universities may have particular implications for our project. Public universities are working at the margins and work feverishly to secure funding from external sources outside of the government. Such a decrease in state funding may shift the priorities of university administrators, obliging them to focus more on pleasing donors. To better understand decision making regarding GHG policies at public universities, we explore our question through a case study of UCSB.

The remainder of our paper explores the theory behind models of organizational decision making, discusses our findings from applying models or lenses to specific decisions made at UCSB, and describes methods and strategies for overcoming GHG reduction barriers at UCSB and American public universities. Chapter 2 introduces models as analysis tools, describes the different models considered, and introduces the three models used in this case study: the pluralism model, the bureaucratic politics model, and the external pressures model. Chapter 3 explains our methodology. Chapters 4, 5, and 6 individually delve deeper into the theory behind the three models. They also cover the conclusions drawn from applying the three models to decisions

made at UCSB (CCN I, LEED<sup>1</sup> Silver, and LEED Portfolio) and include a substantive analysis of what influences decision making at UCSB. Chapter 7 fuses the major findings and insights drawn from applying the three lenses. Lastly, Chapter 8 discusses the policy implications of what we learned that may be helpful to those in the CCN campaign.

#### BROADER SETTING

Policies and initiatives at the international, national, and local levels are beginning to address climate change. The Kyoto Protocol is the foundation of international governmental action focused on climate change. As of March 14, 2007, the Protocol has been ratified, approved, or accepted by 169 countries, accounting for 61.6% of global GHG emissions (UNFCCC, 2007). Although federal initiatives in the United States tackling climate change are far from aggressive, state and local governments are acting to lead the charge against global warming. Arnold Schwarzenegger, governor of California, recently signed Assembly Bill 32 (AB 32), committing the state to reducing GHG emissions to 1990 levels by 2020. Across the U.S., as of March 6, 2007, 418 mayors, representing more than 60 million Americans, have taken a similar stance in signing the U.S. Mayors' Climate Protection Agreement. The agreement requires their communities, among other initiatives, to reduce GHG emissions to 7% below 1990 levels by 2012 (Seattle Mayor's Office, 2007). In addition, CCN projects have taken hold at 13 university campuses across the country (Ahmed et al., 2006).

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<sup>1</sup> LEED stands for Leadership in Energy and Environmental Design. It is a green building rating system.

## CHAPTER 2: ORGANIZATIONAL THEORY AND MODELS OF DECISION MAKING

This portion of Chapter 2 is dedicated to scoping the target of our study, UCSB, first, from a broad perspective and then, narrowing in on its specific classification under the large umbrella of organizations. Before beginning the literature review and characterizing UCSB, it is helpful to clarify our use of the term ‘organization.’ For simplicity sake, we only refer to UCSB as an organization, leaving out the term ‘institution.’ Oran Young defines an organization as “material entities with offices, personnel, equipment, budgets, and so forth,” distinctly different from an institution which he describes as a “set of rules, decision-making procedures, and programs that define social practices, assign roles to participants in these practices, and guide interactions among occupants of those roles” (Young 1994a; Young 1999b). Although universities clearly possess both material entities and governing policies and processes, we use the term organization inclusive of both definitions.

### UNIVERSE OF CASES

Establishing the organizational species to which UCSB belongs is relevant when reviewing the literature and determining if, and to what extent, our findings can be generalized to other universities. Defining UCSB within the large class of organizations sets up our discussion in Chapter 7 regarding the application of our findings to other American public universities. We acknowledge, just as there are unique individuals within the same species, there are differences among public universities. Even though there is not a carbon copy of UCSB, it is sensible to conclude UCSB has more in common with other American public universities than other organizations. In this regard, the conclusions reached by studying one American public university are meaningful to others of the same species and it is appropriate to generalize our findings to other American public universities.

The *decisions* of organizations are often difficult to attribute to a single person or constituency group within, a structural characteristic of, or an external force acting on, the organization. Often, in conversation, onlookers ascribe the outcomes of these decisions as daily parlance, such as the decision was “the right thing to do,” “necessary,” or due to the “nature” of the organization. Our study attempts to better define the nebulous features of campus decision making, and, in essence, peer into the “black box” encasing these processes. Beginning with a literature review of organizations, we classify our study subject, UCSB, for the purpose of framing the study for the reader and for ourselves.

An organization’s structure is influenced by various internal and external factors. One of the main determinants is *size*—the number of individuals in the organization. The size of an organization plays a significant role in determining how an organization functions and the processes necessary to effectively meet the organization’s objective. Illustrating

this point, consider this fictional scenario. Imagine two organizations with the same goal—making money from building and selling boats. One company employs 1,000 workers and the other employs eleven. It is easy envisioning decision making, communication, rules, roles etc. being quite different between the two companies.

Large organizations face unique challenges. In particular, coordination and communication become increasingly challenging as the organization increases in size, forcing organizations to develop formal rules governing these practices (Downs, 1967). We approach the significance of rules within the organization later in this chapter. In addition, large size discourages individuals in the group from acting in the interest of the group (Olson, 1982). In other words, individuals do not put the needs of the organization above their own. This may be due to the fact that any successful effort an individual makes toward bettering the organization benefits all of the individuals in the organization, and they get no credit. In essence, the improvement is shared equally among the other members of the organization while the effort is absorbed solely by the individual. As a result, rational individual group members, despite sharing common goals, will not work toward these goals. Incentives, however, may stimulate a rational individual to act in the interest of the group (Olson, 1982). Such incentives could include increased pay, additional vacation days, and so forth.

Organizations exist both as complex formal structures, such as a university, and informally, such as Maine lobstermen acting as a regulatory agency preventing “outsiders” from fishing in “restricted” waters. The former possesses many budgets, roles, processes, and written rules and regulations, while the latter exists as unwritten law, but is also strictly adhered to and well-understood in practice. In summary, whether the arrangement is formalized or not, fundamentally, an organization consists of coordinated activities between two or more people and specialization of activities among members (Downs, 1967).

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Before discussing the characteristics of an organization, it is valuable to establish the basic *reasons* for forming an organization. Downs (1967) states an organization is a *system* developed to reach certain goals. Presumably, organizations exist because reaching these goals provides a benefit and these benefits cannot be achieved as effectively, if at all, by the individual. As Olson (1965) states, “It is of the essence of an organization that it provides an inseparable, generalized benefit” (p. 15). Olson (1965) defines the fundamental function of an organization as providing collective or public goods. Within Olson’s functional definition of an organization reside the challenges of classifying a university. Arguably, American public universities provide both collective and public goods. Universities are responsible for supplying an education to students who pay fees and tuition; in this manner, universities are providing collective goods. On the other hand, American public universities are funded by the state and federal governments and conduct research that theoretically benefits everyone; in this manner, American public universities are providing public goods. Depending on one’s perspective and the particular university, one observer might see features more characteristic of a public

agency while another may take note of the features more consistent with a publicly traded company. This helps explain the wide-ranging classifications of universities found in the literature. These classifications range from strict bureaucracy to “ordered anarchy” (March & Simon, 1958). In the end, both observers may be right; the university exhibits behaviors characteristic of both a bureaucracy and a firm beholden to stockholders. Operating within such broad boundaries, it is understandable that a university can exhibit more than one behavior. The continuum of university classification and behavior are helpful to keep in mind when reading chapters 7 and 8.

Even though organizations exist for specific reasons, and different organizations may share the same reason for existing, there are different means to the end. Just as there is more than one path to the same destination, there are different processes among organizations to achieve the same goal. The means an organization embodies to reach its goals reveals a lot about the structure and culture of an organization. “Groups and organizations develop cultural patterns—ways of thinking and acting that everyone accepts as ‘the way things are done around here’” (Dyer, 1984, p. 109). The “way things are done around here” relates to Elinor Ostrom’s distinction between the rules in use and the rules on paper (1990). As we observed when interviewing UCSB personnel, many people don’t know specific University rules or bylaws, but they know “how it is done.” This may help explain some of the functional differences observed between organizations governed by the same rules. For example, UC campuses are governed by the same set of rules and regulations, but there are indeed differences between UCSB and UC Irvine, UC Berkeley and Merced, and so forth.

March and Simon (1958) humanize and express the uniqueness of individual organizations by comparing organizations to human nervous system. In this sense, organizations remember, react, and influence. One interviewee suggested that one reason the UCSB Academic Senate is particularly powerful is due to the historical fact that two Chancellors resigned in controversy following votes of “no confidence” by the faculty (Woolley interview, 2006). This anecdote is a proclaimed testament to an organization’s *memory*.

One theoretical characteristic of large organizations is a general tendency to resist change. As Burke (2002) notes, “planned organization change, especially on a large scale, affecting the entire system, is unusual.” Or, as Young puts it, “the default mode” of large organizations is “to do nothing” (Interview, 2007). “Nothing” meaning doing nothing differently today compared to yesterday. This feature of large organizations is not necessarily a conscious choice, but rather the product of specific processes instituted to improve or regulate coordination and communication. From the outside, however, these actions may be perceived as a general resistance to change.

*Inertia* conceptualizes an organization’s resistance to change its current course or path. One reason for organizational inertia stems from the fact that established processes represent a significant investment in time,

*Inertia* conceptualizes an organization’s resistance to change its current course or path.

effort, and money, both in developing the processes and in institutionalizing them. A bureau can rationally decide to change only if the benefits of the new process outweigh not only the benefits of the old process, but also the costs of the transition (Atkisson, 1999). The costs of the transition may not be solely financial, but may include political costs as well.

Taking actions that are not socially palatable or are out of step with the collective beliefs of the organization's members (we later use the phrase 'campus culture' to capture this sentiment) is an uncomfortable position for many organizations. Taking actions not in line with the organization are risks with potential costs. Committing to a policy addressing or taking a position regarding, for example, global warming, ahead of other, similar organizations or the umbrella organization, carries political risk for the organization's administration. In the same sense, spending money on an unproven or not fully supported policy is a financial risk in that if the policy fails, money was spent on a fruitless endeavor. For example, in the past, the University of California Office of the President (UCOP) issued bonds to UCSB to pay for energy efficiency projects. Under these financial restrictions, UCSB decision makers may favor efficiency projects that include easily measured results and short payback periods. From the outside, organizational actions avoiding financial and political risk may be interpreted as a resistance to change when, in actuality, the amount and source of funding limits the projects considered.

In addition to the preference for avoiding risk, organizations are also influenced by additional factors such as individuals. Bureaucratic agents, like all agents, are motivated primarily by self-interest; they're concerned about power, income, prestige, and job security. Often, when making decisions for the bureau, members incorporate concerns about themselves and their careers (Downs, 1967).

External influences affect organizations as well. External influences include the world outside of the organization and how people outside of the organization perceive the organization. In the case of American public universities, this world includes specifically the local community, alumnae, donors, the umbrella organization, and the state and federal governments. As Burke (2002) acknowledges, the external environment shifts more quickly than organizations. The external environment now changes more rapidly than organizations, yet the process of organizational change begins and ends with the external environment (Burke, 2002).

Coordinating the actions of many individuals to achieve a common goal in large organizations requires remedies for entropy. Enacting rules, roles, and standard procedures theoretically combats the communication and coordination challenges in large organizations. Bureaucracies, a type of organization, are characterized by complex formal rules. Formal rules help coordinate complicated activities, ensuring that all members respond to situations in an appropriate manner, and reducing the costs of communication. Rules also help members respond to all clients in an equal manner, helping public agencies, for example, avoid charges of discrimination (Downs, 1967). In

addition, implementing rules that direct processes and regulate actions, restricting what is allowed, increases the defensibility of an action (March & Simon, 1958). The importance of process in a collegial setting is covered in the literature review for the pluralism lens. Finally, rules coordinate the allocation of resources, requiring members to obtain approval for all money spent (Downs, 1967).

Within an organization, individuals complete tasks and perform duties. Their assignments in the organization are their *roles*. Roles in organizations are elaborated, stable, and defined (often in written terms) (March & Simon, 1958). While an individual in the organization may change, the role is a function that remains in tact. March and Simon (1958) use the term role as another word for office when describing the relationships in a bureaucracy. The relationships are between the roles or offices as opposed to between people. The roles are defined both for the individual and others in the organization. Ideally, the internal environment is stable and predictable, allowing organizations to deal in a coordinated way with their external environments (March & Simon, 1958).

#### ORGANIZATIONAL MODELS OF DECISION MAKING

Different decision-making structures are discussed in later in the chapter, but, as a manner of introduction, decisions in organizations generally fall on a continuum between centralized, or autocratic, and decentralized, or pluralistic. The degree of centralization-decentralization of decision making refers to the extent which decisions are made at the higher or lower levels of the organization (Powell & DiMaggio, 1991). The lower levels play more of a role in decision making in a pluralistic structure. In many corporations, the tendency is for the company to embrace a more centralized decision-making structure that relies on the CEO and higher management making strategic decisions and plotting the course of the company.

The purpose of the organization may require a specific type of organizational structure and decision making. While a publicly traded company may feel it necessary to take the risks associated with positioning the company one step ahead of the competition, universities act quite to the contrary; a university would rather wait and be late implementing a “good” thing, than hastily implement a policy and be wrong. A university would rather be safely behind the wake than be creating the wake. At the time a decision is made, it is not possible to know whether or not it is a good decision; the quality of a decision is only known when the consequences are revealed (Pfeffer, 1992). Organizations, including universities, appear acutely aware of Pfeffer’s evident statement that we usually spend more time living with the consequences of decisions that we spend making them. These tendencies strengthen the notion that universities are risk averse organizations and make, or delay, decisions accordingly.

Regardless of the decision-making structure of the organization, there are always complications clouding the process. Scott notes one complication may be the availability of information, influencing the attention structure of the decision makers (2001). March

(1994) reinforces the significance of attention by concluding theories of decision making may be better described as theories of attention or search rather than as theories of choice. Downs (1967) confirms decisions may not always be made with perfect information. Members of organizations are rational, but are limited by time, personal capabilities, and the cost of information. Information is costly in terms of time and effort, and may even require money to obtain and understand. Decision-making always involves some uncertainty and even ignorance (Downs, 1967).

Ideally, a decision would be made with the help of perfect information and a crystal ball revealing all consequences. But, this isn't likely. Tullock (1965) touches on an issue that many have raised regarding groups within the organization each pushing their own agendas, but does so in the context of decision making. In an efficient organization, the decision of the member concerned solely with his or her career would be the same as the decision of the member concerned solely with the objectives of the organization. Few, if any, organizations, however, are completely efficient (Tullock, 1965).

So what can be done to change an organization's path? Changing an organization's performance may require changing an organization's culture. "When we think about changing the outputs of an organization it is critical to see which parts of the organization are mostly connected with the area of change. It is vital to the success of an organizational change program that a good diagnosis of the total system be achieved before a plan of action is devised. Diagnosis before action is always the watch word" (Dyer, 1984, p. 109). When the type of choice problem is one of change versus persistence, a great part of the influence process will consist of initiation, particularly in suggesting alternatives of action where none existed before, either 1) to solve a problem for which there was no solution, or 2) to improve the present program even when it was accepted as satisfactory (March & Simon, 1958). In particular, dimensions of group dynamics that affect change include: involvement, leader-authority, climate (includes listening, accepting, allowing mistakes, giving honest approval and disapproval, etc.), and decision making (Dyer, 1984).

The difficulty in initiating change may be exacerbated in public education. The mission of public education is providing a low cost education complemented with services and training. The university's dynamic mission constrains its capacity to adapt to rapid change (Duderstadt, 2003). Scholars in higher education management and organizational change assert that colleges and universities do not typically change quickly or radically. Authors such as Altbach (1974) point out:

The university's dynamic mission constrains its capacity to adapt to rapid change (Duderstadt, 2003).

1. There is no question that universities are among the most conservative of organizations.
2. They have been notably slow to change their curriculum, organization or structure.
3. Traditions of academic governance date back to the Middle Ages, and academics often take these traditions seriously.



## AMERICAN COLLEGES AND UNIVERSITIES

Today's university is a particular kind of organization that is complex in its composition, leadership, and funding mechanisms. What separates universities from other large organizations are primarily their purpose, governance, and funding. The university has undergone some significant changes since its conception, originating as an autonomous body and transforming into a receptor of external influence and financial pressures. Universities no longer exist as self-ruling bodies that make decisions by only considering the welfare of faculty and students.

Before the 1960's the university was viewed as a machine—a receptor of direct controls and producer of predictable outcomes (Bolman & Deal, 1997). A university was something to be managed, guided by rationality, efficiency, and control (Peterson & Mets, 1987). In the 1960's the university became more political, moving away from a rigid organization to one of negotiation and tradeoffs involving administration, faculty, and students (Baldrige, 1971). Universities slowly became more influenced by external sources that limited their choices and decisions (Young & Murphy, 1997). The Carnegie Commission (1973) concluded that campus autonomy has declined substantially since the end of WWII. The university currently experiences blurred lines between self-governance and the domination of external influences.

The university's external influences include the public's perception of it and the media. Media affects universities by making them continuously strive to build a strong name. Protection and enhancement of the prestige of the university name are important for the university. The name of the organization stands for a certain standard of performance, a certain degree of respect, a certain historical legacy, and a characteristic quality of spirit (Kerr, 2001). This is of utmost importance to faculty and students, and the government agencies and industries with which the organization deals (Corson, 1960). Corson (1960) refers to a university's reputation as its "institutional character."

The modern university is internally a loosely coupled—each department functioning virtually independent of other departments—and adaptive system with growing complexity (Duderstadt, 2003). In fact, Duderstadt (2003) claims the university is so complex it is difficult to articulate its nature to those it serves. The complex mission of universities includes meeting the needs of its students, answering to the state, and securing funding. Universities have multiple, and sometimes conflicting, goals. Unlike a corporation, the success of a university cannot be measure by a single metric such as profit or stock values (Birnbaum, 1988).

## LEADERSHIP

College and university leaders typically exercise less power than their counterparts in the business world (Green & Hayward, 1997). As stated by Birnbaum (1988), "Presidents may have relatively little influence over outcomes when compared with other forces that affect organizational functioning." The role of a university president or chancellor may be more symbolic leadership than actual leadership, yet internal leadership remains an

important component of the university. The president of a university is a multi-faceted character, facing many directions at once, attempting to not turn their back on any input group, and dealing with conflicting interests, ideologies, and loyalties. Kerr (2001, p. 15) describes the university president as follows:

The US university president is expected to be a friend of the students, a colleague of the faculty, a good fellow with the alumni, a sound administrator with the trustees, a good speaker with the public, an astute bargainer with the foundations and the federal agencies, a politician with the state legislature, a friend of industry, labor, and agriculture, a persuasive diplomat with donors, a champion of education generally, a supporter of the professional, a spokesman to the press, a scholar in his own right, a public servant at the state and national levels, a devotee of opera and football equally, etc.

Presidents can exhibit many different styles of leadership, such as mediator (Kerr, 2001), consensus seeker (Millett, 1962), persuader (Wriston, 1959), or initiator (Morrill, 1960). The leadership characteristics of the president influence the workings of the university.

#### Public universities

U.S. state legislature enactments increased from roughly 15,000 annually in the 1950's to 50,000 in the 1980's (Curry & Fisher, 1986). While not all were education bills, Fisher examined four states and determined that nearly half of the higher education laws in this century have been enacted in the last two decades. Though the nature and intensity of the measures vary, some public universities are treated like "state agencies," with limited flexibility in personnel, financial, and academic matters (Curry & Fisher, 1986). Public universities have become increasingly regulated by the state and are decreasingly autonomous.

The state department of finance, the governor, and the state legislature administer detailed reviews of universities (Kerr, 2001). As Volkwein (1987) states, "If public universities are viewed as complex, loosely coupled organizations, their regulatory relationships with state governments form an important feature of the external climate within which these institutions pursue their goals" (p. 139).

#### DECISION MAKING AT PUBLIC UNIVERSITIES

Unlike corporations that have a vertical hierarchy, universities have few layers between the students and the chancellor (Birnbaum, 1988). Diffusion of power is the standard power arrangement in universities. Universities usually have formal boards, presidents, faculty and student governing bodies, and administrators with varying levels of responsibility and power and share in the decision-making process (Birnbaum, 1988). "The prevailing expectation today is that the collective faculty in a college or university will enjoy 'shared authority' with the administration in decision-making about the institution" (Millett, 1968). Shared authority is a pattern in which both faculty and administration exercise effective influence in decision-making. Shared authority exists when educational policy is determined by some sort of faculty senate and

Unlike corporations that have a vertical hierarchy, universities have few layers between the students and the provost (Birnbaum, 1988).

when there is some joint machinery between administration and faculty for resolving personnel issues (Millet, 1968). In general, there are four imperatives for higher education decision making: 1) the push for participatory governance, 2) the mandate for efficient management, 3) the urgency to adapt to a changing environment, and 4) the salience of effective leadership (Schuster, Smith, Corak, & Yamada, 1994).

Funding is a major factor determining how universities make decisions and establish priorities. Intuitively, if funding is limited, a university will spend its funds on items that are of most importance. Universities are primarily funded through student fees and tuition, federal and state support, and industry, which provides funds for research grants and incentives. Universities are now ranked by their comparative financial resources per faculty member, leaving behind past intellectual interests and becoming market-oriented organizations. Karl Marx would define our current university as a *cash nexus* (Rosenblum, 1990). The university is becoming increasingly dominated by the economic market, taken over by the state and industry (Shattock, 1991). In heavily-regulated environments, public universities are treated like state agencies and have less flexibility in personnel, financial, and academic matters, while campuses in other states with limited public funding are considered to be state-aided and are viewed as autonomous (Curry & Fisher, 1986).

#### THE UC SYSTEM

The governance of the UC system is slightly different from most other American public universities, which is significant to note in this study. The UC system is designated, under Article IX, Section 9 of the State of California's Constitution, as a public trust, granting the UC Regents "full powers of organization and government." This public trust designation is shared by only five other major public universities in the United States (Douglas, 1995). The purpose of this designation, states the Constitution, is ensuring the UC "be entirely independent of all political or sectarian influence and kept free therefrom in the appointment of its regents and in the administration of its affairs" (Article IX, Section 9, California Constitution). In essence, the UC's budget, regents, and president are not overtly controlled by the State of California.

Furthermore, the concept of "shared governance" is written into governing documents at both the UC and the individual campus level. Recognizing this distinction, the American Planning Coordinating Committee (2003) stated, "A second cultural element is a deeply rooted foundation of shared governance that is instrumental in bringing faculty from all disciplines into decision-making processes. This is one of the strengths of shared governance and is practiced throughout the UC system, with UCSB being recognized for its emphasis on faculty involvement guiding campus growth."

UCSB is one of ten satellite campuses of the University of California public system. In the Fall of 2006, 21,080 full-time students were enrolled at UCSB. During the 2006-07 school year, the campus had an operating budget of nearly \$437 million (BAP, 2006).

## ORGANIZATIONAL LENSES CONSIDERED AND SELECTED

The university is a complex system and the extensive and shifting processes leading to a decision can be difficult to understand. Thus it is challenging to identify the factors influencing a university's decision of whether or not to enact a GHG-related policy. Theoretical models or lenses can be used to explain the behavior of large organizations and better understand the decision-making structure. Theoretical lenses are never literally true or false, they just allow us to simplify how we look at the object we're studying (King, 1994). We reviewed the literature and identified several potential lenses, including:

- Pluralism Lens: The university is a composite of different groups characterized by different interests and goals.
- Bureaucratic Politics Lens: An organization operates in habitual ways that produce predictable outcomes (Peterson & Mets, 1987).
- External Pressures Lens: External influences blur boundaries to the outside world and make it unclear who is in control of decisions (Deming, 1986).
- Campus Culture Lens: The culture of a public organization stresses some characteristics and not others.
- Issue-Attention Cycle Lens: Interest in major issues systematically cycles between high and low levels of interest.
- Leadership Lens: Personal characteristics of leaders influence organizational action.
- Policy Congestion Lens: Universities are unable to address multiple policy issues simultaneously.
- Financial Incentives Lens: A lack of financial incentives prevents organizations from taking action.
- Priority Setting Lens: The reasons behind how and why organizations set priorities are important. Issues may or may not fit into traditional organizational priorities.
- Mechanistic Lens: The university is a machine that only exists to reach a specific goal (Burns & Stalker, 1961, as cited in Spencer, 1994). Actors as pieces of equipment rather than people with individual traits and strengths.

Each lens frames a way to look at the university decision-making system: what one lens may stress, another may blur. Such a kaleidoscope approach enables us to view the university system from a variety of angles, each highlighting different theoretical decision-making characteristics.

We narrowed the list to the three models we felt were most applicable to American public universities:

- Pluralism Model
- Bureaucratic Politics Model
- External Pressures Model

These three models are quite different from one another and address different aspects of the university's decision-making process. For example, while the bureaucratic politics

lens teases out the influence of rules and processes, the external pressures lens highlights funding and political influences. Typically, there is no single “right answer” to how and why a university works the way it does, but rather different factors combine and interact, impacting the university’s actions and decisions. We anticipate that the combination of these models will capture the multifaceted and competing characteristics prevalent at UCSB, providing a clearer understanding of how the decision-making process operates at UCSB.

### Discussion of models and lenses

We use the words “model” and “lens” extensively throughout our paper and the clarification of each, as we use them, is necessary. A model is a theoretical decision-making framework that explains or helps explain the influences on a decision. A lens refers to the process of analyzing a decision by looking for the unique “fingerprints” of a theoretical model.

#### The purpose of using models

Applying a model (i.e. looking “through” a lens) does not magically reveal influential decision-making factors that would have otherwise remained hidden. Rather, a lens highlights specific determinants of a decision and, in turn, provides insight into the decision-making structure of and influences on university decision making. Using only one theoretical lens to explain a decision may not capture all of the significant influences. Like at other large organizations, the decision-making structure at universities is difficult to classify. It is not accurate to label a university strictly as a bureaucracy, for example. Similarly, all decisions made by a university cannot be explained by only the bureaucratic politics model. By using multiple models to analyze decisions, we are able to distinguish the various theoretical decision-making frameworks at play and gain insight into the essence of university decision making.

### DISCUSSION OF LENSES SELECTED FOR INTENSIVE STUDY

It is easy to understand the propensity of to focus on *what* was decided rather than *how* or *why* it was decided; we are often only concerned with what went into a decision—the input or “problem”—and, even more so, what came out of a decision—the output or “solution.” With such a selective perspective, we often fail to consider *how* and *why* the input was established or *how* and *why* the output was reached, let alone contemplate the influence the *processes* of decision making may have on the result. As March and Olson (1976) state, observers of organizations tend to ignore aspects of decision making essential to understanding why decisions are made. How and why a decision is made is the underlying question of our project. Without this kind of understanding, efforts to see that decisions are based on the best scientific findings will rely mainly on the knowledge and experience of the players involved and on plain old unscientific luck

The following literature review of the three organizational models we selected describes the basic structures of the models and explains how they apply to universities. It also identifies the unique factors the models, used as lenses, call attention to in decision-making processes, which helps us gain insight into *why* and *how* decisions are or are not made. The chapter concludes with an illustration of the differences between the models.

### **LENS I: PLURALISM**

The prevailing organizational structure in higher education is a flat or shared structure as opposed to a pyramid or hierarchical structure. We first examine the influence of this decentralized decision-making structure on the process of decision making.

#### **Basic Features**

##### *Structure*

Decision making in an organization involves the deliberate adoption of means to an end (Ganguli, 1964). The size, culture, financial constraints, funding sources, purpose, goals, and members, to name a few, of an organization determine the adoption of the means. In addition to the function of an organization, the goal of the organizational structure, as Simon (1997) claims, is simplifying and supporting decision making in individuals in organizations, allowing them to achieve higher levels of consistent and “boundedly rational” behavior than would otherwise be possible (as cited in Scott, 2001).

In a shared governance structure, it’s essential to consider two central components to understand the decision-making structure at a university. The first component is the roles of different constituencies on campus in making decisions. In other words, who has the power and how much power they hold? The other component is the degree of autonomy with which departments operate in the system. Often, departments on campus function without much oversight and make many decisions independently of campus administration and other intercampus departments. This departmentalization or, what some call, “loosely coupled units” of a decentralized structure may have practical reasons. As Eckel and Kezar (2006) contend, loosely coupled units within the organization, 1) respond more sensitively to environmental change, 2) foster and sustain localized innovations, 3) benefit from professional autonomy, and 4) lower costs because of less centralization and requisite coordination.

In general, shared authority, or shared governance, is described as a pattern in which the various divisions or functional groups exercise effective influence in decision-making. The decentralized, or flat authority structure, widely distributes power, increasing the control *all* individuals have, but decreasing the control any *one* individual has.

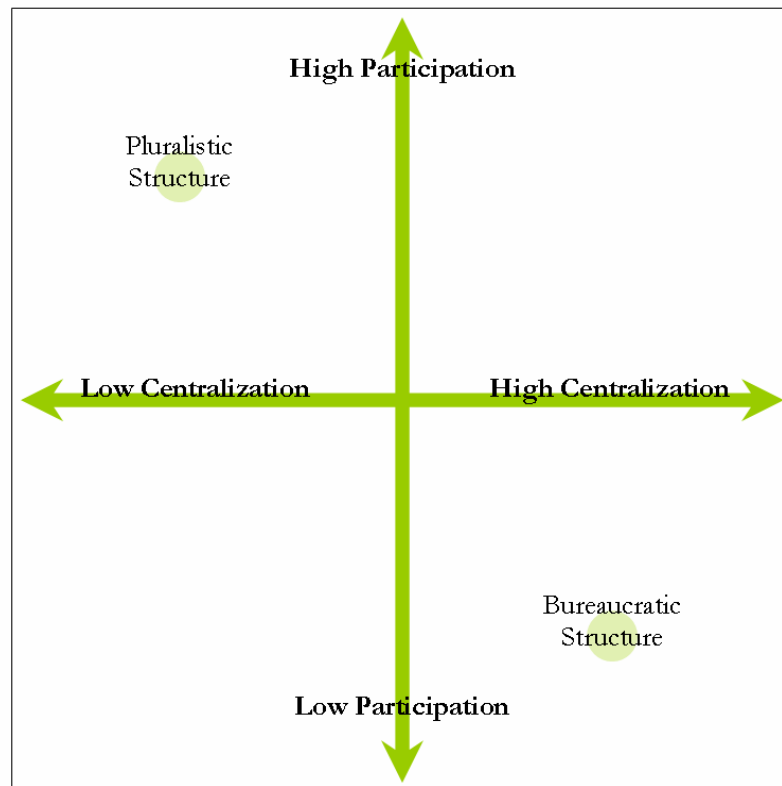


Figure 1: Graph of Organizational Structure

Illustrating this structure, a decentralized (or pluralistic) system values “high participation” of its members and “low centrality” of decision making compared to the “low participation” and “high centrality” of a centralized (or bureaucratic) structure (Bess, 1988).

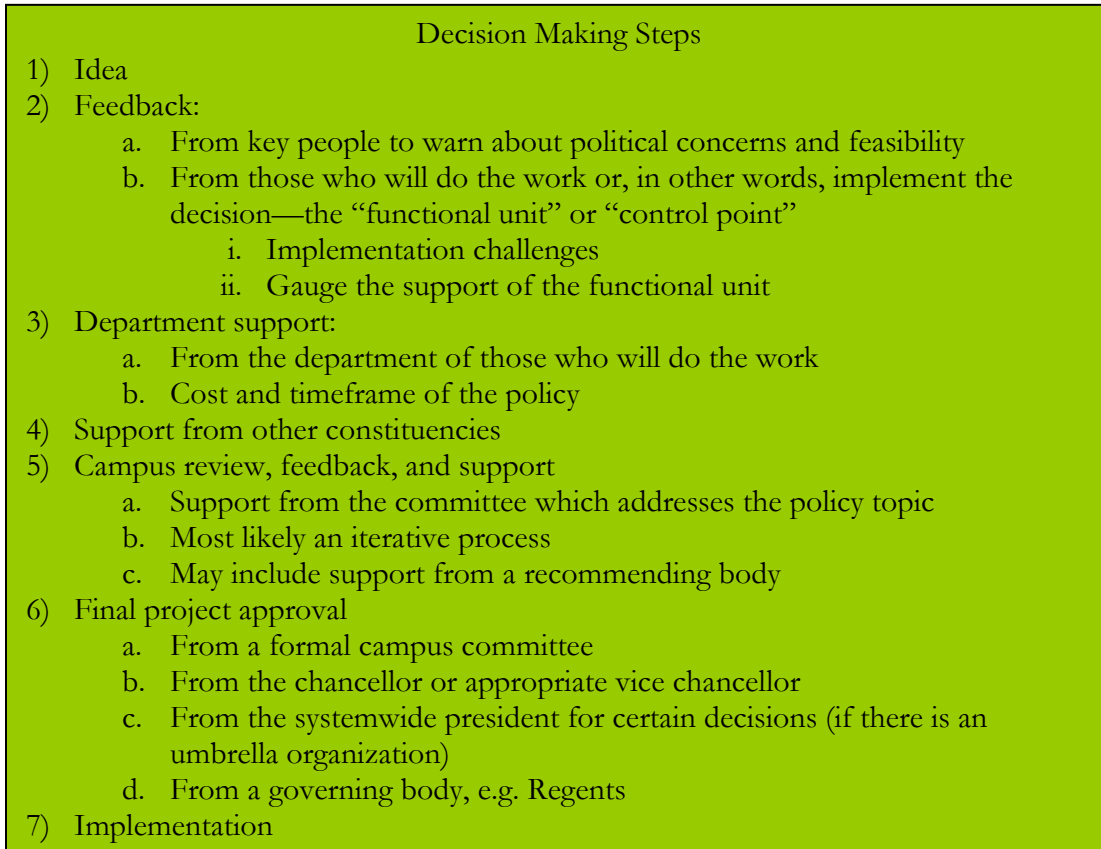
*Actors*

In a decentralized structure the actors include the individuals and the constituencies in the organization. Specifically, in a university, the actors are the students, staff, faculty, and administration. The actors participate in the decision making at a university by individual action or participation in a campus organization, the academic senate, a formal committee, or an *ad hoc* group formed with the specific task of making a recommendation to a decision making body.

*Process*

The process of decision making in a decentralized system lacks a uniform structure and does not necessarily follow the same path for every decision. There are usually nuances in conditions surrounding every decision, resulting in many “unique” decisions and a nebulous decision-making structure. Instead of controlling the organization through intense oversight, this system functions by imposing guidelines, regulations, and rules on its actors, maintaining control by highly regulating processes. While there are different

rules that apply to the various university sectors (mainly academic, financial, and institutional), decisions usually involve a number of steps. Within a decentralized system, these “steps” are determined by, but not limited to, the actors, university culture, the nature of the decision, the profile of the decision, the presence or absence of a parent system, the school’s relationship with the home state, funding, priorities, and, potentially, an infinite number of influences. Even though the decision-making process is not linear and often involves parallel activities, campus non-academic policy decisions tend to follow the loosely ordered steps in the figure below.<sup>2</sup>



*Figure 2: Decision Making Steps for Non-Academic Policies*

### **Applicability to the University**

Universities have a history of collegiality, shared governance, and individual autonomy over research pursuits (Eckel and Kezar, 2006). As Birnbaum (1988) puts it, colleges and universities resist hierarchical coordination and control associated with corporate management. Much of this “resistance” and defense of the altruistic pursuit inherent in the idea of public higher education may be attributed to the nature of and fundamental reasons for a university—teaching, researching, and learning. Threatening these core

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<sup>2</sup> These steps were informed by Maynard, Clow, and Levy.



pursuits rocks the university boat. In fact, Eckel and Kezar claim there is no shorter path to “institutional paralysis,” or termination, than tapping the wrong process, leaving out the wrong person, or proceeding with procedures perceived as illegitimate (2006). Echoing this sentiment, UCSB EVC Gene Lucas, stated that being autocratic “doesn’t leave you in office very long” (Interview, 2007). Unlike the CEO of a corporation who can, at least theoretically, dictate change single handedly, a university president has very little real executive authority in a shared governance structure.

Instead of the university chancellor or president being solely responsible for making decisions, in a pluralistic model, they often make decisions at the recommendation of committees, task forces, or groups specifically formed to inform the chancellor about an issue. These ad hoc groups, task forces, and committees form prolifically in a flat authority structure, maximizing decentralization (Ganguli, 1964), and lead to departmentalization and the creation of subunits (March & Simon, 1958). This spreading of responsibility appears cumbersome, redundant, and inefficient, and participation in decision making is often fluid and permissive (Bess, 1988). In essence, making decisions is an iterative process involving different “steering” groups or committees that don’t necessarily include individuals with a particular skill or knowledge matching the purpose of the committee.

The advantages of creating ad hoc committees include elevating the issues’ level of importance symbolically and practically, the potential for tailoring the group to match interests and expertise with a specific topic. This allows people to work from across the organization collectively, and, if a diverse and influential group is assembled, serving as a “guiding coalition” (Kotter, 1996). Permanently delegating authority, however, results in departmentalization and increasing bifurcation of interests among the subunits within the organization, decreasing the synchronization between organizational goals and achievement. The maintenance needs of the subunits often dictate a commitment to the subunit goals over and above their contribution to the total organizational program (March & Simon, 1958).

Conflicts of interests arise when these subunits, or constituencies, develop individual identities and goals. Their interests are divided in two—their own, and those of the organization as a whole. Groups will generally act in their own best interest, choosing their goals above those of the organization (March & Simon, 1958). Thus, such groups may not use their delegated power to serve the best interests of the organization. For example, an interest group may choose to not spend their “political capital” on an issue that is not essential to its own goals. This leads to the “orphaning” of an issue—people or groups are unwilling to take up the issue as a major concern because they are saving their political capital. In a decentralized decision-making structure, the default mode is do nothing; anything else requires energy, an impetus.

It appears that doing nothing, or doing today what it did yesterday, is both a blessing and a curse for those trying to steer an institution. In other words, changing the course of the institution, whether for the “improvement” of the organization or not, is a

Herculean task. Similar to a cargo ship, in the world of large, complex organizations, there is no such thing as turning sharply or “stopping on a dime.” If a group or person decides to take up a cause, however, in a decentralized structure, establishing coalitions supporting their cause is vital to building momentum and, ultimately, making a change. In addition, parallel networking—informing staff, students, and administration—increases awareness and, hopefully, garners additional support. Of course, different people and groups from different constituencies will carry different “weights,” or degrees of influence, depending on title, position, seniority, and respect on campus.

Difficulties in decentralized organizations also stem from the fact that the goals and priorities of the different constituencies are rarely unified (Cohen, 1991). Faculty, for instance, may primarily be devoted to their research, while staff members may be more concerned about pay scales and benefits, and students may want more varied class offerings. Addressing all the constituencies’ concerns can be difficult (or even impossible) with little time and/or resources. Often the noisiest group gets the most, or only, attention, requiring a persistent champion to ensure the issue is heard and gets on the front burner.

Constituencies may build coalitions and add size to their noise factor, gaining power in numbers. Alliances between groups alter the decentralized power structure. The decisions a university makes can vary drastically depending on who has allied with whom. Individual students, who have relatively little power on their own, may join together and form alliances with faculty or staff, thus gaining the upper hand in a decision-making process. If the students convince the faculty and staff that they should support the students’ desire for more class offerings, the campus could soon provide a plethora of new learning opportunities. Often changes would not happen without deals being made between key stakeholders.

Although we would like to imagine the decision making process at universities as a clean and simple three-step procedure—1) identifying all possible options, 2) evaluating the outcomes of each option, 3) choosing an option that maximizes results—in reality, it is not so straightforward (Eckel & Kezar, 2001). Cohen and March (1986) find that decisions are made separately and independently throughout an organization and are dependent on the flow and mix of 1) decision makers, 2) institutional problems, and 3) the potential solutions at that time.

### **Expectations**

Alliances, constituencies, and flat authority structures influence decisions and the processes occurring between the inputs to a decision and the output, the decision itself. This model of the decision-making system provides a clear approach to the question—what determines whether or not American public universities take advantage of opportunities to reduce GHG emissions, especially when doing so is likely to save them money? It leads us to look for the influence of these factors on the decision-making process in our analysis:

- Multiple stakeholders

- Champions
- Coalitions

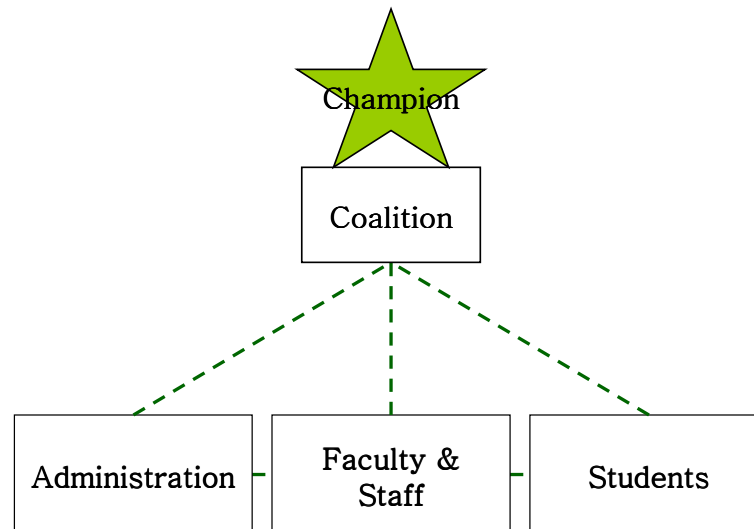


Figure 3: Diagram of the Pluralism Lens

## **LENS II: BUREAUCRATIC POLITICS**

Inertia is “a property of matter by which it remains at rest or in uniform motion... unless acted upon by some external force” (Merriam-Webster, 2007). Bureaucracies are often accused of embodying the concept of inertia and, in addition, move at a snail’s pace, and are “arthritic” due to endless layering of rules and procedures. In an organization composed of many people and processes, it can be difficult to understand how a decision is actually made. Many people joke and say that an organization makes its decisions in a black box and the public only sees outcomes. Exploring the make up of a bureaucracy can explain the parts of an organization that operate in the mysterious black box, and allow us to provide insight on what is happening and why.

### **Basic Features**

#### *Structure*

Weber (1924) claimed that coordinating the divisions of large organizations requires clear lines of authority organized in a hierarchy. Bureaucracies have clear levels of graded authority, and every level has subordinates and superiors. Each level should only give orders to its own subordinates, and receive orders from its own superiors. Since each level has its responsibilities and authority clearly spelled out, everyone is aware of their own responsibilities and those of their colleagues (Weber, 1924).

It is helpful to visualize a hierarchy as a pyramid, with authority concentrated at the top and expertise concentrated at the bottom (Minter, 1968). The task of the lower levels is to communicate all relevant information upward so the right decision can be made at the top. The classic bureaucratic model stresses the importance of executive control and the

duty of leadership at the top (Dunsire, 1980). Executives communicate in a top-down manner, via directives (Minter, 1968). The major purpose of this hierarchal control is to create routine actions, eliminating personal discretion from the organizational decisions (Peters, 1989). The hierarchy ensures a routine process, and what the actors do becomes routine as well. The top is responsible for making decisions, and its decisions are binding for all members of the organization (Peters, 1989). Although the top makes all the decisions, they are not the experts. As Downs (1967) describes, the highest-ranking members often know less than half of all the rest of the members. Since executive control encompasses *all* decisions, the people at the top are “generalists” when it comes to making decisions.

One problem with only having generalists involved in direct decision making is they lack time to absorb or develop information on their own. Another potential problem is faulty communication patterns—information can be distorted as it goes up the ranks. Every rank is composed of people who must synthesize information they perceive or consider as relevant (Peters, 1989). Thus, people from below filter (intentionally or unintentionally) the kinds of proposals they put forward. This filtering can easily distort information and lead to inefficient and dishonest communication. High-level members can combat distorted information by developing networks of information sources that can help verify reports from their subordinates (Downs, 1967).

The hierarchal mega-structure can also be massive and impersonal, taking on a life of its own. The existing establishment can transcend human will and reveal the need to suppress individuality and innovation in the interest of bureaucratic convenience (Tullock, 1965). A common perception of the bureaucracy is the more paperwork and reporting there is, the less gets done. The mega-structure dominates, fogging up the original purpose of the organization.

#### *Actors*

In classic organizational theory, roles are defined and individuals are considered to be interchangeable parts. The structure of the classic bureau is composed of rational actors defined by their roles, each role requiring experience and specific training in relevant skills (Weber, 1924). In this specialized division of labor, all jobs are departmentalized and come with their own detailed rights, obligations, responsibilities, and scope of authority. Personnel carry out only their own specialized tasks. Tasks that do not fall into anyone’s domain can fail to be addressed, or as Young puts it, become “orphans” (Young interview, 2006).

The structure of the classic bureau is composed of rational actors defined by their roles... (Weber, 1924).

In the university, divisions of labor can be divided into the following categories [which helps when visualizing a hierarchy pyramid] (Duderstadt, 2004):

- Administration: A leadership network composed primarily of faculty, sometimes on temporary assignment. This network extends throughout the university.
- 1<sup>st</sup> Level: Schools & colleges (by discipline), broken into departments that are more manageable in size. At each level administration consists of academic

leaders and a dean/department chair assisted by other academic and professional staff.

- 2<sup>nd</sup> Level: Executive officers, which include the president, provost, and vice chancellors. The executive officers are responsible for academic personnel and programs (selected by faculty). They are also responsible for various administrative, supportive, and business functions such as finance, physical plant, and government relations. Executive officers generally have experience and training.

Originally, bureaucratic jobs were considered to have few, if any, personal elements (Leivesley, Carr, & Kouzmin, 1994). March (1958) was one of the first who claimed personal elements indeed exist in bureaucratic jobs. March (1958) believed all actors have wants and motives that can conflict with the goals of the organization. Members' behavior can therefore be motivated by personal interest or external incentives (Gibbons, 1998; Cragg, 1997).

When people are motivated by personal interest or incentives, the organization represents a reflection of these values. *Who* occupies bureaucratic roles can set the flavor of the organization, and if a majority of officials occupying key positions are of one type, then the bureau and its behavior will be dominated by the traits typical of that type (Downs, 1967). The personal characteristics and values of officials are significant (March, 1958). Personalities and interests of the organization's members can determine the scope and reach of the organization's goals.

Bureaucratic workers also have different motives. Some workers choose to work for a bureaucratic agency as a life-long career. These workers want, and can, move up the organizational ladder by showing loyalty to high-ranking members (Downs, 1967). Often, practicing loyalty is paired with playing it safe. Members seeking promotions typically do not want to ruffle the feathers of the mother bird. Other members prefer routine, and operate within their own narrow disciplinary worlds. These members are resistant to changes may upset their comfortable niches (Duderstadt, 2004). Some actors do not always act in the best interest of the organization and are determined to hang on to power and control, even at the expense of the organization (Duderstadt, 2004). Such self interest can lead to institutional inertia (Downs, 1967). When an actor hangs on to the status quo to secure his/her power, the organization is going to experience resistance to change.

In addition to these motives and incentives, actors can be categorized into two general groups: climbers and conservers. Climbers like to create new functions for a bureau and work toward expanding their capacities. Climbers make change happen. Conservers, on the other hand, are biased against any change in the status quo. Many climbers, however, become conservers when promotion possibilities are exhausted. The longer an advocate remains in a position, the more likely they are to adopt policies based upon a magnified view of the relative importance of that position (Downs, 1967). In other words, the longer an actor spends in an organization, the smaller their universe may

become, and the more importance they will place on things that only affect their universe.

### *Process*

Bureaucratic rules morph into standard operating procedures (SOPs), creating standards for daily tasks (e.g. preparing budgets and reports) that result in coordinated and reliable performance. For the most part these rules, or files, are easy to learn and don't change (Weber, 1924). These typically simple rules give way to daily routines, otherwise known as programs (Allison, 1971). As complexity of the action and the number of individuals involved increases, so does the importance of programs as determinants of the organization's behavior (Allison, 1971). The bureaucracy's need for control and coordination can conflict with goal diversity and innovation (Downs, 1967). So while these SOPs allow for coordinated tasks, they can also turn into embedded routines that prevent change, creating rigid formal procedures that characterize sluggish organizations.

The classic bureaucratic model also stresses the importance of executive control and the duty of leadership at the top (Dunsire, 1980). As mentioned earlier, executives communicate in a top-down manner, via directives (Minter, 1968). The faster the actors learn their organization's rules and procedures, the sooner they can move up the organizational ladder. These rules coordinate the activities of hundreds of managers at different levels of the organization and ensure predictable outcomes consistent with the organization's broader goals (Weber, 1924). Rules and process are used to maintain uniformity and predictability in the organization's actions. Usually, the older an organization is, the more conservative it is likely to be (Downs, 1967). Often, with age comes an aged bureaucracy, rigid in its structure and established routines. There are, however, two exceptions to this rule: an older organization experiencing periods of 1) rapid growth, or 2) internal turnover may exhibit fewer conservative characteristics (Downs, 1967).

Path dependence is an important phenomenon found in large organizations. An organization often favors its existing set of ideas because they are familiar and easy to follow (Allison, 1971). Habit can cause institutions to see little reason for doing anything today that they did not do yesterday (Minter, 1968). Actors are only concerned with keeping their organizations running on a day-to-day basis, failing to take a long-term approach in their decisions. Any decision that strays far from the familiar path is approached with extreme caution. Thus a bureaucracy may judge whether or not an action or process is beneficial by considering the reversibility of the action. Path dependence can be associated with institutional inertia. Inertia includes both rest and motion—a bureaucracy experiencing inertia may develop arthritis, or it may build momentum. Path dependence can work both ways; it can serve a barrier if the trodden path does not include the introduced issue, or can be advantageous if the issue is somewhat established.

Habit can cause institutions to see little reason for doing anything today that they did not do yesterday (Minter, 1968).

For example, once an organization decides on an environmental issue and begins moving in that direction, it may be easier to implement future environmental decisions. Path dependence can therefore be beneficial if changes are building on a past success. As a result, institutional inertia is both a blessing and a curse, for while it can cause stability and maintain standardized order; it can also prevent change, even if the change is beneficial.

Bureaucracies are often risk averse, preferring the status quo (Downs, 1967). Sometimes universities become occupied with process rather than objectives, with the *how* rather than *what* (Duderstadt, 2004). The established processes of a bureaucracy represent an enormous previous investment in time, effort, and money. Many mistakes and experiences underlie a bureau's behavior patterns (Downs, 1967). Finances dictate many risks, and if a decision requires a great deal of money it will be viewed with intense scrutiny. Also, the greater the number of officials affected, the more resistance there will be to change. The larger the organization, the harder it is to adopt any given changes and reach consensus or coordinated action (Olsen, 1982). Organizations don't want to take financial risk, or any other risks, that could lead to behavioral change with unpredictable consequences.

Some conditions make change more favorable, such as when the idea is proposed from an external source instead of an internal one (Downs, 1967). Exogenous factors are visible to the outside world and can lead to pressure or rival competition (such as other universities adopting a certain technology). Change is also more favorable when there are favorable alternatives to the status quo. Lastly, change is easier to implement if it only affects a small group of people and ideally, only requires consensus of key stakeholders (Downs, 1967; Crenson, 1971). The fewer people affected and the fewer people who must agree to the change, the easier it is for change to happen.

### **Applicability to the University**

The public university is composed of the chancellor, administration, faculty, staff, and students, all with varying levels of responsibility (Birnbaum, 1988). Another factor in operations is government oversight, which varies by state law and political climate (Green & Hayward, 1997). All of these players form the mega-hierarchy. The chancellor sits at the top of the pyramid, with all vice chancellors underneath them. Moving downward, the next level varies by campus, but is typically a decision-making body. At UCSB, one such decision-making body is the CPC, which receives and votes on proposals from faculty, staff, and students. Another decision-making body is the Academic Senate, which is composed of faculty and addresses academic issues. . The direction of information moves upward, and ends with the Chancellor's signature. An overarching layer of the pyramid is the UCOP, which oversees all the UC schools.

### **Expectations**

The bureaucratic politics model will highlight the following characteristics in our case studies, when applicable:

- Hierarchical decision structure

- Risk aversion
- High emphasis on process
- Path dependence

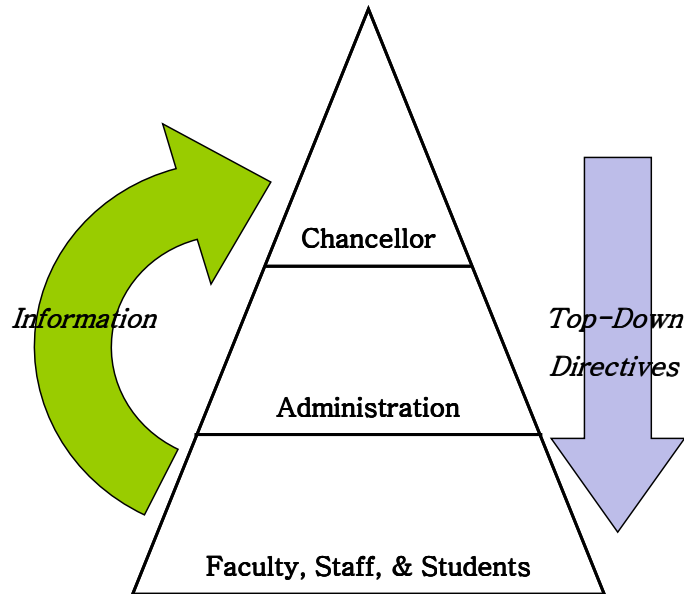


Figure 4: Diagram of the Bureaucratic Politics Lens—Hierarchical Decision Structure

### **LENS III: EXTERNAL PRESSURES**

Just as there are constituencies within the university, there are also constituencies outside the university. “The individual college or university in America has never been so isolated or so independent as some persons have suggested” (Millett, 1968, p. 2). Some scholars once imagined that organizations of higher education could function separately from their external environments, but most now agree that universities cannot and should not ignore external realities (Schuster et al., 1994). Public universities are open systems, depending on and continually interacting with their environments (Burke, 2002). According to Burke (2002), organizational change actually begins and ends with this external environment. Change generally requires the approval (implicit or explicit) of external constituents. The following section explores how external pressures influence decision making.

#### **Basic Features**

##### *Structure*

All organizations deal with external influences and these influences may vary based on the type of organization (i.e. public, private, or non-profit). For many organizations the external environment can be divided into two categories: the parent system and the rest of the outside world (Burke, 2002). An organization’s parent system makes up a significant portion of the environmental influence. For example, “subordinate organizations may operate relatively autonomously with respect to the outside world (such as having their own purchasing operations, for example), but because of corporate



policy, they may be fairly restricted in how much money they can spend” (Burke, 2002, p. 183). Pressures from the parent system have a particularly strong impact when they involve money (Zaltman & Duncan, 1977).

Money, in general, creates a significant external pressure, whether as a restriction or an incentive. For universities, financial resources are “a continuing restraint upon academic decision-making” (Millett, 1968, p. 13). Organizations that receive public funding have particular external constituencies in the outside world. Public universities must consider how “chief executives and legislatures” might react to their actions because local, state, and federal government funding decisions directly affect them (Millett, 1968).

Organizations that receive private funding have particular external constituencies as well: gifts from private foundations, for example, influence academic practices (Millett, 1968). In fact, an organization’s dependence on donations can shift its activities to those favored by philanthropists (Schlesinger, 1998). It can also cause an organization to focus energy on soliciting donations.

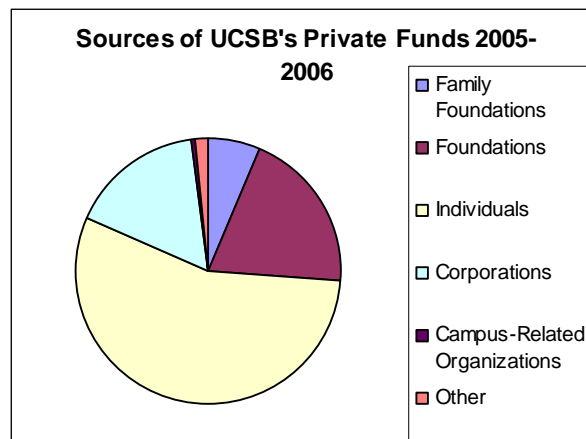


Figure 5: Sources of UCSB’s Private Funds 2005-2006

Not only the amount of funds, but also the restrictions on funds impact organizations. For example, organizations generally have both capital and operating budgets. Capital funds include plant, equipment, and loan funds. The operating budget is generally earmarked for specific current operations. Many universities and state governments keep capital and operating budgets separate. The separation attempts to “prevent artificial inflation of an operational budget by including a one time large payment for a capital item” and “protect the fiscal authority from losing track of large sums of money in a day to day operating budget style” (Northern Arizona, 2001).

Private sources of funding are often restricted as well. Donors restricted nearly 98% of the private support they gave to the University of California in 2005-2006, dictating for what purpose the university could use the money (UCOP, 2006). Private groups and individuals can influence organizations indirectly as well. A university can become sensitive to a major donor’s whims, for example, to keep that source of funding. In a

multi-campus university system, a university may even be forced to please a minor donor who gives primarily to other campuses.

The parent system and the government also influence organizations in ways beyond funding. At the level of the parent system, a conservative Board of Regents could, for example, affect the actions of a university. Government regulators and policy makers continually influence the actions of public universities (Schlesinger, 1998; Schuster et al., 1994). According to Kimbrough (1964), the government is the predominant power in educational policy...officially. Unofficially, special interest groups influence educational policy making. In addition, associations such as accrediting bodies have influence on programs, curricula, and costs (Millett, 1968). Concerns about future students and enrollment, as well as international competitiveness, also influence universities' decisions about academic programs and other activities (Schuster et al., 1994).

The local community in which an organization is located also impacts the organization. In the case of universities, the relationship between the two is referred to as the relationship between town and gown. The phrase "town and gown" stems from the Middle Ages, when gowns differentiated university scholars from non-degree holders (University of Cambridge, 2007). The relationship between town and gown has been rocky, historically, but today the two communities usually acknowledge both the benefits and the detriments of their coexistence. An organization of higher learning offers perks and prestige to the local community, but may also contribute rowdy students, invasive buildings, and traffic (Brawer, 1998). The town may or may not support the university by appreciating its mission, attending its events, and offering special services to faculty and students. The sociodemographic characteristics of the community in which the university operates also have influence (Schlesinger, 1998). A university may choose to hold events, for example, that would be of particular interest to local residents. Unfavorable images of universities increase as universities are forced to seek outside funding because they begin to resemble businesses, risking their academic loyalty and public support. .

The phrase "town and gown" stems from the Middle Ages, when gowns differentiated university scholars from non-degree holders (University of Cambridge, 2007).

Broader societal goals and values affect organizations as well. Society expects organizational interests to align with its goals. "A fundamental question...is whether the goals and interests of organizations and their leaders and managers are congruent with the interests of the larger society such that the activities of the organizations...increase the collective well-being of society" (Powell & Clemens, 1998, p. xiv). Societal goals increasingly impact universities in particular because universities prepare students to participate in and be leaders in society (Powell & Clemens, 1998). The university once primarily *responded* to its external environment, but that view has shifted toward a more proactive role (Schuster et al., 1994). Organizations can position themselves to find opportunities societal goals they once perceived as threats.

### *Actors*

Actors with external influence include members of the parent system. In a multi-campus university<sup>3</sup> staff members of a statewide headquarters generally fulfill this role.

Government officials are also part of the system structure. The government plays a role in setting policy and regulation that affects organizations.

Funding sources are also players in this model. These include the parent system; local, state, and federal government; and private donors. Outside organizations may constrain financial resources or provide financial incentives.

The local community and interest groups, as well as members of broader society are also external influences. Their goals and values affect organizations.

### *Process*

External influences affect policies in that the policies must fit within the organizational guidelines of the parent system and the government. Often these are beyond the control of the individual organization.

Funds affect policy as well. Many policies require financial resources, and, for new policies, organizations must ensure adequate funding, often from outside sources.

Organizations also fit within the local community and society. An organization may wish for its policy decisions to align with the desires of the community within which it must live. Like financial influences, these communities may help or hinder the policy decision.

### **Applicability to the University**

UCSB's parent system is the UC system. UC employs a system of "shared governance" (UC, 2007). The Board of Regents, the systemwide president, and the faculty share governing authority over UC.

The California Constitution established the Board of Regents, whose 26 voting members include the following (Regents, 2007):

- 18 Regents appointed by the Governor for 12-year terms
- 1 student appointed by the Regents for a 1-year term
- 7 ex-officio members
  - Governor
  - Lieutenant Governor
  - Speaker of the Assembly
  - Superintendent of Public Instruction
  - President of the Alumni Associations of UC
  - Vice President of the Alumni Associations of UC

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<sup>3</sup> The University of California pioneered the multicampus system in the 1920s with two campuses—Berkeley and Los Angeles (Millett, 1968).

□ UC President

Two faculty members serve on the Board as non-voting members:

- Chair of the Academic Senate
- Vice Chair of the Academic Senate

Of the 18 appointed members of the Board of Regents, seven were appointed by Governor Schwarzenegger, eight by Governor Davis, and three by Governor Wilson (Regents, 2007). The current student member is a graduate student at UCLA and the two non-voting members are UC professors in Davis and Santa Barbara.

Article IX, Section 9 of the California Constitution gives the Regents “full powers of organization and government, subject only to [specific areas of] legislative control” (State, n.d.). “The Regents promulgate policy for the University overall” (UCI, 2006).

Appointing the president of the University is another responsibility of the Board of Regents (Regents, 2007). UCOP serves as UC’s systemwide headquarters and the chancellor of each campus reports to the President (UCOP, 2007). Although the Regents are primarily responsible for promulgating University policy, the President has some policy-making duties (UCI, 2006). “New Presidential policy may result from Regents’ action, changes in law, or new administrative issues within the University itself. Presidential policies are revised or rescinded based on changes to Regents’ policy, legal or societal changes, or administrative changes” (UCI, 2006). When the President creates policies, called administrative policies, he consults extensively with the constituencies of the University, including administrators, faculty, and students from the 10 UC campuses and the three national laboratories. “Presidential policies customarily set forth courses of action, provide administrative direction, and promulgate regulations or processes which are applicable Universitywide” (UCI, 2006). The Universitywide Policies Unit within UCOP reviews policy before issuance by the President, ensuring that the policy “is consistent with existing Presidential policy and regulations outside the University” (UCI, 2006). The General Counsel of The Regents performs legal review.

UCOP must also approve some campus-level projects. Capital projects that are funded in whole or in part with non-state funds and/or require more than \$400,000 and/or are externally financed, for example, must be approved by the UCOP Budget Office (UCOP Budget, 2007). Major capital improvement projects funded by non-state funds that cost less than \$400,000 do not require approval from UCOP or the Board of Regents. Projects that involve any state funding must be approved by UCOP.

The Academic Senate represents the faculty in UC’s shared governance. The Regents mandated that the faculty “determine academic policy, set conditions for admission and the granting of degrees, authorize and supervise courses and curricula, and advise the administration on faculty appointments, promotions and budgets” (Academic, 2007). The Academic Senate fulfills this delegation of authority. There is a Systemwide Academic Senate as well as 10 Divisional Academic Senates (one for each of the 10 campuses).

Above the UC system is the State of California. “State and federal legislation provide the first level of authority to the University” (UCI, 2006). Three branches of government (Executive, Legislative, and Judicial) create a system of checks and balances. The Executive Branch of the State of California includes the following statewide elected officers (Wilson & Ebbert, 2006):

- Governor
- Lieutenant Governor
- Secretary of State
- Attorney General
- Treasurer
- Controller
- Superintendent of Public Instruction
- Board of Equalization (4)
- Insurance Commissioner

California’s bicameral Legislature consists of an 80-member Assembly and a 40-member Senate. 35 Democrats and 15 Republicans currently sit on the Senate (California State Senate, n.d.). Seven Justices sit on the State Judiciary.

Another influential state agency is the California Coastal Commission, which regulates land use in the coastal zone (California Coastal Commission, n.d.). When UCSB wishes to construct a building, for example, generally it must obtain a permit from the Coastal Commission. Twelve voting members and four non-voting members make up the Commission. Of the 12 voting members, four (two locally elected officials and two from the public at large) each are appointed by the Governor, the Senate Rules Committee, and the Speaker of the Assembly. Representatives from the following agencies make up the non-voting members:

- Resources Agency
- Business, Transportation and Housing Agency
- Trade and Commerce Agency
- State Lands Commission

Some of these external constituents affect UCSB’s financial position. UCSB relies on the state, for example, for 31% of its current funds (UCOP, 2006). 15% of the UC system’s current funds come from the state.

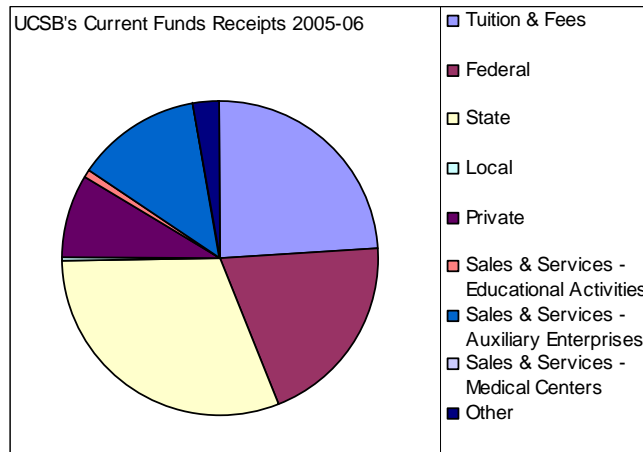


Figure 6: UCSB's Current Funds Receipts 2005-2006

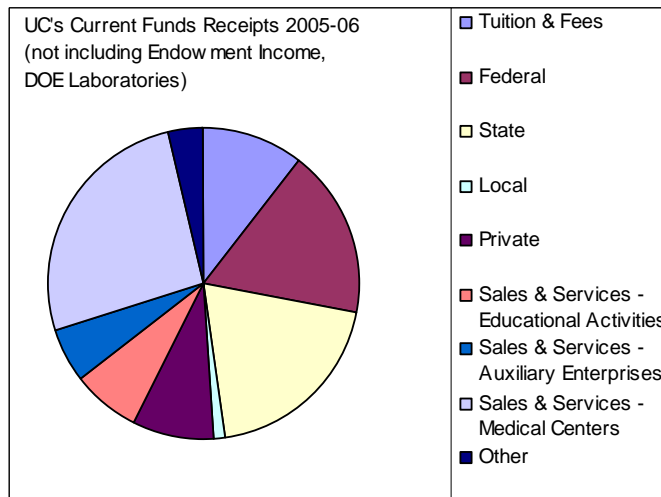


Figure 7: UC's Current Funds Receipts 2005-2006

In addition to state funding, universities increasingly depend on federal funds, particularly for research and student aid (Millett, 1968). The federal government also provides matching grants for construction, instructional equipment, and teacher education. Federal money makes up 20% of UCSB's current funds and 14% of the UC system's current funds (UCOP, 2006).

Private gifts make up approximately 10% of UCSB's current funds (UCOP, 2006). The majority of UCSB's private funds come from individuals who collectively contribute 56%<sup>4</sup> of the private money to the campus (UCSB, 2006). Foundations account for 26% and corporations for 16% of private funds.

<sup>4</sup> These percentages vary from year to year. In 2004-2005, individual donors, for example, contributed a mere 23%.

## Expectations

This model encourages us to look for influences from the external environment. If this model accounts for a significant portion of what happened in the decision-making process, we will find the following factors:

- Influence of the system structure
- Budgetary constraints
- Public relations

These factors may help determine what may prevent a university from taking (or encourage a university to take) advantage of GHG emission-reducing, money-saving opportunities.

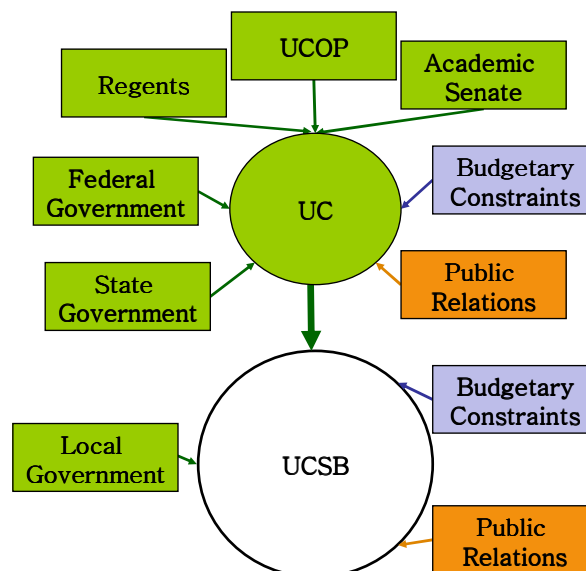


Figure 8: Diagram of the External Pressures Lens—UCSB

## KEY DIFFERENCES AMONG THE MODELS

Imagine that the president of a university wants to switch to recycled paper. Below is a description of how each of the lenses might approach this situation

### **Lens I: Pluralism**

First of all, the president cannot make this decision on their own. They must first consult the appropriate committee, perhaps the Paper Task Force. If the Paper Task Force approves, and has the authority to approve, the decision-making process is over and the university can begin using recycled paper.

But let's imagine that multiple stakeholders have other ideas about paper. One group wants to switch to linen paper, one wants banana paper, and another wants paper that is pink. Let's imagine that the faculty members dislike all the new options and want to stick with the status quo. Faculty members feel very strongly about this and make themselves heard. One faculty member in particular champions the issue—they bring it out of the congestion and on to the front burner. Now the students join the faculty in

protesting recycling paper, making a deal and forming a coalition, and the university continues using regular paper.

### **Lens II: Bureaucratic Politics**

In this case, let's assume everyone in the university agrees with the president and wants to switch to recycled paper. The problem is that the process is difficult. First, someone must consult the Manual on Paper Use, which will not likely include a procedure for changing paper. There are SOPs for paper use, likely written before the dawn of the recycling age, and the organization is expected to follow the same procedures today, tomorrow, and the next day.

Let's hope that the university agrees to rewrite the Manual on Paper Use to incorporate a switch to recycled paper. The university then follows the procedures for rewriting the manual, which include filling out lots of paperwork and obtaining multiple signatures. Soon everyone becomes so involved in changing the manual, they forget about recycled paper altogether. The rewriting procedure becomes an end in itself, and they lose sight of their original objective—switching to recycled paper. The university does eventually begin using recycled paper, but the entire process takes several months.

### **Lens III: External Pressures**

We'll focus on the statewide university system. Let's imagine that back in 1900, the university system created a rule that all campuses must purchase paper from The Paper Vendor. This rule has been in place ever since. The Paper Vendor, however, does not make recycled paper. The university contacts the systemwide office about this concern, but they say they cannot change the rule, at least not at this time. They recognize that it's silly, but it's the rule, and they have to stick with it. Thus the university must continue to purchase regular paper.

Next let's imagine the previous system structure constraint is somehow overcome. The university is allowed to purchase from The Paper Seller, which carries recycled paper. The Paper Seller, however, requires payments to be made monthly, rather than bimonthly like The Paper Vendor. It turns out the budget only allows bimonthly payments, and the university cannot switch to recycled paper.

Finally let's imagine that both the system structure and budgetary constraints are overcome. The university is allowed to purchase recycled paper from The Paper Seller and may start a monthly payment plan. Mr. and Mrs. Superdonor, however, are personally opposed to recycled paper. Mr. and Mrs. Superdonor have contributed millions of dollars not only to the university, but also to several other universities in the statewide system. Even if the university president is comfortable irritating Mr. and Mrs. Superdonor, they are not comfortable also angering the presidents of the other universities and of the statewide system. The university continues to use regular paper to keep Mr. and Mrs. Superdonor happy.



## CHAPTER 3: METHODOLOGY

We conducted qualitative research, namely a case study, to explore our question. The case study approach involves an in-depth examination of the state of affairs to gain a sharper understanding of why some actions and not others are taken to reduce GHG emissions. This chapter provides a brief description of the literature on qualitative research methods, then details our approach.

### QUALITATIVE RESEARCH METHODS

Social science differs from natural science because there are no laws in social science (Berg, 2004). Instead there are patterns. Social science makes sense of these patterns, generally through qualitative research. Qualitative research captures the patterns of the organization by gathering information to understand how it operates and functions. Qualitative research explores social phenomena, trying to understand seemingly ordinary events in new ways (Esterberg, 2002). Esterberg (2002) gives the example of talking on the telephone. People usually answer the telephone by saying “hello” and simply expecting the caller to identify themselves. If an unfamiliar caller simply says, “It’s me,” the person answering the phone will likely feel confused and frustrated. A researcher might want to explore this phenomenon—the social rules for talking on the telephone. Counting and making statistical calculations would provide little insight. Instead the researcher must try to understand this social process in context, interpreting and analyzing, moving back and forth between theory and evidence.

There are several models for designing qualitative research. One option follows this structure (Berg, 2004):

IDEAS  
LITERATURE REVIEW  
DESIGN  
DATA COLLECTION AND ORGANIZATION  
ANALYSIS AND FINDINGS

Once ideas are formed, a literature review is part of the initial stages of any empirical research. “By knowing what other researchers have already said about your topic, you are in a better position to come up with a well-thought-out research plan” (Esterberg, 2002, p. 37). While reviewing the literature, a researcher must think carefully and thoroughly about any and all potential search terms related to the identified ideas in order to avoid “terminological classification bias” (Berg, 2004). Although most research fields utilize standardized terminology, it is important to uncover a broad range of related research.

The third step in qualitative research is designing the research. Examples of research designs include longitudinal studies, sample surveys, experimental social research, and

case studies (Hakim, 2000). Case studies are “the subset of qualitative methods that aspires to cumulative and progressive generalizations about social life and seeks to develop and apply clear standards for judging whether some generalizations fit the social world better than others” (George & Bennett, 2005, p. 19). A case study examines and provides a descriptive account of one or more events in detail. At a minimum it provides a richly detailed ‘portrait’ of a social phenomenon (Hakim, 2000). Ideally it develops or tests explanations for the event(s) that may be generalizable to other events (George & Bennett, 2005).

There are three types of case studies: intrinsic, instrumental, and collective (Berg, 2004). An intrinsic case study is performed to better understand one, particular, unique case. An instrumental case study is performed to understand an external theoretical question; the case itself is secondary. A collective case study is the study of several instrumental cases to “enhance the ability to theorize about a broader context” (Berg, 2004, p. 256).

There are three types of case studies: intrinsic, instrumental, and collective (Berg, 2004).

There are also three designs for case studies: exploratory, explanatory, and descriptive (Berg, 2004). In an exploratory case study, the research question is defined after collecting the data. Explanatory case studies are useful for causal studies since they examine a plurality of influences, particularly in complex studies of organizations or communities (Berg, 2004). Before beginning a descriptive case study, researchers establish a framework to follow throughout the study, identifying a theoretical orientation and determining what the units of analysis will be.

There are some limitations to case studies. Their primary weakness is that the perspectives of the researchers can influence the results (Hakim, 2000). In addition, case studies are better at “assessing *whether* and *how* a variable mattered to the outcome than at assessing *how much* it mattered” (George & Bennett, 2005, p. 25). The researcher must remain aware of these limitations while collecting data and analyzing cases.

The fourth step in qualitative research is data collection and organization. Case studies involve a systematic gathering of information in order to understand how the subject operates (Berg, 2004). Case studies usually utilize at least two methods of data collection, such as analysis of administrative records and other documents, and interviews (Hakim, 2000).

Interviews can be grouped into three categories: standardized or structured, semistandardized or semistructured, and unstandardized or unstructured (Berg, 2004; Esterberg, 2002). The formality of these interviews ranges from using the exact same precisely-worded questions each time, to having no questions prepared in advance. When designing or asking questions, it is important to remember the following guidelines: avoid dichotomous (yes or no) questions, avoid leading questions, ask both general and specific questions, and be careful using “why?” because it can made the interviewee feel defensive (Esterberg, 2002).

The fifth step of qualitative research is analysis and findings. Once interviews are transcribed, both interviews and documents are simply textual data. According to Esterberg (2002), the first step in making sense of this data is coding. Coding involves going through text, line by line, and coming up with categories in order to manipulate the data. After first doing open coding, themes should begin to emerge. Then focused coding can be used to zero in on key themes. This coding is part of a larger technique called content analysis, which is a “systematic analysis of texts” (Esterberg, 2002). The analysis can be limited to manifest content (elements physically present) or extended to latent content (symbolism underlying the physical data). The researcher must also decide on a unit of analysis, which could be words, themes, characters (number of times a person is mentioned), paragraphs, items (whole unit of sender’s message—book, letter, etc.), concepts (sophisticated word counting), or semantics (number and type of words, strength or weakness of words) (Berg, 2004). Many researchers use a combination of these elements.

Theoretical models or lenses can be incorporated into the coding process. Models “help to link theory with practice” (Burke, 2002, p. xiv). They provide a lens through which to look at a decision-making process. Lenses are important because “how we look at things affects how they look” (Pfeffer, 1992).

#### METHODOLOGY

The basis of our methodology is grounded in a specific type of case study method, the instrumental case study, which is best for using a case (e.g. UCSB) to answer an external, theoretical question (e.g. what factors influence decision making at American public universities?). Admittedly, there are limitations to the case study method, but there are definite advantages to using this qualitative approach for the purpose of our study. In selecting a design for our case study, we found explanatory case studies are well suited for evaluating casual relationships, an advantage of the qualitative approach. An explanatory case study design, therefore, is ideal for our project’s objectives of exposing the generalizable factors determining the outcome of GHG-related policy decisions at American public universities and guiding other like-minded groups down a more effective and efficient pathway. Outlined below are the general steps we followed in acquiring information, collecting data, constructing our analysis, deriving our conclusions, and constructing our recommendations:

- I. Discussed means to evaluate decision making at UCSB and chose the case study method
- II. Selected three theoretical models for evaluating the decision-making process
- III. Pooled campus decisions and selected the three decisions involving GHGs
- IV. Conducted initial research by communicating with players identified by their status or position on campus as well as contacts identified by CCN I
- V. Gathered information by interviewing key players involved with each decision, informally discussed the decisions with faculty and staff, and reviewed available documents
- VI. Separated the decision-making process of each decision into three general phases and identified the components at each stage highlighted by our theoretical lenses
- VII. Tabulated our findings into a matrix including all three decisions on the x-axis and the characteristics of each lens along the y-axis and then weighted the relative importance of each characteristic in all three decisions through a color scheme
- VIII. Evaluated the collective importance of each characteristic by examining its presence or absence in each decision and, if present, its relative weight
- IX. Developed recommendations from these conclusions

Acquiring information began in the Spring of 2006 with the reviewing of CCN I's analysis and open communication between CCN I and our team. Because of CCN I's experience and findings, we had a solid understanding of not only UCSB's GHG emissions, but also the challenges, bright spots, and "way things work" at UCSB. To get a better understanding of CCN I's stepping-off point, please reference CCN I's report (<http://www.bren.ucsb.edu/research/documents/CCNThesis.pdf>). CCN I's information, experience, contacts, and tactfully-built relationships provided for a relatively seamless passing of the project baton.

Selecting our models and GHG-related campus decisions occurred in concert during the Fall of 2006. Chapter 1 contained a description of the selected models. To identify our decisions, we initially contacted various campus staff and inquired about policies approved and dismissed. From this field of "decisions," filtering out the policies not related to GHG emissions narrowed this group down to the three "decisions," including 1) deciding on CCN I's recommendations, 2) approving LEED Silver, and 3) approving LEED Portfolio. The University has approved the latter two decisions; the outcome of the first is pending. We would have preferred including the analysis of a policy that was dismissed, but we could not find such an example.<sup>5</sup>

After selecting our decisions, each group member gathered information about one of the three decision-making processes. The beginning of the research included contacting university staff and researching campus documents such as UC policies, minutes from

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<sup>5</sup> This may speak to the fact that many policy ideas and proposals at universities are weeded out before they ever reach a decision making body.

various committee meetings (e.g. the CPC), and related documents. From our initial research into each decision, we became aware of who was involved in the decision-making processes as well as who would “do the work” of the proposed policy— the functional unit. Once these players and groups were identified, we contacted them directly and set up interviews. We also continued our document research.

We conducted semistandardized interviews in person, through email, and over the phone from November 2006 through February 2007. A question template was constructed and followed loosely during the in-person and over the phone interviews (see Appendix C). The interview template was not strictly followed, leaving room for new questions in order to converse more naturally with the interviewees and respond to their answers, adding additional contextual and background information. During email exchanges, questions were used from the template along with more specific questions aimed at filling in missing pieces of information. It is foolish to unequivocally proclaim our questioning was entirely unbiased; however, we strove to remain neutral throughout the development of the questions and during the interviews. The team was mindful of being objective during the gathering of information and interpreting the results.

Following the interviews, each group member drafted the “story” of each decision by referencing all the information gathered from the interviews and documents. What was included in each decision’s story was left up to the individual author and purposefully included only the information necessary to provide the reader with a general understanding of the evolution of the decision.

After writing the decision stories, each decision was evaluated for the presence and degree of influence of each characteristic of the three theoretical lenses. The results were compiled in a matrix including the decisions on the x-axis and each model’s characteristics on the y-axis. If the characteristic was present in the decision process, it was then given a relative weight depending on its degree of influence. In the CCN I decision, for example, there were champions present to push the initiative through the system. Therefore, the champion square in CCN I’s row was filled in with a dark (i.e. the most influential) blue. Once the matrix was completed, the lens characteristics filled in for all three decisions were considered to be the most significant in the decision-making process at UCSB. The matrix revealed the value of using more than one theoretical lens to explain a decision. In addition, placing our findings in the matrix helped clarify the influential factors not captured by our lenses. While the three lenses did not combine to explain every factor of decision making, they did identify key, influential factors in the decision-making process.

Following the analysis, we had many discussions regarding the significance and the generalizability of our findings. Regarding the weighted findings, we questioned what is absolutely necessary to push a policy from inception through implementation. Is there a necessary order of the findings? Furthermore, we considered the significance of the UC system on our findings and the potential differences in our results compared to a study at another American public university.

## CHAPTER 4: CCN I NARRATIVE AND ANALYSIS

In May 2006, CCN I presented their findings to the CPC illustrating how UCSB can reduce GHG emissions and save money. We follow the process of one of CCN I's recommendations—to make a commitment to reducing GHGs.

### NARRATIVE

#### **SETTING THE STAGE**

Because the background describing the development of the CCN I project is found in Chapter 1, we'll take a moment to provide the context of policy addressing GHG emissions at UCSB. Although the UC system and the Santa Barbara campus are taking and have taken actions regarding energy usage, especially in the past ten years, until 2004, neither the UC nor UCSB had instituted policies specifically targeting the reduction of GHG emissions. The first policy prescribing the reduction of GHG emissions was introduced as a part of a larger package—the UC's Green Building and Clean Energy Policy—and is standard language in LEED building initiatives.

#### **THE STORY**

As the project name implies, the original, long-term goal of our predecessors and the NAELS organization is leading UCSB and college campuses to climate neutrality—zero net GHG emissions. After CCN I's initial investigation into what actions would be required for UCSB to reach zero net GHG emissions—broadly, discretionary funds and new policy at the UC and/or UCSB levels—the practicality of this goal became less and less realistic to accomplish during the remainder of their project and resulted in a shift of objectives.<sup>6</sup>

The CCN I team realized the need for a more practical emissions target than zero net emissions. CCN I proof reader Bob Wilkinson suggested they demonstrate the feasibility of aligning UCSB with the State of California's targets of reducing GHG emissions to 2000 levels by 2010 and to 1990 levels by 2020.<sup>7</sup> CCN I determined this was a more feasible option and understood the importance of UCSB going along with current policy and not pushing the envelope. Because UCSB was already on track to reach to the 2010 benchmark through approved efficiency projects, CCN I decided to evaluate the viability of UCSB attaining the 2020 reduction target, climate neutrality, and one other point of reference—the Kyoto Protocol.

Next, the group conducted feasibility studies determining the costs associated with meeting these targets—the second tier State target, Kyoto, and climate neutrality.

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<sup>6</sup> CCN at UCSB was only supposed to last one year, but the discovery of severe budget constraints, the complex nature of university decision making, and the snail's pace at which organizations such as UCSB move revealed the need for an extension of the project; thus leading to CCN II.

<sup>7</sup> These targets were later approved as AB 32.

Starting with implementing zero capital cost initiatives followed by mechanisms resulting in the greatest NPV per GHG reduced, CCN I identified the means and costs of achieving all three targets. Their analyses revealed UCSB could meet the reduction targets with a NPV of \$2.4 million, \$5.7 million, and \$4.3 million dollars, respectively. After conducting their analyses and concluding UCSB could reduce GHG emissions and save money, the group prepared to share their findings with key campus administrators.

The CCN I team first presented their GHG reduction analysis to Marc Fisher,<sup>8</sup> Associate Vice Chancellor of Campus Design & Facilities, and, with his support, the group then presented to Chancellor Yang; EVC Lucas; and Todd Lee, Assistant Chancellor of Budget and Planning. Chancellor Yang seemed generally interested in the findings; he communicated that any campus policy, such as addressing GHG emissions, would have to come through the recommendation of the CPC and suggested the group present to the Subcommittee on Sustainability—a group created to make recommendations to the CPC regarding the Long Range Development Plan (LRDP).<sup>9,10</sup> In addition, Lee stated it is often easier to put together packages of projects, making the financial analysis more attractive (Lee interview, 2006). This may imply the difficulty of getting the funding for any single initiative and lend credence to including GHG reduction mechanisms as a part of a larger package addressing energy efficiency.

Their analyses revealed UCSB could meet the reduction targets with a NPV of \$2.4 million, \$5.7 million, and \$4.3 million dollars, respectively.

In April of 2006, CCN I presented their findings to various members of the CPC's Subcommittee on Sustainability, including Fisher, Jonathan Cook (Associate Director, Physical Facilities), Roland Geyer (Assistant Professor, Bren), Martie Levy (ex officio member; Director of Capital Development, Budget & Planning), Lovegreen, Jim Reichman (Professor, Ecology, Evolution, and Marine Biology), Mark Rousseau (Energy & Environmental Manager, Housing & Residential Services), Bruce Tiffney (Dean, College of Creative Studies), Mark Weeks (graduate student, Bren), Kelly Burns (undergraduate student), and staff members Perrin Pellegrin (Sustainability Manager, Physical Facilities) and Shari Hammond (Senior Planner, Campus Planning & Design). After their presentation, Fisher commented he was unsure about firmly committing to the second California target, but suggested CCN I present their findings to the CPC and the Subcommittee members present did not object.

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<sup>8</sup> Fisher is one of the contacts made during CCN I's GHG emissions analysis. He is also the co-chair of the Design and Review Committee (DRC), a member of the CPC, and the chair of the CPC Subcommittee on Sustainability.

<sup>9</sup> As a part of policy, before presenting to the CPC, an individual or group must be supported by one of the 25 members of the CPC; each member represents a campus community. The CPC is a dictated list of campus stakeholders, including seven faculty members among the sixteen voting constituents, the chair of the Academic Senate, and the EVC. Incidentally, Fisher stated that one of his three reasons for supporting CCN I was that Chancellor Yang "was interested" in the CCN I project (Fisher interview, 2006).

<sup>10</sup> The LRDP is a document completed every 15 years or so, required by the UC to serve as a planning guide, directing the growth of UC campuses.

In May 2006, CCN I presented to the CPC and received both substantiation and skepticism from committee members. The support came from Joel Michaelsen, Chair of the Academic Senate and Professor of Geography, who explained some climate change concepts, and from Matt Tirrell, Dean of the College of Engineering, who commented UCSB has an opportunity to be a leader in combating climate change. Ultimately, the CPC decided any policy addressing GHGs should be included in UCSB's Sustainability Plan, currently being drafted by the CPC Subcommittee on Sustainability.

Back in the Summer of 2004, the Associated Students Environmental Affairs Board (EAB), assisted by staff, had recommended to Chancellor Yang that a sustainability plan be included in the next LRDP.<sup>11</sup> As a result, in 2005 the Chancellor asked the CPC to create a Subcommittee on Sustainability.<sup>12</sup> Once formed, the Subcommittee hired consultants to lead the development of an inclusive plan, representative of different campus interests. In the Fall of 2005, 75 campus "change agents"—faculty, staff, and students—were organized into nine different working groups and developed different sections of the Sustainability Plan. The current plan is a working document produced by the collaborative efforts of the working groups and additional meetings during the 2005-2006 and into the 2006-2007 school years.

One of the nine working groups of the Subcommittee on Sustainability was the Energy group: Jim Dewey (Associate Director of Energy and Utilities, Physical Facilities, UCSB), Ryan Schauland (Sustainability and Energy Coordinator, Physical Facilities), Lovegreen, Rousseau, and Gary Lawrence (Associate Director, University Center and Events Center). The vision statement of the Energy Group is the following: "We will work to reduce the use of non-renewable energy consumption on campus, through energy conservation and strategic procurement of energy resources, until our campus can accomplish its mission independent of non-renewable energy sources" (Dewey interview, 2007). In addition, the Energy group developed two complementary goals of reducing GHG emissions to 2000 levels by 2010 and further reducing GHG emissions to 1990 levels by 2020.

The Subcommittee on Sustainability presented the Sustainability Plan during the CPC meeting in December 2006 for the first time. Members of the CPC asked questions and raised concerns about the Plan, but they were primarily apprehensive about the section of the plan dedicated to establishing an "Office of Sustainability" and funding (Fisher interview, 2006). Even though the objectives in the energy section seem aggressive (zero net emissions in the next 20 years) and are different from the initial draft, the language of

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<sup>11</sup> The most recent LRDP for UCSB was completed in 1991 and the next LRDP will be submitted to the UC Regents in the Spring of 2008. The LRDC focuses on land issues and is developed to publicly show growth can happen without additional or minimal impacts on the environment.

<sup>12</sup> Before the Chancellor formally requested the CPC create a subcommittee, a working group was formed to develop indicators of a sustainable campus.



the energy section of the Sustainability Plan did not receive any comments from the members of the CPC.

Following the December CPC meeting, the Sustainability Plan was returned to the Subcommittee on Sustainability for revisions. The Sustainability Plan was reviewed by Cook, change agents, all Subcommittee on Sustainability members, and the chair, Fisher. The revisions of the Sustainability Plan are complete and the staff report will be presented at the April CPC meeting and then a “vote” (consensus reading) to approve or reject the plan is scheduled for May 2007

### **THE OUTCOME**

The outcome of the CCN I decision is pending at the publication of this study.

## ANALYSIS

### **APPLICATION OF LENS I: PLURALISM**

Several processes characteristic of the flat decision-making structure influenced the life cycle of the recommendation made by CCN I. Imagining a scenario without the participation of multiple constituencies, ad hoc committees, or champions, it is easy to conclude that answering the question regarding *why* policies are or are not selected is affected by the configuration of the organization. For example, a pyramid, or hierarchical, model delegates the decision-making power to the senior administration, essentially surrendering the power of the governed to the administration. In a pyramid structure, the answer to *why* a specific decision was made centers around one individual or a small group of individuals. In a decentralized structure, on the other hand, this question is dependent on the roles, rules, regulations, constraints, relationships, and players within the organization.

### **Multiple Stakeholders**

A decentralized structure often implements the use of ad hoc campus committees, teams, and working groups involving members from different stakeholder groups that develop and evaluate policies. Forming committees and groups that guide policies accomplishes multiple objectives of the flat structure and, in university culture, including the following:

1. Involving different stakeholder groups helps secure campuswide buy-in. In the case of CCN I's recommendation, faculty, administration, and students all participated at various stages. In addition, the CPC includes members from all three campus sectors, including the Graduate Student Association (GSA) president.<sup>13</sup>
2. Forming an open entry committee (a non-selective committee allowing anyone willing to participate) shields the president and administrators from criticism later down the road regarding claims of exclusion. The Subcommittee on Sustainability (the 75-member group developing the Sustainability Plan) was open to anyone and

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<sup>13</sup> Incidentally, she usually does not participate in the CPC meetings, yet she is the lone representative for UCSB's graduate students on a 25-member steering committee.

everyone on campus who wanted to participate. Originally, campus administrators estimated and planned for a group size around 50, but more people wanted to participate and were accommodated (Fisher interview, 2006).

3. Taking such action follows the expected processes in the collegiate culture.
4. Forming committees and groups legitimizes the process. The appearance of legitimacy in decision making shields the president from criticism in a decentralized structure.

### **Champions**

The inclusion of members from various parts of campus in decision making, a characteristic of the decentralized structure, led to arguably the most influential contribution to the inclusion of the secondary California emission target in the Sustainability Plan. Because participation in the decision-making process allowed for interested people throughout campus to contribute to the Sustainability Plan, someone motivated by their own convictions had the opportunity to support and drive the effort of reducing UCSB's production of GHGs. If the process was exclusive, an interested stakeholder wouldn't have the opportunity to participate and influence the outcome.

### **Coalitions**

Securing the involvement and support, whether explicit or implied, of multiple campus constituencies played a role in the general progression and eventual inclusion of the GHG reduction targets into the Sustainability Plan. Setting the goal of meeting the 2020 targets had active support from CCN I and passive support (at the least, the students participated and didn't object to the energy goals of reducing GHG emissions) from the students participating in drafting the Sustainability Plan. This initial support, arising from the diverse group of 75 through the drafting of the Sustainability Plan, pushed for setting a GHG reduction target in the final draft submitted to the CPC. The issue of GHG reduction came back to the CPC with wide campus backing. Without the broad-based support from or involvement of the Energy group, it is conceivable the issue would have been abandoned and potentially never revisited by the CPC.

Building coalitions and involving multiple constituencies are united by the concept of parallel networking. Parallel networking is the concurrent informing and coalition building of the different campus constituents. CCN I met with many people at various levels in the organization including, the functional group (i.e. the people who will do the work if the policy is passed), vice chancellors, Facilities managers, staff, students, the EVC, and the Chancellor. While preparing their presentation for campus administration they were working with other students to organize the support of The Green Initiative Fund.<sup>14</sup> Pushing the issue and organizing with different stakeholders (i.e. building coalitions) appeared to grease the informal pathway from an idea to a formal decision "input" and helped unify different people and groups on campus.

Parallel networking is the concurrent informing and coalition building of the different campus constituents.

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<sup>14</sup> The Green Initiative Fund (TGIF) is fund approved by graduate and undergraduate students supporting water and energy efficiency programs on campus. TGIF is funded by a quarterly student fee.

Examining the CCN I decision through the lens of a decentralized decision-making structure brings to light the importance and influence of coalition building, parallel networking, and champions. Furthermore, the pluralism model confirms the opportunities for those being governed in a decentralized system to govern themselves by participating in campus committees and groups. Accessing the campus decision-making process by initially pushing several trigger points, energizing the cause by identifying champions, and sustaining the cause by building coalitions, seem to be key ingredients in moving an initiative through the decision-making process. Within this context, timing is everything. The issue must be important enough to garner attention from the campus community and the political environment must be right for the university to act. The shortest path to university action is involving all of the campus stakeholder groups; the administration in a flat-decision structure must respond to a diversified collection of stakeholders. While this model does not explain the CCN I outcome in its entirety, it does shed light on *how* issues become decision “inputs” and *how* the structure of the decision-making process affects the “output.”

#### **APPLICATION OF LENS II: BUREAUCRATIC POLITICS**

Within the black box that is decision making there are rules, roles, regulations, and standardized procedures. The second analysis of the CCN I decision applies Model II to the story and sifts out the results attributable to the formal constraints and operating conditions of the bureaucracy.

#### **Hierarchical Decision Structure**

*Who* is in the bureaucracy makes a difference. Unlike some have suggested, actors in bureaucracies are not robots, or at least not all of them all of the time. As stated in the literature review, Downs (1967) and March & Simon (1958) both communicate that *who* is in the bureau—the individuals filling the roles—influence the traits, behaviors, and values of the organization. An example of the importance of individual players occupying the roles of the bureaucracy traces back to CCN I’s initial presentation of their findings. Fisher did not brush off CCN I’s presentation and supported the group presenting to the Chancellor and to the CPC. If the person in this role opposed the suggestions of the students, the group may have not made it as far.

#### **High Emphasis on Process**

Chancellor Yang requested the formation of the Subcommittee on Sustainability to draft the Sustainability Plan, which would inform the LRDC. This approach may appear inefficient because it emphasizes process over product; however, a process-oriented approach often results in buy-in from constituent groups. As Eckel and Kezar (2006) state, a university president is more concerned with *how* a decision was made than *what* decision was made. In other words, the president is primarily concerned with process rather than results. From a chancellor’s perspective, managing this process helps ensure the course of action leading to a decision was legitimate.

As Eckel and Kezar (2006) state, a university president is more concerned with *how* a decision was made as opposed to *what* decision was made.

And, in turn, if the process is legitimate, then the action the chancellor takes is defensible.

Yang's recommendation that the group present to the CPC and his statement suggesting policies directed toward GHG emissions should be part of the larger set of recommendations made by the CPC, is a classic illustration of the standard operating procedures inherent in bureaucracies. His response confirms the idea that chancellors are focused on process. All major campus capital and land-use initiatives pass through the CPC and, if supported by the consensus, are proposed to the Chancellor as recommendations. As Meta Clow, Campus Policy and Records Management Coordinator, and others have suggested, because Yang is a strong proponent of shared governance, he would most likely never pass a measure that was not supported by the CPC (Clow interview, 2006). In fact, if the Academic Senate did not support the CPC's recommendation or a few, vocal, senior faculty members didn't support the recommendation, Yang would most likely not back the proposed initiative and suggest continuing the consultation process (Levy interview, 2006).

### **Path Dependence**

There was no evidence of path dependence in the CCN I decision.

### **Risk Aversion**

In reviewing the process of CCN I's recommendations to the CPC, there is no direct evidence of risk aversion by the bureaucracy. It will be interesting, however, to note Chancellor Yang's response to the GHG emission targets included in the Sustainability Plan. Even though the political temperature of the issue is heating up, specifically addressing climate change in university policy may be too contentious because controversy may result from UCSB going out ahead of State and UCOP policy, a form of risky behavior. In the sense that doing something controversial might be an exposure to criticism and this exposure is a risk, the University may avoid the potential condemnation by stalling until UCSB is behind the political wake as opposed to creating the wake.

Although it is likely the Sustainability Plan will include GHG emission goals, it is likely Chancellor Yang will check with UCOP on an issue such as global warming. Yang is bound by appearing too radical if the school moves ahead of UC and the State of California and by setting a precedent other UC campuses cannot reach.

### **APPLICATION OF LENS III: EXTERNAL PRESSURES**

Applying external constraints—financial, societal, political, and/or governmental—to the outcome of the CCN I recommendation helps us understand how outside forces influence decision making. The clear external forces working on UCSB are the policies of and oversight by UCOP and funding from both UCOP and the State. What may not be so clear are the influential layers beneath the surface of outright oversight and the extent of the financial constraints limiting policy options at UCSB.

### **Influence of the System Structure**

The constraints imposed on the University by UCOP and the State of California regarding GHGs are another factor affecting this decision-making process. The UC as a system is sensitive to putting itself ahead of State policy. Although the State approved AB 32, committing to climate neutrality is a more radical step. Through our interviews we learned there is an unwritten rule that requires individual campuses to check with UCOP concerning policies that may affect the all campuses. For example, the UCOP wouldn't allow different affirmative action policies at the different campuses or different pay scales. UCSB may be reticent to firmly commit to climate neutrality because this would set a precedent for other UC campuses.

### **Budgetary Constraints**

The funding of UCSB is not, obviously, limitless. Creative funding mechanisms have been used to overcome the constraints of the current budget situation. Energy related projects that result in future operating cost savings have been paid by using funding set aside for other projects. The key to doing this is a short payback period that allows the funds to be used for the original project. A general rule of thumb is that projects must show a payback period of less than seven years. Most of the selected projects, however, have a payback period between three and five years (Lee interview, 2006). Because UCSB sometimes takes out an internal loan—funding set aside for other projects—the project must provide an ironclad, short payback period. If a project takes longer than the preferred three to five years, it can be bundled with other projects that have a short payback period to lower the average payback to an acceptable length. CCN I's presentation to Lee and others did not explicitly contain the payback period. When considering policies, both Lucas and Lee also stated there must be a complete analysis, including costs no matter how minor. CCN I did not admit to any costs other than capital costs during their presentation.

### **Public Relations**

There was no evidence of direct external private and social constraints on the CCN I decision. With that said, social conditions are currently ripe to implement policies regarding GHG emissions. Certainly, a policy to reduce GHG emissions proposed ten years ago would have gone nowhere. It is clear that timing plays a role in prioritizing issues. UCSB recently launched its “UCSB Reads” campaign centered on global warming. It will be interesting to follow the remainder of the decision-making process because there might be more clear examples of social influences on the CCN I decision. In addition, the culture and values of the school influence what policies are considered and approved. Lucas sums up this concept by saying upper administrators, when considering policy, look at whether or not the philosophy embedded in the policy “jives” with the campus philosophy (Lucas interview, 2006).

## CHAPTER 5: LEED SILVER NARRATIVE AND ANALYSIS

In February 2004, Chancellor Yang approved a policy calling for UCSB to establish the LEED Silver standard for all new buildings beginning July 1, 2004.

### NARRATIVE

#### **SETTING THE STAGE**

In April 2002, the U.S. Green Building Council (USGBC) assigned Bren Hall the highest LEED rating: Platinum. Bren Hall was the first Platinum laboratory building in the UC system. Lovegreen, then Assistant Dean at Bren, worked closely with contractors to implement innovative constructive practices, such as a reclaimed water system for toilets and building positioning to maximize natural light. More importantly, Lovegreen preformed a cost-benefit analysis, showing that a building could achieve LEED standards at no great increase in cost if the standards were incorporated into the contractor's original design (Lovegreen interview, 2006).

A few months after Bren Hall's completion, students organized the "UC Go Solar" campaign, and started placing pressure on the UC Regents<sup>15</sup> to adopt a UC-wide green energy policy. Greenpeace helped to organize the students as part of their "Clean Energy Now" campaign, and provided technical and organizational support to the student activists (St Clair interview, 2006). This was in line with the students' belief that the UC system needed a policy emphasizing the interrelated elements of buildings and energy. The policy's energy piece aimed to minimize a predicted net increase in campus fossil fuel consumption. The building portion would require all new and significantly renovated buildings in the UC system to obtain LEED-equivalent standards, and strive towards LEED Silver or better—a policy that would put UC at the head of the national collegiate system in the building and energy field. The student-formed California Student Sustainability Coalition (CSSC) pressured the UCOP by lobbying legislative officials and organizing letter writing campaigns and call-in days directed to UCOP (France interview, 2006). Individuals in UCOP responded to the pressure and discussed whether to require a LEED or a LEED-equivalent standard, as well as the feasibility of implementing such standards (Pernsteiner interview, 2006).

The students pressured the UCOP by lobbying legislative officials, forming a statewide California School Sustainability Committee (CSSC), and organizing letter writing campaigns and call-in days directed to UCOP (France interview, 2006).

At UCSB, the concept of sustainability was becoming widespread. Many at UCSB thought sustainability could, and should, become part of the University's culture, making

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<sup>15</sup> The University of California is governed by The Regents, a 26-member board, as established under Article IX, Section 9 of the California Constitution. The board appoints the President of the University and the principal officers of The Regents: the General Counsel, the Treasurer, and the Secretary.

sustainability second nature on the campus (Pernsteiner interview, 2006). LEED Silver was considered a tool to galvanize efforts in this direction (Pernsteiner interview, 2006).

Fisher knew UCSB's unique location had a lot to offer, including plenty of solar energy, ocean cooling, and sloped ocean-side land (Pernsteiner interview, 2006). Instead of considering the campus as separate from its environment, Fisher and George Pernsteiner (then Vice Chancellor of Administrative Services) were shifting the paradigm toward working with the natural environment in a mutually beneficial way (Pernsteiner interview, 2006).



Bren Hall, the first LEED Platinum building in the UC System  
(Courtesy of Marie-Claire Munnelly)

The success of Bren Hall, the brewing UC policy, and a shared sustainability vision for UCSB were all factors that caused Lovegreen to form the UCSB Central Campus Sustainability Committee (CCSC), which is no longer in existence (Pellegrin interview, 2006). Pernsteiner pushed for the emerging UC policy that would require all new UC buildings to achieve LEED certified or equivalent ratings, and proposed that UCSB go a step beyond and achieve LEED Silver standards (Lovegreen interview, 2006).

The resulting process, which was ultimately successful, took a little over a year, and involved Facilities, administration, students, faculty, vice chancellors, and the Chancellor.

## THE STORY

Many actors played roles in the LEED Silver process. From senior faculty to staff, many in the UCSB community showed their support for LEED Silver not only as a wise growth decision, but also as the right thing to do (Pernsteiner interview, 2006).

Lovegreen remained involved and interested after moving from the Bren School to the Geography Department. She knew that buildings besides the Bren School could also achieve LEED or similar standards, and her experience and number crunching proved it.

Pernsteiner was another important player with a green vision for UCSB, believing that the university could be modeled sustainably to cater to its natural environment (Lovegreen interview, 2006).

Pellegrin was (and is) responsible for ensuring LEED certification for new or significantly renovated buildings. She also worked with USGBC to develop a LEED point rating system for both types of building, which made the concept of LEED certification more practical for the UCSB campus and others (Pernsteiner interview, 2006).

David Gonzalez, then Assistant Vice Chancellor of Physical Facilities, was very committed to and interested in sustainable practices he and his staff could implement. Gonzalez always recognized LEED certification as an opportunity rather than a financial burden (Pernsteiner interview, 2006).

Gonzalez always recognized LEED certification as an opportunity rather than a financial burden (Pernsteiner interview, 2006).

Student and staff interest in a LEED Silver policy was also strong. A few years earlier, student Adam Garcia served on the EAB, introducing the vision of UCSB achieving LEED Silver for all new buildings. Garcia shared this vision with then UCSB Facilities design-builder Emilio Casanueva (France interview, 2006). Though Garcia had graduated and Casanueva had left UCSB by the time the campus LEED Silver movement was fully underway, they showed a desire for LEED Silver that became incorporated as an aspiration in the institutional memory of the student-led EAB (France interview, 2006). The UC-wide student campaign for the Green Building and Clean Energy Policy also helped to reinforce the idea, and led to the formation of a UCSB CSSC group (France interview, 2006).

Lovegreen (staff), Pellegrin (Facilities), Pernsteiner (administration), and Gonzalez (Facilities) also sensed the momentum building behind the UCOP Green Building and Clean Energy Policy. They also knew they needed an organized effort to have UCSB commit to something above and beyond the UC standard of achieving LEED for all new buildings (Lovegreen interview, 2006). To create an organized effort, Lovegreen formed a working group, called the Central Campus Sustainability Committee (CCSC). Many informal meetings occurred among the CCSC, students, and administration (Pellegrin interview, 2006). Committee members also met with CPC members, the



Chancellor, vice chancellors, other senior administrators, and faculty to gain much needed support (France interview, 2006). Pernsteiner also raised the proposed policy at weekly UCSB senior officer meetings (Pernsteiner interview, 2006).

Students also met with the Chancellor Yang, representing the student desire for UCSB to be a leader in the green movement. The students considered the university a Petri dish (living lab), producing future leaders, change, and social movements (France interview, 2006). Students also organized a UCSB letter campaign and gained media support from the campus and city newspapers.<sup>16</sup> Utilizing the media, the students strategically thanked the administration in advance for their support and leadership in achieving the LEED Silver policy, even though the administration had not technically decided on the policy yet (France interview, 2006).

The combined efforts of the CCSC and students resulted in adoption of the UCSB LEED Silver policy in February 2004. Its many benefits included credit for much work already in progress (Pernsteiner interview, 2006). Achieving LEED Silver was also relatively easy, since existing UCSB infrastructure is already very close to achieving LEED Silver, and it would take only a little extra effort, ranging from maximizing natural light to using recycled materials to meet the standard. This helped key figures, such as senior faculty member, and chair of the Academic Senate, Joel Michaelsen, push for implementation. Michaelsen understood the feasibility of achieving LEED Silver and became a strong proponent for it in the CPC. The CCSC also emphasized implementation benefits to project sponsors (funders), making it clear that LEED Silver standards would require minimal effort on their part, and that by doing “X, Y, and Z” they wouldn’t go over budget (Pernsteiner interview, 2006).

Another selling point of the LEED Silver policy was that a pilot project had already been completed, in-house (Lovegreen interview, 2006). The success of platinum-rated Bren Hall erased most doubts about feasibility and risk. “The field was already plowed and sowed” (Pernsteiner interview, 2006). The Bren construction process got people conversant in LEED terminology, helping the CPC become familiar with, and develop an understanding of, LEED (Pernsteiner interview, 2006).

The CCSC represented all parts of campus, including Gonzalez (Facilities), Lovegreen (staff), Pellegrin (Facilities), and Pernsteiner (administration), as well as academic and Bren representatives (Lovegreen interview, 2006). The campuswide involvement resulted in campus and UC systemwide recognition and understanding of the importance of green building as a step toward sustainability. The broad participation also reflected a general level of acceptance by senior faculty and administrators who saw sustainability dropping naturally into coffee break talk (Pernsteiner interview, 2006).

Of course, many decisions involve evaluating costs, and the LEED Silver decision was no different. Bren Hall showed that LEED Silver (or additional levels) could be achieved

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<sup>16</sup> UCSB’s *Daily Nexus* and the *Santa Barbara News-Press* provided media support.

without extensive additional construction costs if the LEED rating requirement was specified in the programming phase (Pellegrin interview, 2006). LEED Silver could potentially even save money on energy costs (Pernsteiner interview, 2006). The recent energy crisis and the Enron scandal were fresh in everyone's minds, and caused them to look beyond current energy use and consider the future. Green energy offered a path to follow towards cheaper and cleaner energy generation (Pernsteiner Interview, 2006).

Lastly, Chancellor Yang was inclined to encourage recognition for UCSB doing something good. Yang knew a LEED Silver commitment would bring a lot of positive media (Pernsteiner interview, 2006). He discussed the LEED Silver policy with the Regents, faculty, and vice chancellors. The CCSC inspired Chancellor Yang to feel, "We can keep this going!" (Pernsteiner interview, 2006). The University built Bren Hall, even with all the complications of laboratory requirements, so the obvious next step was LEED Silver for all new buildings (Lovegreen interview, 2006).

The CCSC discussed all the above mentioned points when meeting with CPC members, other administrators, and faculty. The CCSC and students knew it was incredibly important to bring the CPC on board with any issue like the LEED Silver policy (France interview, 2006). CPC approval of the policy would enable the CCSC to convince deans and department heads to participate: since they could promote simple trade-offs to their department, such as changing materials or using less square footage to gain energy efficiency (Pernsteiner interview, 2006).

Fisher was the UCSB representative at the UCOP level for the Green Building and Clean Energy Policy decision process. Students were represented through the CSSC, which included students from UCSB (France interview, 2006). The CSSC kept up momentum through conference calls, initiated by Arthur Colstead (CSSC staff). Colstead is considered by many students to be the driving force that kept the systemwide campaign alive (France interview, 2006). In addition to Greenpeace, the students involved in the campaign formed a new systemwide student organization called the California Student Sustainability Coalition, which continued to advocate for sustainability actions in the UC even after they succeeded with the UC Go Solar campaign (St Clair interview, 2006).

Fisher was also communicating with Christine Ervin of USGBC about counting the use of UCSB location and existing practices as points towards LEED ratings, increasing feasibility (Pernsteiner interview, 2006). Fisher, Ervin, and Pellegrin, worked on establishing a baseline that would automatically grant new UCSB building projects at least 2/3 of the points needed to achieve Silver or a higher rating (Pernsteiner interview, 2006).

To move the LEED policy forward, CCSC had to present it to the CPC. At CPC's November 2003 meeting, Bren Professor Jeff Dozier outlined the dangers of GHGs and how LEED Silver at UCSB just made sense (Lovegreen interview, 2006). The CPC agreed to send the policy on to the Office of Budget and Planning, where Levy developed a draft report to determine economic feasibility. The CPC agreed to vote on

the LEED Silver policy in their next meeting, in December. The CCSC decided Pernsteiner, who was a member of CPC and respected in the administrative world, would present Levy's draft in the CPC meeting (Lovegreen interview, 2006). The students rallied support and packed the CPC meeting room with students, pressuring the CPC to vote yes and show the policy was not only in the faculty and administration's best interest, but also the students' (France interview, 2006). The CPC voted unanimously to approve the LEED Silver policy, but suggested revisions to the proposal before it was given to the Chancellor. The CCSC took on the task of revision since Lovegreen had experience in crafting institutional language (Lovegreen interview, 2006).

Yang received the revised proposal shortly after the CPC vote and consulted with all other UC chancellors as well as vice chancellors at UCSB. Yang was cautious, not wanting to set a firm precedent on requiring LEED Silver for all new buildings as the other campuses had no experience with LEED and had climatic challenges. He was concerned it could negatively affect the other universities (Lovegreen interview, 2006).

Yang decided to use the policy language asking UCSB to *strive* to achieve LEED Silver for all new UCSB buildings beginning construction after July 1, 2004, and announced the policy in February 2004. This allowed flexibility for other universities, and also allowed UCSB to make a policy statement. For all buildings already being constructed, it was up to Pellegrin to ensure these buildings were as LEED-friendly as possible (Pellegrin interview, 2006).

### **THE OUTCOME**

The new UCSB LEED Silver policy decision was communicated through a variety of avenues. First, a few campuswide memos were sent out, a typical method for informing the campus of a new policy. Second, letters went out to all deans and chairs. Third, the faculty and staff newspaper, *93106*, published a story on the decision (Pernsteiner interview, 2006). Finally, the policy was mentioned as a new standard at meetings and internal planning workshops. All of these avenues had people talking about LEED Silver until it became part of the UCSB background, and eventually culture (Pernsteiner interview, 2006).

To date, two buildings have been planned incorporating the LEED Silver standard, and architects are becoming accustomed to the idea. UCOP passed the Green Building and Clean Energy Policy in July 2003. The policy asks UC schools to achieve LEED-equivalency for all new buildings. UCSB chose to continue using the official LEED rating system, versus an equivalent, and is recognized today as being a LEED leader in the UC system.

### **ANALYSIS**

#### **APPLICATION OF LENS I: PLURALISM**

##### **Multiple Stakeholders**

The CCSC reached out to many different groups on campus.

Lovegreen and Pernsteiner framed the policy to administration as a long-term cost incentive with minimal risk. Plus, it made the university (and thus the administration) look good (Pernsteiner interview, 2006). The administration, however, was not the only player in this decision game. Senior faculty believed the policy to be a step towards achieving a sustainable culture at UCSB. The Silver policy could incorporate sustainability into daily parlance and mores, which they believed was necessary as well as a great thing for the university (Pernsteiner interview, 2006). Students believed the policy demanded the university act its role of training future leaders and problem-solvers. The students believed UCSB needed to push the envelope and take the lead in green building, training the leaders of tomorrow with the groundbreaking ideas of today.

The support of all these constituencies allowed for the success of the Silver policy. Administration, faculty, and staff are all represented in the CPC. The Chancellor listens to the recommendations of the CPC, and both listen to the voice of the students. Pernsteiner expressed the importance of gaining CPC support: “The CPC is important to get on board because if we put the policy forth as ‘strive to achieve LEED Silver as a practice’ the CPC could convince departments to take actions to help make LEED Silver possible in their new buildings, such as decreasing square footage to gain energy efficiency or substituting materials. “Here at UCSB the administration listens to the faculty” (Pernsteiner interview, 2006). The campus is a network of different constituencies, and having them all intoned to a policy makes the policy very strong.

### **Champions**

In order for any policy to gain real momentum and support, a champion often pushes the decision toward success. In LEED Silver, both Lovegreen and Pernsteiner proved to be the champions. Although the idea was Lovegreen’s, Pernsteiner took equal ownership, and both were determined to follow the Silver policy through. Both Lovegreen and Pernsteiner were aware of the wide support they needed to gain, and took the initiative to meet with as many players as possible. As Pernsteiner stated, “Outside of CPC, we met with senior administrators and senior faculty. We also met with the Chancellor and the vice chancellors. We also mentioned [the policy] at the weekly executive officer meetings... “It’s like a political campaign. You have to work a lot of different constituencies before calling the question” (Pernsteiner interview, 2006).

Pernsteiner and Lovegreen championed the issue and got campus-wide support. They met with Dozier, as well as faculty all across campus, to familiarize them with the Silver issue. Michaelsen, senior faculty who was also the chair of the Academic Senate, was an important faculty representative to get on board. Pernsteiner and Lovegreen met with administration, which ended up supporting the policy, for not only did they have the incentive of cutting long-term costs, but they could also get bragging rights. The LEED Silver decision would make the university look good. Who doesn’t like that? Staff was also supportive and vocal. Gonzalez and Pellegrin knew that LEED Silver was a great opportunity for energy efficiency and a greener future that did not necessarily have to come with an exuberant price tag. Gonzalez and Pellegrin were the experts, and since Gonzalez was one of the main people doing this work on the field, the staff support

carried weight. Lastly, students were a huge constituency that made the decision possible. Some students were involved in the UCOP policy decision, and were simultaneously lobbying UCSB administration and others to commit to LEED Silver on our campus. Students, who organized to form a local CSSC, lobbied vice chancellors, Pellegrin, Lovegreen, Pernsteiner, and even the Chancellor—twice. The students strategically wrote letters to the newspapers, thanking the administration for passing the policy (even though they had not decided yet). The students packed the CPC meeting for the day of the vote, showing that this was an issue that they felt very strongly about.

### **Coalitions**

The CCSC was a broad coalition. The CSSC consisted of administration and staff, and the communication between these two groups was essential. Knowing what each others' actions and intentions were was a crucial part of the Silver process. The strong administrative front of Pernsteiner and Fisher, combined with staff, Pellegrin and Gonzalez, formed quite an impressive base of expertise.

## **APPLICATION OF LENS II: BUREAUCRATIC POLITICS**

### **Hierarchical Decision Structure**

A bureaucracy is made up of defined roles, making up a hierarchy. Who fills these roles is also important.

In LEED Silver, Lovegreen, a staff member, had been a player in the faculty and administrative realms on campus for over 20 years, and the campus community was familiar with her, not to mention her credible reputation. However, since Lovegreen was low on the decision-making hierarchy, it was necessary for her to get someone higher in the structure on board, which was Pernsteiner.

Pernsteiner, an administrator, was further up the hierarchy. Pernsteiner's department, Administrative Services, was responsible for all of the central administrative departments of the campus, including Campus Design and Facilities. Pernsteiner was a big driver for the LEED Silver policy, and he used his administrative pull to keep the proposal moving forward (Lovegreen interview, 2006). Pernsteiner was established and familiar with the administrative system, and knew what pieces of a puzzle were needed to make a new decision successful. Elements of success included policy language, who to get on board, and how to frame the issue. Pernsteiner wore two hats; in addition to his administrative position, Pernsteiner also was co-chair of the CPC, the committee that needed to approve the Silver policy. Pernsteiner's influence flowed over into the CPC. As a participant in both parties, Pernsteiner was an informed advocate who knew how to tweak the system to make change happen.

Fisher, as Associate Vice Chancellor for Campus Design & Facilities, was also high in the hierarchy, and all building issues fell under his departmentalized wing. If the Associate Vice Chancellor for Campus Design & Facilities wasn't behind it, then there is doubt to how far the decision may have gone. Fisher, however, was environmentally-minded and aware of the benefits of green policies, such as LEED Silver. Fisher not

only supported the decision, but also worked behind the scenes with the USGBC to ease the accreditation process for UCSB, along with Pellegrin of Facilities. Due to Fisher's expertise in the green building field, his opinions and advice were considered in a higher light than if the advice had come from someone who was not an expert (or personally interested for that matter).

Michaelsen was Chair of the Academic Senate, and supported the Silver proposal. Michaelsen pushed for the policy in CPC discussions, explaining the concept of GHGs and its direct relation to buildings and their emissions. The Academic Senate Chair is a very influential role, and if Michaelsen had no interest in the Silver decision and didn't help persuade the CPC, the outcome of the process could have been quite different.

An intermediate player was Levy, a staff member in the Capital Development Office. The mission of the Capital Development Office is to assist the campus in maximizing the utilization of its existing physical facilities and acquiring the physical resources necessary to meet its instruction, research and public service goals (<http://bap.ucsb.edu/>). Levy serves as a filter in the sense that she makes sure people have completed the necessary pre-CPC work: checked with the functional units and related departments and obtained the representation of one of the CPC members. Levy is a nonvoting member of the CPC but can still voice her opinion, since the next step, which is writing the staff report for the proposed decision, falls on her lap.

At the top of the University hierarchy is the Chancellor, who approved the decision to finalize it.

### **High Emphasis on Process**

Any proposed policy needs to go through a series of hoops. The tangled web of rules can be frustrating, intertwined with many SOPs. Lovegreen or Pernsteiner could not bring the proposal straight to the Chancellor; a series of steps needed to be completed first. Any decision involving campus buildings needs to obtain approval from the CPC. Lovegreen or Pernsteiner could not go straight to the CPC either. They need to gather data to show the costs and benefits of such a proposal, and draft a written proposal. Once the report was drafted, Lovegreen and Pernsteiner had to contact the CPC to get the Silver proposal on the agenda. Then, the proposal had to be emailed to all the members of the CPC committee, so they could, ideally, read it before the meeting. Next came the actual CPC meeting, where Dozier presented on the dangers of GHGs and the importance of LEED Silver for both its campus and global implications. The CPC then discussed the proposal and, despite some interpretative confusion, decided to send it to Levy in the Office of Budget and Planning. Levy prepared a staff report for the proposal, displaying the costs and benefits and other similar information, and emailed it to all CPC members. At the next monthly meeting, Pernsteiner presented the LEED Silver staff report and everyone seemed clear on what the new policy entailed.

The CPC voted yes and the policy needed to be revised before going to the Chancellor. Lovegreen, Pernsteiner, Pellegrin, and Gonzalez all revised the document and sent it to

the Chancellor. Chancellor Yang did not make the decision alone; he had to confer with other vice chancellors to make sure they also supported the policy. Yang also conferred with Chancellors in other UCs, getting their feedback and feeling out their reactions. Since Yang did not want to establish a LEED Silver precedent, he decided to stick to language similar to the UCOP policy, which stated that UCSB would “strive” to achieve LEED Silver (if “shall” was used, the policy would have been considered more forceful to other campuses). The Chancellor signed the policy in February 2004, and the policy came into effect in July 2004.

### **Path Dependence**

Lovegreen and Pernsteiner wisely framed the decision as a no-brainer. Not only would it take little additional effort on the part of architects, but it would also not cost more than other buildings going up. Implementing the LEED Silver policy would not be much more additional work than what UCSB was already doing. The policy deflected little off the course UCSB was already taking, which appeased people who may not favor radical change.

### **Risk Aversion**

Bren Hall served as a pilot project at UCSB. Lovegreen’s cost benefit analysis of Bren Hall showed achieving LEED standards (whether Silver or Platinum) could be done cost-effectively and did not involve financial risk (if incorporated into the contractor’s original building design). Bren Hall allowed the LEED Silver policy to be viewed as a continuance of an existing practice, versus an entire new shift in behavior and finances.

## **APPLICATION OF LENS III: EXTERNAL PRESSURES**

### **Influence of the System Structure**

The institutional climate at the time of the LEED Silver process was hot (Pellegrin interview, 2006). At the UCOP level, the Green Building and Clean Energy Policy was being discussed, and the momentum behind that policy gave life to the LEED Silver policy. Pernsteiner was pushing the policy as one that would make UCSB a LEED leader, and if the UCOP policy passed, then UCSB would be one step above what it required (it required only LEED-equivalent, not LEED certified). The discussions at UCOP formed the backdrop of the UCSB’s LEED Silver discussions, and the simultaneous timing benefited the pushers of LEED Silver (Pernsteiner interview, 2006).

UCSB is part of the UC system, so its actions can affect the actions of the other universities.

UCSB is part of the UC system, so its actions can affect the actions of the other universities. Yang did not want to set a firm precedent on requiring LEED Silver for all new buildings because he felt it could negatively affect the other universities (Lovegreen interview, 2006). Not all universities are created equal, and for some, LEED Silver was not familiar, or they lacked the LEED expertise present at UCSB. To ease the policy effect, Yang decided to use softer policy language, asking UCSB to strive to achieve LEED Silver for all new buildings, versus requiring all new buildings to achieve LEED Silver. Chancellor Yang’s

language prevented UCSB from setting a precedent and still allowed UCSB to make a policy statement.

### **Budgetary Constraints**

Another external influence that many think about immediately when it comes to change is money. As part of the UC system, UCSB receives its building capital in allocated building funds from UCOP. The UCOP's allocation is essentially the building's budget, and anything extra is the responsibility of the University. The LEED Silver policy was feasible within the building budgets allocated by UCOP, which was a huge plus for the Silver policy. A change that existed within UCOP's constraints was much more likely to succeed than one that did not.

### **Public Relations**

Public relations did not seem to be a significant factor in the LEED Silver policy decision.



## CHAPTER 6: LEED PORTFOLIO NARRATIVE AND ANALYSIS

In November 2006, UCSB committed to participate in the pilot phase of the USGBC's LEED Portfolio Performance Program.

### NARRATIVE

#### **SETTING THE STAGE**

UCSB's experience with LEED has led some to say it has "held the torch" for green building within the UC system (Pellegrin interview, 2006). After the USGBC adopted LEED for Existing Buildings (EB) in 2004, Santa Barbara's Girvetz Hall was the first UC building to receive LEED-EB certification (UCSB Sustainability, 2006).

Now the USGBC is piloting a LEED Portfolio Performance Program. The Program will help sizeable organizations quickly attain LEED certification on multiple buildings (their "portfolio" of buildings) by providing online tools for organizations to keep track of credits for all of their new or existing buildings. According to a USGBC news release, "The Portfolio Program is a significant way [to] accelerate [sic] LEED project certifications, which means...more LEED buildings performing at top levels and reducing greenhouse gas emissions" (U.S. Green, 2006). UCSB is a member of the USGBC pilot program and has committed to achieving EB certification for 25 buildings over the next five years.

#### **THE STORY**

Long before the Pilot Program, UCSB Physical Facilities (PF) had been talking about certifying existing buildings and eventually certifying the entire campus, according to Dewey. After the success with LEED for New Construction (NC) at Bren, PF became particularly interested in the possibility of EB certification because the university has many more existing buildings than new buildings. Pellegrin began EB discussions with the USGBC in 2002, near the time the USGBC started the pilot phase of EB (Pellegrin interview, 2006).

Soon, with the promise of an EB certification program, PF became interested in the possibility of campuswide certification. Pellegrin explains, "After Bren Hall was certified and Facilities hired me...to do LEED certification and sustainability, [and] the green building policy<sup>17</sup> passed, it only made sense for us to start a discussion with the USGBC on campuswide LEED credits because our campus works as a small city" (Pellegrin interview, 2006). Pellegrin<sup>18</sup> worked with the USGBC to develop what would become the Portfolio Program.

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<sup>17</sup> UCSB's Green Building Policy calls for all new buildings to strive for LEED Silver certification.

<sup>18</sup> Pellegrin has been involved with the USGBC for several years. She sits on the LEED-EB Core Committee and attends the USGBC annual meetings (Greenbuild).

Pellegrin first sat down with USGBC officials to discuss the Program in 2004 at the USGBC’s annual meeting (called Greenbuild) in Portland, Oregon (Pellegrin interview, 2006). The focus of the meeting, which included strictly UC campuses,<sup>19</sup> was how to adopt and track campuswide green practices in order to certify more buildings more quickly. Pellegrin and the USGBC also discussed how to set up a Program to minimize both documentation and review time—a win-win situation for both UCSB and the USGBC. They discussed identifying a percentage of credits derived from campuswide practices, such as custodial and landscaping practices, that UCSB would document and report on a website

At the next Greenbuild, in 2005, the USGBC began looking for organizations to do a “pre-pilot” and give additional feedback about how the Portfolio Program would actually work. At that time, it was still unclear whether or not participants had to commit to *both* LEED NC and EB. As an established university, UCSB would not build 25 new buildings in the following five years, so although UCSB was committed to LEED NC (through the UCOP Green Building and Clean Energy Policy and the UCSB LEED Silver policy), developing an NC *portfolio* did not make sense for the University. Yet at the 2005 Greenbuild, UCSB had not yet completed an EB certification and was also unwilling to develop an EB portfolio. Thus UCSB did not participate in the “pre-pilot.”

While planning continued, UCSB achieved its first LEED-EB certification: Girvetz Hall.



Ceremony recognizing all who made achieving LEED EB Silver in Girvetz Hall possible  
(Courtesy of the Subcommittee on Sustainability)

Then, during the Summer of 2006, the USGBC called Pellegrin and explained it was ready to officially pilot the Portfolio Program and wanted UCSB to participate. The USGBC had decided organizations could include LEED EB and/or LEED NC in their portfolios. At this point PF was confident in its ability to certify existing buildings. It considered official commitment to be a no-brainer, since it reflects its capacity for, and

<sup>19</sup> Organizations such as Starbucks and Home Depot were also in discussion with the USGBC about the portfolio approach because the USGBC is testing the pilot on all different types of organizations.

long-standing commitment to, sustainability. PF had already made most of the changes necessary to ensure the Program's feasibility by developing several campuswide practices (e.g. reclaimed water for irrigation, green cleaning chemicals, recycled paper, and reduced pesticide use) through regular operational practices or during building certification (e.g. Bren and Girvetz Halls) that could earn LEED credits. Every building in the portfolio would gain LEED credits from campuswide practices.

The approval process was short and simple because the decision was internal, unopposed, and did not require sanction from outside the department of PF (e.g. from the Chancellor). Since the Portfolio Program applies only to the maintenance of existing buildings, it amounts to an operational decision, which falls within Facilities' authority and within its budget. Thus the department committed on behalf of the entire campus. Acting Director of PF, Jon Cook, supported the program and, following protocol, informed the Associate Vice Chancellor of Campus Design & Facilities (Fisher) he intended to proceed. Fisher fully supported the idea.

The approval process was short and simple because the decision was internal, unopposed, and did not require sanction from outside the department of PF.

Pellegrin drafted a letter of intent to participate. Cook reviewed, edited, and signed the letter, which he addressed to the Vice President of LEED, Thomas W. Hicks, in October 2006. Cook and Pellegrin enclosed a commitment form with the letter, which outlined UCSB's pledge to certify 25 buildings over the following five years. The USGBC officially announced UCSB's participation in the Portfolio Program at the Denver Greenbuild in November 2006.

In Denver, the USGBC promoted the Portfolio Program as important for reducing GHG emissions. PF staff members consider reducing GHGs an important element of sustainability, a key value for the department. PF sets goals for energy reduction, which equates to GHG reduction. LEED helps save kilowatt-hours and thus tons of CO<sub>2</sub>, as well as dollars. PF mentions these three metrics as important elements of the story.

The LEED Portfolio Program also provides reduced certification and registration fees for pilot participants. Although the University still pays some fees, and some new practices may cost more up front, the energy savings are predicted to save the campus money overall. Lastly, PF staff supported joining the Program simply because they believed it was the right thing to do.

Although PF whole-heartedly embraces the Portfolio Program, staff members still take a precautionary approach. Byron Sandoval, Superintendent of Custodial Services, is constantly looking for greener products and practices, but the products must work well for him and his staff. When he tried to find a greener floor wax, for example, the first sample the manufacturer sent was matte and the custodians did not approve, claiming building residents need to see shine to believe the floors are clean. Sandoval worked with the manufacturer to develop a new, green, shiny floor wax. Now the floor wax satisfies Custodial Services' quality standards and counts toward LEED certification.

## **THE OUTCOME**

Pellegrin, Cook, Dewey, Peppers, and Sandoval, as well as Mary Ann Hopkins (Recycling, Refuse, Integrated Pest Management), and Raimond Calderon (Grounds Maintenance) will select and prioritize the 25 buildings for certification based on various criteria. They will look at where commissioning projects are already taking place, where there are problematic systems (e.g. heating) in need of repair, and where they can have the most impact with their budget. North Hall, which has heating problems, will be among the first buildings the USGBC certifies at UCSB. Facilities will test EB certification of a laboratory building on Bren Hall, which has already received NC certification and whose occupants are supportive of LEED. The Recreation Center (already certified), Embarcadero Hall, the Orfalea Family Children's Center, and Cheadle Hall will also top the UCSB EB certification list.

Because this is a pilot project, UCSB will be in constant contact with the USGBC. UCSB hopes to have nearly five buildings certified by the next Greenbuild in November 2007 and be able to provide a protocol to guide other campuses, particularly other UC campuses, in achieving LEED certification for a portfolio of buildings. Facilities has hired a student intern, paid with both donor<sup>20</sup> and Facilities Management funds, to help with the Program.

PF will continually raise the bar for its own performance. While LEED evolves, UCSB's goal is to stay ahead of the curve. LEED-EB requires re-certification two to five years after certification. In addition to ensuring LEED standards have been maintained, re-certification also provides the opportunity to change levels, from Silver to Gold, for example. Because of its commitment to the Portfolio Program, PF will constantly improve its green building practices.

The publicity and fanfare at UCSB regarding this new commitment to the Portfolio Program has been minimal. PF plans to bring more attention to the Program as buildings are certified. The University will likely hold ceremonies to present the certification plaques, give out awards, and recognize those involved. Dewey stresses the importance of letting people know what's happening: "If we don't let people know, it's as if we've not done anything" (Dewey interview, 2006).

## ANALYSIS

### **APPLICATION OF LENS I: PLURALISM**

#### **Multiple Stakeholders**

The various constituencies within PF were informed about the decision to commit to the Program. No one expressed any opposition to Cook (Cook interview, 2006). Dewey says they didn't take a vote; everyone in PF was for it (Interview, 2006). He explains everyone was committed because they benefit from LEED: certified buildings function

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<sup>20</sup> PF submitted several projects for donor funding and one donor was willing to sponsor a student intern. PF received the funding after committing to the Portfolio Program (Pellegrin interview, 2006).

better and are more easily maintained (Dewey interview, 2006). The Program also fits their commitment to sustainability, which they value as much as any other criteria (Pellegrin interview, 2006). Dewey says they also felt it was the right thing to do (Interview, 2006).

As the Program is implemented and buildings achieve LEED certification, building occupants will be important stakeholders. PF emphasizes the importance of having buy-in from them in order for the program to succeed. The certification process will affect not only the building's PF staff, purchasing department, and Management Services Officer, but also all users of the building. If PF's experience with Girvetz is any indication, buy-in will not be a problem. Cook explains, "Perrin is very persuasive, and it is hard to be opposed to something that makes so much sense" (Cook interview, 2006).

### **Champions**

Even with many interested stakeholders, it is unlikely UCSB would have adopted the Portfolio Program without Pellegrin. The issue would have been lost among the stakeholders' other interests. Pellegrin fulfilled the role of champion by building respect for her LEED expertise, developing the idea of the Portfolio Program, and following it through to the end. She will continue to be involved throughout implementation of the program. Cook describes Pellegrin as a "get it done" professional (Cook interview, 2006). He believes it is unlikely UCSB would have become involved in the program without her.

### **Coalitions**

This decision-making process was contained within PF and therefore did not require high participation on campus. Thus the process was much simpler than it would have been had the decision required authorization from the CPC and the Chancellor. New buildings require approval from the top of the hierarchy, but once the buildings are in place, units lower on the hierarchy have the authority to make decisions regarding their maintenance. With their established authority, PF was able to respond relatively quickly to the opportunity to participate in the Portfolio Program.

Although it was unnecessary to involve the campus bureaucracy, high participation was reflected within PF. Everyone in PF was informed, and everyone will be involved in the implementation component of the decision. During the decision-making process, all PF management staff members were acutely aware of the Program, as were several of the trades people and some other staff. All other PF staff members were at least generally aware. Pellegrin, Cook, Gonzales (Cook's predecessor), Dewey, and George Lewis (Associate Director of PF) all supported the idea (Dewey interview, 2006). They collectively represent the areas of Sustainability; Landscape, Environmental, & Custodial Services; Energy & Utilities; and Building Maintenance. Fisher, Sandoval, Peppers, Calderon, Hopkins, and Schauland were also on board, adding representation from Campus Design & Facilities, Design & Construction Services, Grounds Maintenance, and Recycling, Refuse, Integrated Pest Management. Most of this coalition of people

will continue to be involved in deciding which buildings will be among the 25 certified in the next five years.

This decision was spread out among people with varying expertise not only to ensure the most appropriate choices are made, but also to build “collegiality.” In addition to being part of the decision-making process, collegiality is also a significant component of the implementation process. Pfeffer (1992) emphasizes the importance of implementation: “[A] decision by itself changes nothing. ... Thus, in addition to knowledge of decision science, we need to know something about “implementation science” (p. 19). In implementing the Portfolio Program, orders are not imposed on staff. Sandoval explains, for example, what happens when Pellegrin approaches him with new green products or processes: “We [don’t] necessarily agree 100%. I’m totally for it [in general], but the crew (over 100 custodians) has to be on board” (Sandoval interview, 2006). Input is expected and encouraged.

## **APPLICATION OF LENS II: BUREAUCRATIC POLITICS**

### **Hierarchical Decision Structure**

Cook, in his position as Acting Director of Physical Facilities, was the sole person with the authority to approve participation in the Portfolio Program. His approval (or disapproval) had the ability to make (or break) the decision. His position on the hierarchy directed his actions and he dictated to his staff they would participate in the program.

Cook’s subordinates, especially Pellegrin, provided him with ample input from their personal experience. He also obtained information from many of the staff at the bottom of the hierarchy—those with applicable expertise. Pellegrin says the program “would not be possible if [she] did not have” her colleagues wanting to “share their opinions” (Pellegrin interview, 2006). In addition, Sandoval also collects feedback from his subordinates during the implementation process. Sandoval needs his entire crew of more than 100 custodians to be on board. He directs his subordinates to participate in the program, but he also explains why it is important for them to participate, and encourages them to share their insights.

### **High Emphasis on Process**

From a bureaucratic perspective, this decision did not involve an elaborate decision-making process. The process affected only PF. PF has a clear level of authority at UCSB and this decision fell within that authority. The decision involved one SOP: Cook, the person at the top of the PF hierarchical structure, formally made the decision by signing the letter of intent to participate.

Sustainability began as a money-saving effort and developed into a desire to do the right thing.

### **Path Dependence**

In this decision, the path was one of momentum toward sustainability and LEED leadership. According to Cook, “Facilities has long had an interest in sustainability” (Interview, 2006). Sustainability began as a

money-saving effort and developed into a desire to do the right thing. UCSB created Dewey's position as Utility & Energy Manager to reduce the campus's energy usage when energy costs skyrocketed in the 1990s (Pellegrin interview, 2006). UCSB was also the first in Santa Barbara County to use reclaimed water for irrigation. The practices of reducing energy and water usage are sustainable, both financially and environmentally. In addition, the LEED-NC certification of Bren Hall, UCSB's Green Building Policy (LEED Silver), and the LEED-EB certification of Girvetz Hall all preceded the Portfolio Program. Systemwide momentum had also been building in the direction of sustainability, particularly in the area of green building. UCOP's Green Building and Clean Energy Policy illustrates this trend.

### **Risk Aversion**

The certification of Girvetz Hall, the first LEED-EB certified building at UCSB (and in the UC system), was particularly important to participation in the Portfolio Program. In order to benefit from this Program, UCSB needed to certify multiple buildings in a relatively short period of time. While Bren Hall proved UCSB could succeed at LEED-NC certification, the campus did not plan to build 25 new buildings within five years. Therefore, it needed to include existing buildings in its portfolio. The certification of Girvetz demonstrated UCSB could also succeed at LEED-EB certification. This knowledge assuaged PF's risk aversion. Both Cook and Dewey agree they would not have signed on to the Portfolio Program without having first certified Girvetz Hall (Cook interview, 2006; Dewey interview, 2006).

The university is also risk averse in its implementation of the Portfolio Program. Sandoval constantly researches and tries new materials (Cook interview, 2006), but he is initially skeptical of all new machines presented to him (Sandoval interview, 2006). He first asks how long a machine has been on the market and if there have been any problems or recalls. He then most likely tests something on only a portion of the campus before he commits to converting campuswide practices.

### **APPLICATION OF LENS III: EXTERNAL PRESSURES**

#### **Influence of the System Structure**

UC, UCSB's parent organization, has a significant influence on UCSB's actions. PF is not exempt from this—"UC rules and budget constraints significantly affect all that PF does" (Cook interview, 2006). In the case of the Portfolio Program, however, UC may not have directly influenced PF's decision to participate. PF has the authority to make decisions about buildings and did not need outside approval. In addition, UCSB has been a leader in the UC system with regards to LEED, which limited influence from UCOP (Dewey interview, 2006). Some PF staff members do, however, believe the UCOP Green Building and Clean Energy Policy of July 2003 and/or the Chancellor's LEED Silver Memo of July 2004 influenced their ability or inclination to participate in the Program (Cook interview, 2006). If nothing else, since the campus and the system had already committed to strive for a standard equivalent to at least LEED certified for NC, PF could assume UCSB and

"UC rules and budget constraints significantly affect all that PF does" (Cook interview, 2006).

UCOP would be pleased with their decision to certify LEED-EB (Dewey interview, 2006).

Contracts with suppliers affect the university's actions as well. If environmentally-friendly products are not available, UCSB may be forced to use what is available, regardless of its environmental impact. Some suppliers may be willing to help—as described previously, Sandoval worked with his manufacturer to develop a green floor wax that suited his needs.

### **Budgetary Constraints**

Participation in the Portfolio Program requires neither capital funding nor any additional funding. Although the PF budget is as tight as ever, PF has committed to using its budget to fund the program (Dewey interview, 2006). The program does, however, provide some financial incentives in the form of money savings. First, it is more economical to perform EB certification on multiple buildings at once than it is to certify just one or two at a time (Dewey interview, 2006). Second, in the long run, LEED-EB saves money on energy costs, the “most rapidly escalating element of [the] PF budget” (Cook interview, 2006). Finally, the USGBC provides discounts on certification and registration fees to participants in the pilot program (Pellegrin interview, 2006).

### **Public Relations**

Changes tend to happen more easily when an idea is proposed from an external source (Downs, 1967). The exogenous factor adds pressure and visibility. In the case of this decision, UCSB had been in conversation with the USGBC about campuswide credits since Bren was built, so the USGBC was eager for the university to sign on to the pilot (Cook interview, 2006).

UCSB could, theoretically, do the very same thing it will do as part of the Portfolio Program without the USGBC or LEED. An outside certifying agency offers, however, a certain encouragement. Without LEED certification, UCSB would have to develop an internal policy, and “internal policies of this type are often bent and sometimes broken” (Dewey interview, 2006). The USGBC provides a formal commitment and holds the University accountable. The USGBC also offers credibility, which matters both to the outside world and to the staff doing the work to achieve certification.

The outside commitment also impacts implementation. The campus was already making some of the changes required to achieve LEED-EB certification, but certification is making them happen more quickly. LEED certification is also changing which green practices PF chooses to employ. Cook explains, “External certification has probably placed more emphasis on custodial supplies, air quality and water conservation than we would in a purely energy-focused sustainability program” (Cook interview, 2006).

Involvement with the USGBC also comes with the benefit of widespread recognition. The CEO of the USGBC announced UCSB's participation in the Portfolio Program at Greenbuild in front of 11,000 people (Pellegrin interview, 2006).



Participation in the program also reflects society's increasing recognition of climate change as a pressing issue. UCSB holds itself accountable to the public: Cook explains, "As a public employee, I strive to make decisions that are in the best interests of the University and the public, hence the decision to pursue the Portfolio Program" (Cook interview, 2006).

## CHAPTER 7: FUSION

This chapter pulls together our results, draws conclusions, and addresses the generalizability of our findings.

### COMPOSITE PICTURE

We applied three conceptual lenses—pluralism, bureaucratic politics, and external pressures—to analyze the decision-making process at UCSB. Applying the lenses to the three different decisions made at UCSB—CCN I, LEED Silver, and LEED Portfolio—helped us understand the decision-making process more concretely. Looking through the lenses, we uncovered components of the three decision-making processes determining their outcomes. Each lens calls attention to distinct characteristics of the decision-making process, but none describes the entire process alone. For example, examining UCSB’s decision to adopt LEED Silver as a green building standard, by looking only through the pluralism lens, points out the coalition between students, faculty, staff, and administration as a primary reason for success. Looking through the bureaucratic politics lens, on the other hand, emphasizes the process of presenting to the CPC and obtaining approval from the people in hierarchical roles of authority. A third perspective, looking through the external pressures lens, highlights yet another component of the process: the fact that UCOP was simultaneously working on its own Green Building and Clean Energy Policy. Collectively the lenses reveal the key theoretical characteristics of decision making and the decisions-making structures at play. The graphs below illustrate the relative influence of each of the factors in each of the three decision-making processes:

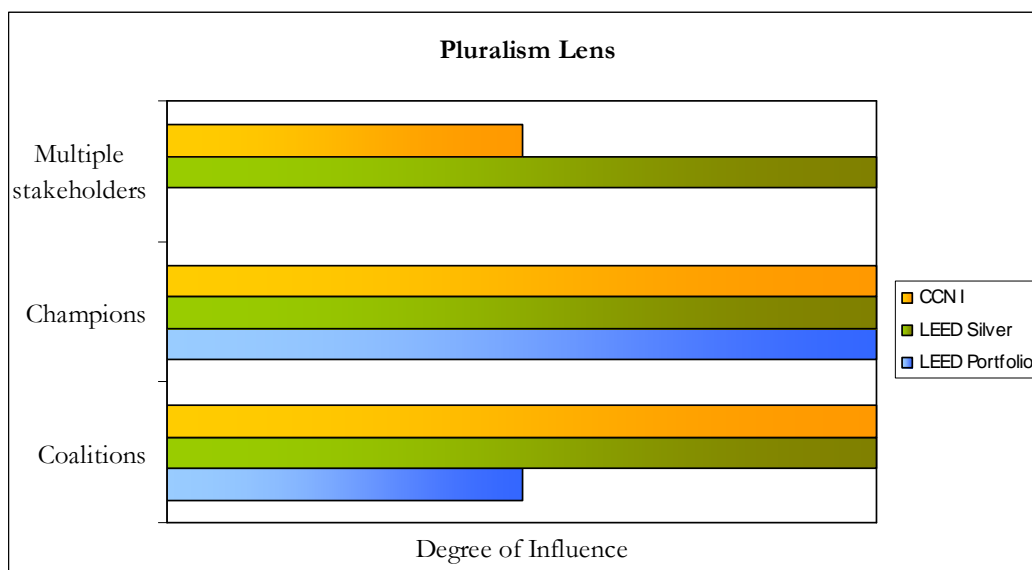


Figure 9: Pluralism Lens Factors in the Decision-Making Processes

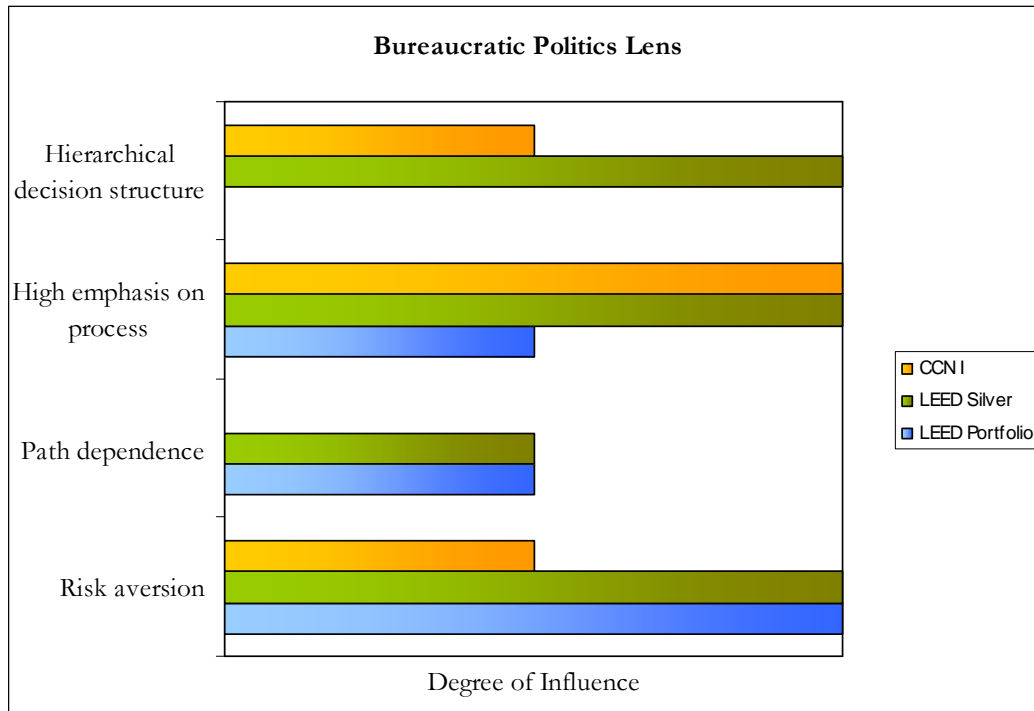


Figure 10: Bureaucratic Politics Lens Factors in the Decision-Making Processes

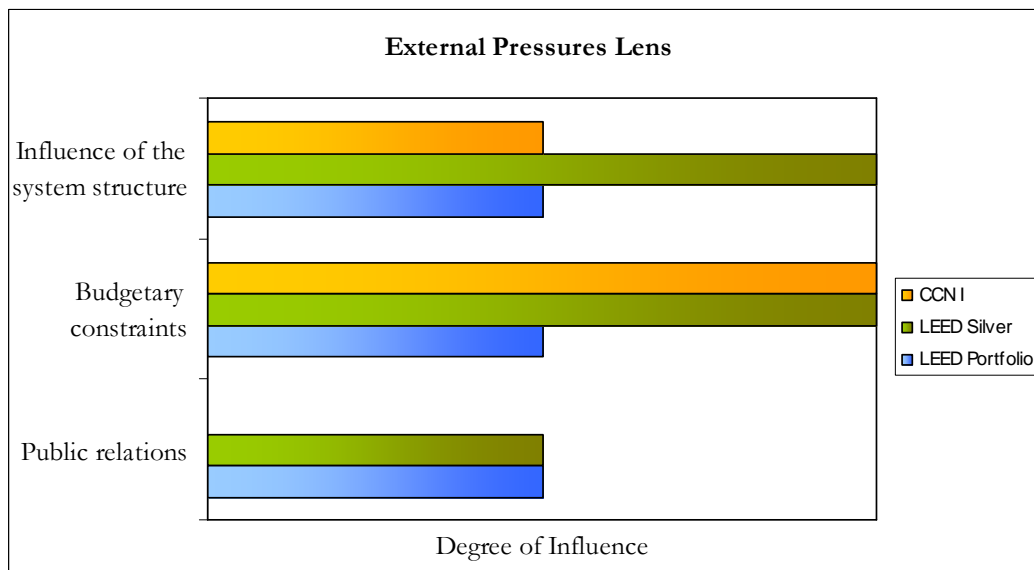


Figure 11: External Pressures Lens Factors in the Decision-Making Processes

Combining all three lenses and all three cases, our analysis revealed that the most important components of the decision-making process at UCSB include:

- Champions
- Coalitions

- High emphasis on process
- Risk aversion
- Budgetary constraints

A champion—whether driven by job description, personal motivation, or some combination of both—is someone who takes the lead on an issue and follows it from inception to implementation. We conclude the champion determines whether the issue succeeds or gets lost in the congested policy-making agenda. The LEED Silver policy may have gone nowhere without Lovegreen’s dedication, knowledge, experience, and credibility. Likewise, Pellegrin’s championship of the Portfolio Program is a primary reason UCSB committed to it.

Champions often build broad coalitions of support. The people involved (both who and how many) in a coalition impact the issue’s outcome. Inclusion is important to gain input, expertise, and buy-in. Inclusion creates an atmosphere of collegiality, which is generally valued in the academic world. At UCSB, faculty members make up a particularly important constituent, and Lovegreen is seeking their support to push the Sustainability Plan (CCN I decision) forward, presumably because she understands their support is essential and powerful. Power in numbers, on the other hand, was important when students packed the CPC meeting room when LEED Silver was on the agenda.

The presence of a supportive champion and/or coalition may not be enough to secure implementation; champions and coalitions must follow certain processes when pushing an issue. They must follow these processes because the University employs SOPs, on paper and/or in practice, and whether or not one follows these procedures can make or break a decision. The processes and procedures exist to provide an administrator or chancellor with an often unconsidered ally: defensibility. A new policy that was developed through the proper channels is easier to defend than a new policy that comes out of nowhere. CCN I learned their proposal needed to be approved by the CPC Subcommittee on Sustainability, then the CPC, and finally the Chancellor. The Chancellor was unwilling to make a decision about their recommendations before they went through the proper procedures.

This concern with defensibility is linked to risk aversion, which applies to the University in many ways. For example, the University is unlikely to instate a policy for which it has not already secured funding. Lovegreen addressed this concern by showing LEED Silver standards could be met with little or no extra cost. The University is also unlikely to pursue a politically-risky policy. In the case of CCN I, climate neutrality may have been perceived as too radical; setting the same emissions reduction goals as the State of California targets was a safer move, politically.

Budgetary constraints, perhaps obviously, impact a decision as well. It is important to be aware of them and to address them, as Lovegreen did with LEED Silver. Likewise, CCN I framed their objectives in terms of monetary savings when they presented to the

CPC. In the case of LEED Portfolio, although it happened after the decision was made, PF was fortunate enough to receive a private donation to fund an intern.

ADDITIONAL FACTORS

Our three lenses did not account for all factors of the decision-making process. In analyzing our cases, we detected several factors our lenses did not explicitly illuminate:

- Campus culture
- Issue-attention cycle
- Issue framing
- Power or position of the proponent

The graph below shows the relative influence of each of these additional factors in each of the three decision-making processes:

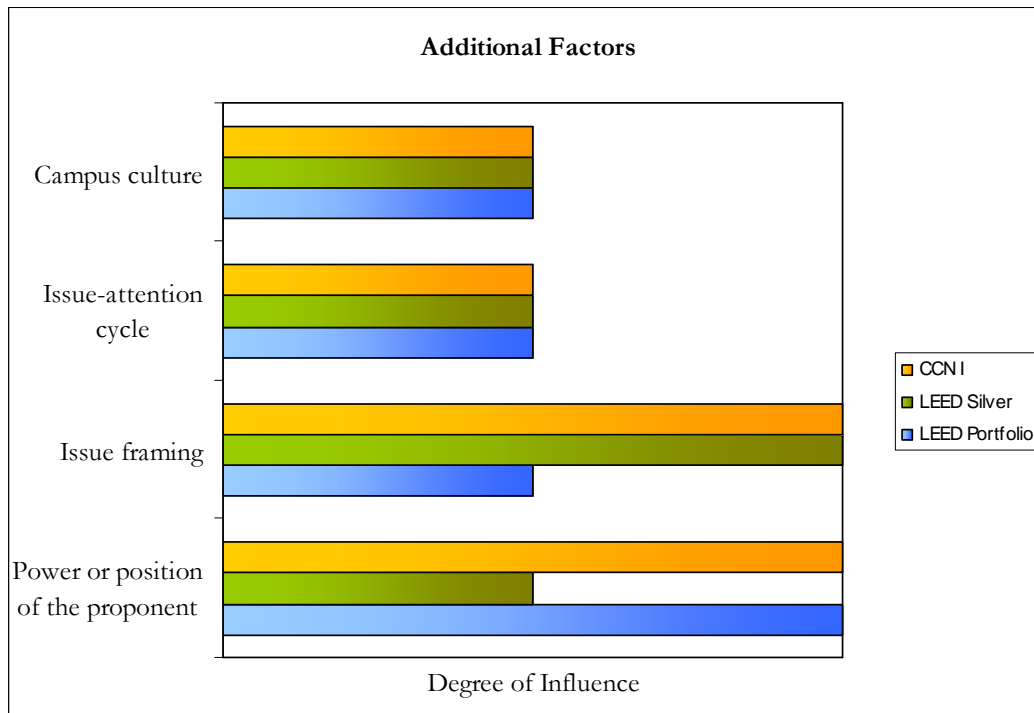


Figure 12: Additional Factors in the Decision-Making Processes

Campus culture influences a university’s perception of an issue. Lucas explains that before administrators implement a new policy, they make certain it will “jive” with the campus culture (Lucas interview, 2006). Many people at UCSB view sustainability and green building as an important part of the culture on campus. By the time PF committed to certifying 25 buildings over five years through the LEED Portfolio Program, Bren and Girvetz Halls had already achieved LEED certification, Chancellor Yang had signed the UCSB Green Building Policy (LEED Silver), and UCOP had instated the Green Building and Clean Energy Policy. LEED was part of the campus culture.

The issue-attention cycle refers to the “systematic cycle of heightening public interest and then increasing boredom with major issues” (Downs, 1972). Excitement grew after Bren Hall achieved LEED Platinum certification, and the timing to propose campuswide building standards was ripe when the LEED Silver committee proposed the LEED Silver Policy. The timing may have been off, however, for CCN I, as their culminating presentation took place in the Spring when faculty and students are focused on finishing the year and attention to policy change is low. As climate change increasingly appears in the daily news, public interest in the issue is heightening. Climate change coverage has steadily increased since 2000. Even in the exceptionally skeptical American media, in 2005, coverage began shifting toward accepting that climate change is happening and needs to be addressed (Henson, 2007). “The global atmospheric concentration of carbon dioxide has increased from a pre-industrial value of about 280 ppm [parts per million] to 379 ppm in 2005” (Alley et al., 2007, p. 2). The figure below illustrates this increase.

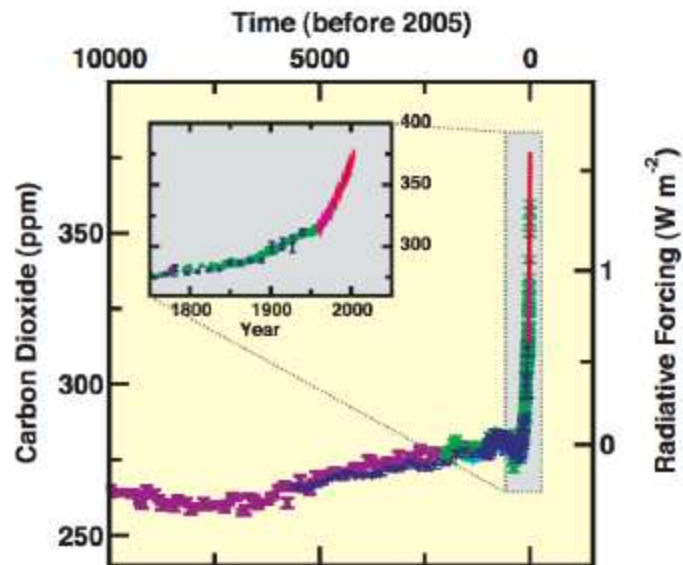


Figure 13: Changes in CO<sub>2</sub> from ice-Core and Modern Data<sup>21</sup>

The time for campuses to act is getting riper and riper, and the need for campuses to act is becoming more and more urgent.

The framing of the issue being addressed affects what the University decides. In the case of LEED Silver, Lovegreen and Pernsteiner addressed the University’s budgetary constraints and risk aversion by stressing the policy would add little or no extra cost. The LEED Silver working also appealed to people’s morals, framing LEED Silver as the right thing to do.

<sup>21</sup> Alley et al., 2007, p. 3

The power or position of the proponent is an influential factor in the decision-making process as well. This is related to the idea of the champion, but teases out the crucial idea that not just any champion will do. Lovegreen has been such a successful champion of sustainability endeavors such that, by now, merely the association of her name frames an issue in the light of good judgment. She is not, however, a member of the most influential constituency on campus—the faculty—and she cannot sit on the CPC. She knows how to get the Sustainability Plan on the agenda, but does not have the authority to vote on it. She can, however, use her credibility to pull together influential deans and faculty members willing to stand up at the CPC meeting and voice their support for the Sustainability Plan.

**MATRIX OF INFLUENCES**

The figure below tabulates both the presence and the degree of influence (indicated by the number of stars) of all the decision-making characteristics. It includes the characteristics captured by the three models as well as those outside the models, and sums them across all decisions.

Models	Characteristics	Decisions			Sum
		CCNI	LEED Silver	LEED Portfolio	
I	Multiple stakeholders	★	★★		★★★
	Champions	★★	★★	★★	★★★★★
	Coalitions	★★	★★	★	★★★★★
II	Hierarchical decision structure	★	★★		★★★
	High emphasis on process	★★	★★	★	★★★★★
	Path dependence		★	★	★★
	Risk aversion	★	★★	★★	★★★★★
III	Influence of the system structure	★	★★	★	★★★★
	Budgetary constraints	★★	★★	★	★★★★★
	Public relations		★	★	★★
Influences not captured by models	Campus culture	★	★	★	★★★
	Issue-attention cycle	★	★	★	★★★
	Power/position of the proponent	★★	★★	★	★★★★★
	Issue framing	★★	★	★★	★★★★★

*Figure 14: Matrix of Influences on all Decisions*

The matrix illustrates champions, coalitions, a high emphasis on process, risk aversion, budgetary constraints, power/position of the proponent, and issue framing are the most influential factors in decision making.

## WEIGHTED FINDINGS

Of the seven most influential factors (five specified by our lenses and two outside our lenses) our analysis showed to influence the decision-making process, we found the following four, in order of importance, to be the most significant:

1. Champions
2. Coalitions
3. Issue framing
4. Power or position of the proponent

We looked for common threads throughout our cases to determine these weighted findings. We also considered which components were absolutely necessary to get the decision from inception to implementation. We ultimately determined champions, coalitions, issue framing, and the power or position of the proponent are the most influential factors in the decision-making process.

Identifying a champion for an issue is the most important step toward getting the University to take action on the issue. As shown in Figure 14 the presence of a champion was important in all three decisions. Building a coalition of support is the second most important factor in the decision-making process. Framing the issue is also important because the way University officials perceive an issue affects what they decide. Finally, the power or position of the proponent is the fourth most important factor in the University's decision-making process.

## SURPRISE

One factor we expected to find when we began our research was not present in our case study. After our literature review, we anticipated organizational arthritis would have more of an impact on decision making than we observed. On the contrary, we found that universities can make changes. This is a surprising and valuable finding.

The bureaucratic politics lens includes the potential for organizational arthritis, a phenomenon related to a high emphasis on process and the tendency to exhibit path dependence, due to the successive layering of rules and regulations. Large organizations follow processes to maintain control and coordination. They are not designed to be nimble. An organization will only adopt change if the new program's benefits exceed the old program's benefits *and* justify the costs associated with change (Downs, 1967). Over time, however, simple reluctance to change turns into complete rigidity and refusal to change. More and more processes and procedures inflame the joints of the organization and prevent it from moving—even a small change would require disturbing many of those processes and procedures.

We found, however, the UCSB does not yet suffer from organizational arthritis. Our case studies showed that any resistance to change could be overcome by strong champions, broad coalitions, etc.



## GENERALIZABILITY

Most of the factors that impact decision making at UCSB are characteristic of decision making at all American public universities. Based on the literature, all nine of the significant factors revealed by our analysis are generalizable to American public universities:

1. Champions
2. Coalitions
3. Issue framing
4. Power or position of the proponent
  - High emphasis on process
  - Risk aversion
  - Budget constraints
  - Campus culture
  - Issue-attention cycle

Some aspects of these factors, however, are specific to individual universities. When seeking champions, building coalitions, and identifying proponents with power, for example, it is important to remember that constituency strength varies from university to university. Although all UC campuses employ shared governance, the strength, in practice, of various constituencies differs from campus to campus. At UCSB it is important to obtain faculty buy-in. Faculty members at UCSB hold an atypical amount of power (Pernsteiner interview, 2006). At UCLA, on the other hand, the administration is stronger and the faculty is less so (Woolley interview, 2006). And at the University of Arizona, even the concept of faculty power is relatively new—the University did not even implement shared governance until 1997 (Shared, 2003).

Shared governance has implications beyond giving the faculty input into the decision-making process. It also keeps them busy. Faculty at universities that employ shared governance may spend a lot of time in meetings, serving on various committees.<sup>22</sup> This commitment leaves them less time to pursue or support policy change campaigns. Shared governance also limits the power of the leader—the chancellor or president. This limited leadership is in the nature of the role and thus also of the people who fill it.

Shared governance is one of two features that distinguish UC from other major public research universities. The other is UC's "unusual status as a constitutionally designated public trust—a designation shared by only five other major public universities" (Douglass, 1998, p. 1). The designation of public trust allows UC to be "entirely independent of all political or sectarian influence and kept free therefrom in the appointment of its regents and in the administration of its affairs" (Douglass, 1998, p. 2). This designation affects the portion of the budget that comes from the State. The State of California provides funding in an annual lump sum payment and the University of California (i.e. the Board of Regents and the President) allocates the money. In other

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<sup>22</sup> University service is one of the categories on which faculty are evaluated. See Appendix N.

states, legislators have more control over how the funds are distributed and spent. Thus, this designation influences budgetary constraints and who is responsible for them.

UCSB is also unique as part of the UC system. Individual UC schools do not make decisions without considering how they will impact the other schools in the system. The process is different than it would be in a stand-alone school.

As for campus culture, its importance holds at all universities, but its nature varies. Sustainability is part of the campus culture at UCSB, but that may not be the case at all public universities. GHG emissions reductions policies may or may not “jive” with the cultures of different universities.

The same is true for issue framing. It is important at all universities, but the actual framing must be tailored to each university. Issues should be framed in language that highlights what is important to the university.

#### SYNTHESIS

We found that American public universities are not arthritic. They are not completely resistant to making changes in order to address climate change and reduce their GHG emissions. But, because they are risk averse, constrained by funding, public relations, and consensus building, they are also not necessarily the birthplaces of social innovation they are commonly believed to be.

Universities, by design, are not nimble. Unlike corporations, they are not designed to respond quickly to market shifts. The university decision-making process incorporates “planned slowness.” Universities are cautious. They are worried about funding. They are worried about criticism, both external and internal. University officials form coalitions in an attempt to please everyone. University leaders are not like corporate leaders: they do not dictate; they build consensus.

Change can happen, but it does not happen quickly. Before university chancellors or presidents will commit to GHG emissions reduction goals, they will first ensure the commitment is not, in any way, too risky. They will make sure all campus constituents are on board. They will make sure they have adequate funding. They will make sure the commitment will not draw too much public criticism. This process takes time, which can be frustrating for students who are not on campus long-term. As a consequence of the slow-handed university, a strictly student-led campaign may not make it through the policy-making agenda before the students graduate.

Finally, we found that some factors particularly influence the decision-making process and thus policy change. Powerful champions who frame the issue effectively and gain campuswide support can speed the decision-making process along. These factors can help American public universities take advantage of opportunities to reduce GHGs.

## CHAPTER 8: RECOMMENDATIONS AND POLICY IMPLICATIONS

This chapter describes our recommendations for other universities working to implement emissions reduction policies. It also addresses the implications our findings have on policy, specifically, how stakeholders can induce universities to take advantage of opportunities to reduce GHG emissions.

### RECOMMENDATIONS<sup>23</sup>

Various characteristics of the university impact the decision-making process. Universities are not entirely obstinate to creating new policies or changing old ones, but they are often slow to move and they step cautiously, two important characteristics to understand when pushing policies committing the university to reduce GHG emissions. The university decision-making process incorporates “planned slowness”—a high emphasis on process and a wide distribution of power require change agents to follow many steps and involve many people in the decision-making process, which takes time. In addition, universities are cautious—they take a conservative approach because they are limited by funding and wary of attracting criticism. Our study provides evidence these characteristics influence what factors are important in the decision-making process, and these factors can be used to the advantage of those seeking to reduce university GHG emissions.

One of the keys to overcoming obstacles to change at your university is understanding your university’s SOPs. A great way understand how your university operates is to ***follow a decision from inception to implementation***, attending meetings and talking with the people involved. This will help you understand the rules in practice in addition to the rules on paper. Change can happen more quickly and more smoothly if you understand the system and work *with* it. It is beneficial for you to get the steps right from the beginning.

Following a decision will help you make personal connections; the more connections you have, the more effective you will be in finding information and knowing where to go for support. Following a decision will also increase your understanding of the power structure—the different degrees of power among the various stakeholders. These pieces of knowledge will help you ***recruit a powerful champion***. The power aspect of the champion role is important. An issue receives more attention when someone who carries weight on campus supports its cause. Identify the key constituency on your campus and, ideally, seek a champion from this constituency. At UCSB, the faculty has a lot of power. Often the support—or lack of support—of the faculty determines a policy’s fate.

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<sup>23</sup> For recommendations specific to UCSB, see Appendix E, which addresses each of CCN I’s recommendations to UCSB.

It is important to keep in mind an individual champion will have other responsibilities and may not be able to push the policy, particularly in the slow-moving university decision-making system, through to implementation. Therefore, it is important to ***assign the responsibility of reducing GHGs to someone on campus***. Incorporating the issue into a job description ensures it will outlast any individual person filling the position. It makes the issue part of the university's institutional memory. If the issue does not naturally fall into an existing role, ask for such a role to be created. This task is particularly important if students are the policy proponents; they will likely graduate before seeing the policy through.

It is valuable to involve other campus constituencies beyond the champion. Due to the university's conservative approach and shared governance structure, administrators make decisions by consensus. For this reason, it is important to ***form a broad coalition*** of campus stakeholders. Coalitions are instrumental in building momentum behind the issue from different campus sectors. Chancellors appreciate coalitions because they represent broad support of the issue, insulating the chancellor from potential criticism. In addition, a chancellor will not approve a new policy without first knowing the policy 1) is feasible, 2) has broad stakeholder support, and 3) is approved by the most powerful campus constituency. As with the champion, it matters *who* is in the coalition. A coalition involving "functional units"—the people who will actually do the work of the proposed policy—shows the feasibility of the policy. A coalition including a diverse group of constituencies demonstrates broad support. Finally, a coalition involving the faculty, often the most powerful constituency, increases the likelihood of the policy's success.

In order to get faculty, or anyone, on board, you must ***frame the issue in the language of the university***. Framing presents an issue in a certain way, emphasizing some aspects more than others. Understanding the campus culture may help the proponents better present the issue in a manner that addresses the specific decision-making criteria of the university. Policies related to GHG emissions reduction and climate change may be framed as moral obligations. Use the issue-attention cycle to your advantage—push hard right when the issue is at the top of the public interest cycle. With mayors and states taking the lead on committing to GHG reductions, the public is slowly becoming aware that reducing GHGs is important for our generation and future generations. Emphasize that reducing GHGs is "the right thing to do."

Demonstrating minimal risk is another way to frame the issue. A chancellor does not want to set a goal the university cannot reach. Failure is not good for public relations. Provide evidence of success from other universities that have done similar projects. In addition, ***set a practical emissions target***. Currently, universities may not be capable of making a meaningful commitment to climate neutrality. In the meantime, set tangible, short-term steps (e.g. energy efficiency projects), track emissions reductions, and revisit the concept of climate neutrality in the future.

Framing can also address budget concerns. When appropriate, GHG reduction policies can be framed as cost-effective, win-win deals that make both environmental and financial sense. Reducing GHGs often means reducing energy use, which saves money. Other times GHG reduction strategies may be part of a Trojan Horse policy, bundled with larger energy bonds or incorporated into LEED building designs to help secure funding. Since the university moves too slowly to efficiently deal with many small policies, bundling a GHG reduction strategy in with a larger policy increases the chance the university will address it.

A way to overcome budgetary constraints is to **secure additional funding**. Universities never have enough money and since their priority is to operate on the most basic level and serve their constituents, reducing GHGs may not make the list of priorities. However, if you find a willing donor to earmark funds for GHG reductions, the university will have financial incentive to take advantage of emissions reduction opportunities.

Our general recommendations are summarized below. We hope American public universities can use these recommendations as a roadmap for strategizing potential roadblocks and potholes.

#### GENERAL RECOMMENDATIONS

- Follow a decision from inception to implementation.
- Recruit a powerful champion.
- Assign the responsibility of reducing GHGs to someone on campus.
- Form a broad coalition.
- Frame the issue in the language of the university.
- Set a practical emissions target.
- Secure additional funding.

#### POLICY IMPLICATIONS

Universities are not designed as nimble organizations. If a university were a ship, its ballast would be heavy and the ship would be slow, but it would be able to handle the rough and changing seas. Unlike corporations, which adjust constantly to maximize their profits, universities are built to “stay the course.” As conditions change around universities, they resist these forces. They are not the birthplaces of rapid, boundless social innovation many believe them to be. Indeed, universities can change, but they do so gradually. Certain policy changes may increase the likelihood that universities will take advantage of opportunities to reduce GHGs.

First of all, a university chancellor (or president) is not likely to lead the GHG charge. Unlike the role of a leader at a for-profit company, which includes responding quickly to market shifts and dictating bold new policies, a large part of the chancellor’s job includes

satisfying on- and off-campus stakeholders, mediating, and building consensus.

University boards look for these conciliatory skills when hiring a chancellor. In addition, the personality type of a person who desires to be, or is, a university leader is different from the personality type of a person who seeks to be a corporate leader. University chancellors will not lead the charge because it does not fit their roles or their personalities. In fact, taking bold, unilateral actions could jeopardize a chancellor's job security. Decreasing participation and increasing centralization in the university decision-making structure could increase the efficiency and likelihood of policy change.

Decreasing participation and increasing centralization in the university decision-making structure could increase the efficiency and likelihood of policy change.

As mentioned, the faculty is important both in recruiting a champion and in forming a coalition. However, it is not always easy to get faculty members on board. Between research, teaching commitments, and publishing pressures, they have little time to devote to extra activities. Although, on paper, service is one of the categories on which faculty are evaluated, in reality, service is a low priority. Faculty members will not reach tenure sooner by serving on a committee. They therefore have little incentive to get involved. Working to increase the weight of university service in faculty evaluation criteria could make it more attractive, or perhaps simply more feasible or acceptable, for faculty members to take the time to get involved.

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The strain on universities' budgets influences GHG-related decisions. Granted, at first read, this goes without saying, but what may not be initially considered is the deep influence funding has on determining what decisions are considered. State and federal funding does not meet the costs of running a public university. With increasing enrollment and an inadequate increase in public funding, the unfunded gap is growing, and will grow by an increasing amount each year. Universities are not free of the corporate concern with the bottom line, and this influences the issues they are even willing to consider. Additionally, policies requiring money often must take money from somewhere else. Any widespread campus policy put in front of faculty, for example, will inevitably make them think, "How does this affect me?" Thus, faculty may not support emissions-reduction policies, not because they don't believe in reducing GHGs, but rather because they are reluctant to spend their already-limited funds on issues not essential to their departments. Providing adequate funding for higher education could encourage schools to practice their values and provide valuable outside-the-classroom lessons on addressing climate change.

Providing adequate funding for higher education could encourage schools to practice their values and provide valuable outside-the-classroom lessons on addressing climate change.

Characteristics of the decision-making process, as well as the overall design of the university, determine whether or not American public universities take advantage of opportunities to reduce greenhouse gas emissions.

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## INTERVIEWS

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## APPENDIX A: ACRONYMS

AB	Assembly Bill
CCN	Campus Climate Neutral
CPC	Campus Planning Committee
CCSC	Central Campus Sustainability Committee
CSSC	California School Sustainability Committee
DRC	Design and Review Committee
EAB	Environmental Affairs Board
EB	Existing Buildings
EVC	Executive Vice Chancellor
GHG	Greenhouse gas
GSA	Graduate Student Association
HVAC	Heating, ventilation, and air conditioning
LEED	Leadership in Energy and Environmental Design
LEED-EB	LEED for Existing Buildings
LEED-NC	LEED for New Construction and Major Renovations
LRDP	Long Range Development Plan
NAELS	National Association of Environmental Law Societies
NC	New Construction
NPV	Net present value
PF	Physical Facilities
SEAC	Student Environmental Action Coalition
SOP	Standard operation procedure
UC	University of California
UCOP	University of California Office of the President
UCSB	University of California, Santa Barbara
USGBC	U.S. Green Building Council



## APPENDIX B: KEY PLAYERS

First	Last	Title
Raimond	Calderon	Grounds Maintenance, Physical Facilities, UCSB
Meta	Clow	Campus Policy and Records Management Coordinator, Administrative Services, UCSB
Arthur	Colstead	Staff, CSSC
Jon	Cook	Acting Director of Physical Facilities, UCSB
Jim	Dewey	Associate Director of Energy and Utilities, Physical Facilities, UCSB
Jeff	Dozier	Professor, Donald Bren School of Environmental Science and Management, UCSB
Marc	Fisher	Associate Vice Chancellor of Campus Design & Facilities, Facilities Management, UCSB
David	Gonzales	former Assistant Vice Chancellor Physical Facilities, Parking & Transportation, UCSB
Thomas	Hicks	Vice President, LEED
Mary Ann	Hopkins	Recycling, Refuse, Integrated Pest Management, Physical Facilities, UCSB
Christine	Irvin	USGBC
Gary	Lawrence	Associate Director, University Center and Events Center
Todd	Lee	Assistant Chancellor of Budget and Planning, UCSB
Martie	Levy	Director of Capital Development, Budget & Planning, UCSB
George	Lewis	Associate Director of Building Maintenance, Physical Facilities, UCSB
Mo	Lovegreen	Executive Officer, Geography, UCSB
Gene	Lucas	Executive Vice Chancellor, UCSB

Katie	Maynard	Sustainability Coordinator, UCSB
Joel	Michaelsen	Professor, Geography; Chair, Academic Senate, UCSB
Perrin	Pellegrin	Sustainability Manager, Physical Facilities, UCSB
Mark	Peppers	Project Manager, Design & Construction Services, Facilities Management, UCSB
George	Pernsteiner	former Vice Chancellor of Administrative Services, UCSB
Jim	Reichman	Professor, Ecology, Evolution, and Marine Biology, UCSB
Mark	Rousseau	Energy & Environmental Manager, Housing & Residential Services
Byron	Sandoval	Superintendent of Custodial Services, Physical Facilities, UCSB
Ryan	Schauland	Sustainability and Energy Coordinator, Physical Facilities, UCSB
Bruce	Tiffney	Dean, College of Creative Studies, UCSB
Matt	Tirrell	Dean, College of Engineering, UCSB
Henry	Yang	Chancellor, UCSB

## APPENDIX C: INTERVIEWS

LETTER

Date

Dear *Interviewee*:

As a graduate student at the Donald Bren School of Environmental Science and Management, I am participating in a Group Project focusing on decision-making at UCSB.

I would like to interview you as part of this project. The purpose of the interview is to help develop a model of how decisions are made at the university and to assess how this might assist universities in general to make effective and efficient decisions.

We will keep your identity strictly confidential, unless you wish to permit your name to be used. Only an interview code or general term will serve as reference. The interview, which may be taped with your permission, should take no more than 45 minutes. Your permission would be requested once more for any follow-up interview.

Tapes will be archived and accessible only to group members as principal investigators. Your participation would be voluntary and subject to your withdrawal at any time. No interviewee will receive any direct benefits from participation; no risks are foreseen. Any question you do not wish to answer will be dropped. The results of the project will be available at your request upon completion.

Please contact me (*interviewer email*) or our faculty advisor Professor Oran Young ([young@bren.ucsb.edu](mailto:young@bren.ucsb.edu)) if you have any questions about the terms of reference of our project. Please convey your understanding of the attached consent agreement by signing both copies, one of which is yours to keep. I will collect the other copy during the interview.

Thank you for your attention to this request. We would be grateful for your participation, and will contact you by telephone or email to discuss scheduling an interview.

Sincerely,

*Interviewer Name*

2007 Master's Candidate, Donald Bren School of Environmental Science and Management

*Interviewer Phone*

*Interviewer Email*

Dr. Oran Young

Professor, Donald Bren School of Environmental Science and Management

805-893-8747

[young@bren.ucsb.edu](mailto:young@bren.ucsb.edu)

## QUESTIONS

### **I. Inception**

Where did the idea originate? (Who's idea was it?)

Was this idea generated independently, within campus, or was it influenced by UC (e.g. the Green Building and Clean Energy Policy)?

How long was the process from inception to implementation?

Was timing a factor?

Was this proposal framed as one that would save money?

### **II. Gaining momentum**

Who was instrumental in carrying the ball?

Did you have a supporter on the CPC who helped push this decision forward? Please describe their support.

Who organized meetings?

Were they formal/informal meetings? How frequently did you meet?

Did you (and the committee) try to gain additional support? How?

Was the media contacted to generate support and awareness of the issue?

Who wrote the proposal?

Who worked on revising the proposal?

### **III. Implementation**

Who helped implement this decision (in CPC, etc.)?

What was the time between approval and implementation?

Was there a ceremony on the first day of implementation? Was there media coverage and/or a press release?

How was the campus community notified about this decision?

Do you have any additional comments (suggestions on improving transparency, what other factors were important, etc.)?

## APPENDIX D: CCN I'S RECOMMENDATIONS AND CONCLUSION

(The following is from CCN I's final report.)

Climate change must be addressed by the institutions that shape society's future leaders – universities. As a key part of the most prominent higher-education system in California, UCSB is strategically located to play a leadership role for public universities nationally and globally, along with other schools within the UC system. In addition to opportunities to be on the forefront of one of the most important issues of the twenty-first century, our analysis indicates that significant cost savings can be found in reducing the University's greenhouse gas emissions.

By focusing on emissions sources reported to the California Climate Action Registry (i.e., electricity, natural gas, campus fleet, and refrigerants), the reduction of these emissions to meet the California, Kyoto, and Climate Neutrality targets could yield net present value (NPV) cost savings of \$2.6 million, \$5.8 million, and \$4.3 million respectively. This analysis indicates that UCSB is missing a significant cost savings opportunity due to a myriad of barriers to implementing projects that would be in its best financial and long-term interests.

Although numerous paths to climate neutrality exist, we offer some final recommendations on how UCSB can build its institutional capacity to address climate change, reduce greenhouse gas emissions and reap the cost savings related to climate mitigation projects. The policies outlined below seek to capitalize on existing University initiatives with momentum, as well as address important institutional barriers that presently constrain the University from implementing more GHG emissions reduction projects.

### Key Recommendation

**Make a firm commitment to meet the California GHG targets through 2020, at a minimum.**

As our analyses have shown, meeting the California targets is feasible and financially attractive for UCSB. California specific targets are also a natural fit for a state-funded institution. Through a combination of on-campus mitigation and external offsets, UCSB is in a position to meet the two California targets and save net \$5 million in the process, despite campus growth of 25% through 2020. As a result of previous energy efficiency investments, UCSB is already on track to meet the first of the California targets without significant new capital investments. Although the majority of the mitigation projects result in net savings over time and so should be implemented as soon as possible, the implementation schedule allows UCSB to put off significant capital investments until 2012, which should allow enough time to obtain the necessary capital. Since the more aggressive targets we profile generate larger savings, due to projects being implemented

more immediately; UCSB should strive for the more aggressive emissions reduction targets such as the Kyoto Protocol. However, these more aggressive targets run into the institutional barriers to implementation (e.g., lack of funding, bureaucratic inertia) profiled in the previous chapter, which makes them less feasible in the near term. Therefore, UCSB should adopt the California targets at a minimum, and strive to meet the more aggressive targets in the long term.

In order to ensure the meeting of the target, we recommend that UCSB should:

1. **Include aggregate GHG emissions targets in long-term Campus planning documents, such as the Campus Sustainability Plan component of the Long-Range Development Plan.**

UCSB is committed to rigorously inventorying its GHG emissions annually through the California Climate Action Registry. Once adopted, aggregate GHG emission targets should be included in long-term campus planning documents to ensure the commitment of the University to climate mitigation. Additionally, aggregate GHG emissions can also be used as metric for broader environmental performance that would be relevant to University stakeholders in judging the desirability of campus growth.

2. **Turn the “Sustainability Working Team” of the Campus Planning Subcommittee on Sustainability into a real Office of Sustainability, and authorize them to develop an integrated system to manage GHG emissions.**

The UCSB Sustainability subcommittee already encompasses four staff members, who work on a diversity of sustainability issues and are extremely active and visible on campus. With the development of a Campus Sustainability Plan, the time is ripe to turn the Sustainability subcommittee into a real Office of Sustainability, with a budget and direct reporting line to the Executive Vice Chancellor’s Office, spanning both the Facilities and Academic branches. The formal incorporation of a UCSB Office of Sustainability would be invaluable for coordinating the day to day activities related to meeting the California State Target.

3. **Implement zero cost emissions reductions projects first, followed by projects found to have the best net present value (NPV) for GHG reductions (e.g., energy efficiency projects).**

In choosing greenhouse gas mitigation projects, the University should begin by selecting projects with no upfront cost. There are several project ideas evaluated in this report that can yield emissions savings with no capital or operating cost. These projects are:

- (a) Implement energy star computer settings

- (b) Choose smaller fleet vehicles, and reverse the trend towards purchasing larger trucks
- (c) Work with local fuel providers to source E85 locally and use it in flex-fuel vehicles

Once zero cost mitigation projects are exhausted, the University should then look towards the projects with highest net present value per MTCO<sub>2e</sub>. If the University wishes to continue to seek least cost climate mitigation projects, then the price of carbon offsets can serve as a benchmark against which on-campus projects costs can be measured. When all remaining prospective on-campus projects have a \$/MTCO<sub>2e</sub> value greater than the price of carbon offsets, then the University should purchase carbon offsets with the savings from previously implemented projects.

*Figure 6.1: Suggested Order of Projects Before Purchasing Offsets*

Recommended mechanism implementation sequence	Annual GHG reduction MTCE	Capital cost	Annual savings
Energy star computer settings	310	\$0	\$94,000
Fleet smaller vehicles	33	\$0	\$9,545
Fleet ethanol	1	\$0	\$0
HVAC Upgrade – Air Handlers (1)	573	\$200,000	\$112,000
HVAC Commissioning	340	\$120,000	\$71,159
HVAC Upgrade – Filters	607	\$372,323	\$184,053
EE – Fume Hoods	55	\$80,000	\$14,298
Building baseline awards	14	\$15,000	\$4385
HVAC Upgrade – Fans	914	\$1,574,464	\$277,048
Lighting Upgrades	835	\$1,797,762	\$252,919
HVAC Upgrade – Air Handlers (2)	174	\$550,000	\$45,328
Reduce fleet driving – bikes	1	\$2500	\$27

**4. Focus on identifying additional cost-effective GHG mitigation opportunities, such as energy conservation, and leverage the energy and creativity of UCSB students, faculty and staff.**

The mitigation mechanisms evaluated in our research are by no means exhaustive. Many opportunities for energy conservation on campus still exist, and the UCSB Facilities team has already demonstrated expertise in identifying these types of opportunities in both existing and new buildings. The University should continue developing energy efficiency and energy conservation projects, since these types of projects tend to be very cost effective. Since electricity and natural gas comprise the largest portion of UCSB’s GHG emissions, these are important areas to focus on.

Staff members on campus also possess a great deal of innovative thinking and environmental motivation. UCSB should leverage the energy and creativity of all

staff members who wish to promote resource conservation, and to evaluate their ideas seriously. Students on campus are also involved intimately as both consumers and drivers of campus culture. Through both formal and informal avenues, UCSB students are initiating projects that conserve campus energy resources. The ESLP, Bren and Environmental Studies programs have formal courses that can help engage faculty as project advisors. UCSB should seek to foster synergies between the different people on campus interested in reducing Campus GHG emissions.

**5. Work with administrators at other UC schools and the UCOP to lobby the state legislature to address capital budget funding reform.**

With an increasing body of evidence that climate mitigation can encourage resource conservation that protects the environment and institutional pocketbooks, UCSB should take this opportunity to address funding barriers that prevent the implementation of lifecycle cost evaluations. Although this may be the most difficult recommendation to implement, it may also be one of the most important as funding is probably the most important institutional barrier restricting emission reduction projects. UCSB needs to work with other UC schools to push funding reform related to capital budget on two issues:

- Allow the capital budget to borrow from the operating budget;
- Ensure that bid reversions stay with the campus to fund energy efficiency components that may have been removed during value-engineering.

These recommendations should allow UCSB to reap the multiple benefits previously discussed, including significant dollar savings, improved environmental performance, and positive public relations opportunities. Furthermore, UCSB's leadership on addressing climate change has the potential to have significant impacts beyond the UCSB campus, including:

- Mobilizing other public universities, in the UC system and beyond, to address climate change;
- Demonstrating the feasibility – indeed benefits – of meeting the first two commitments of the California targets; and,
- Educating the students of UCSB, as future consumers, investors, professionals, and leaders.

Ultimately, it is these longer term and broader scale implications of UCSB's actions today that make climate mitigation so important. As David Orr (2000), a professor of Environmental Studies at Oberlin College puts it, "*Education is done in many ways, the most powerful of which is by example.*" It is time for UCSB to educate – its students, other universities, and California businesses – by example.

<http://www.bren.ucsb.edu/research/documents/CCNThesis.pdf>



## APPENDIX E: PUSHING CCN I'S RECOMMENDATIONS FORWARD

CCN I made six key recommendations. Below we address each of the recommendations. We indicate what happened and why, and what we recommend as next steps.

### CCN I's Key Recommendations

1. UCSB should make a firm commitment to meet the California GHG reduction targets (2000 levels by 2010, 1990 levels by 2020).

In order to accomplish this, UCSB should:

2. Use aggregate GHG emissions targets as a metric in long-term campus planning documents.
3. Turn the "Sustainability Working Team" of the Campus Planning Committee's Subcommittee on Sustainability into a real Office of Sustainability.
4. Implement zero cost emissions reduction projects first, followed by the most cost effective (i.e., highest \$/ MTCO<sub>2e</sub>) projects.
5. Focus on identifying additional cost-effective GHG mitigation opportunities on campus, such as energy efficiency.
6. Work with administrators at other UC schools to press UCOP and the state legislature for capital budget funding reform as one of the top priorities.

### CCN II Addresses CCN I's Key Recommendations

**Recommendation #1:** Make a firm commitment to meet the California GHG reduction targets (2000 levels by 2010, 1990 levels by 2020).

- Outcome: The second target was initially omitted from the Campus Sustainability Plan.
- Cause of Outcome: No one placed pressure on the Subcommittee on Sustainability to include strong GHG language in the Campus Sustainability Plan. Lovegreen, however, continued to push for strong policy language, and got the additional policy language in the revised draft.
- **Next Step: Show campuswide support and get more power players on-board.** While Lovegreen gets Deans on board (power players), students should build a big coalition and attend the March CPC meeting.

**Recommendation #2:** Use aggregate GHG emissions targets as a metric in long-term campus planning documents.

- Outcome: Nothing was done.
- Cause of Outcome: There was no one identified to do it.

- **Next Step: Incorporate calculating GHGs as a metric into a job description.** Meet with Dewey and see if creating this metric would interest anyone in his department. If not, try to find someone interested in this issue (faculty or administration) to develop a feasibility study of how to accomplish it.

**Recommendation #3:** Turn the “Sustainability Working Team” of the Campus Planning Committee’s Subcommittee on Sustainability into a real Office of Sustainability.

- Outcome: An Office of Sustainability was incorporated into the Sustainability Plan, but remains a point of contention regarding specific funding and how it fits in the campus structure (as in, who the office members report to).
- Cause of Outcome: The CPC likes exact facts and figures. Rough approximations of a job description are not satisfactory. Details need to be incorporated to carry out a solid CBA. Also, no one outside the CPC pressured the group to vote yes.
- **Next Step: Use the existing champions to build a broad coalition.** Meet with the two existing champions, Lovegreen and Maynard, and help form a broader coalition of power players, such as deans. Then revise the Sustainability Plan to include the number of positions requested with their job description and funding requirements.

**Recommendation #4:** Implement zero cost emissions reduction projects first, followed by the most cost effective (i.e., highest \$/ MTCO<sub>2e</sub>) projects.

- a. Energy Star computer settings
  - Outcome: Participating departments are installing the Energy Star settings, but others are hesitant due to security/IT issues.
  - Cause of Outcome: Computer settings are a department-by-department issue (very decentralized). While some departments don’t want to take applicable security risks, other departments may not be aware of the choice.
  - **Next Step: Get the facts, then the champion.** We recommend finding someone in the IT department to help construct a pro’s and con’s of Energy Star settings (some people have security concerns). Identify someone who values this issue, ideally in the IT department.
- b. Purchase smaller fleet vehicles
  - Outcome: No action.
  - Cause of Outcome: Requests for vehicles are completed on a department-by-department basis.
  - **Next Step: Meet with the champion (Arjun Sarkar, Fleet Technician) and then the coalition (the existing Transportation Committee).** Have Sarkar propose that the committee write vehicle-purchasing guidelines for the transportation facilities.
- c. Convert fleet to ethanol
  - Outcome: This is already in the works: one car is on ethanol now (2007) and three to five are on order.

- Cause of Outcome: Sarkar and his supervisor are interested in alternative fuels and are willing to support its implementation.
- **Next Step: Meet with the champion, Sarkar, and see if the ethanol savings are being documented.** Our experience from lack of written records begs everyone doing good work to write it down! We recommend posting the information on the sustainability website so other CCN groups can access it.

**Recommendation #5:** Focus on identifying additional cost-effective GHG mitigation opportunities on campus, such as energy efficiency.

- Outcome: Dewey already identifies money-saving energy projects (partly due to being over-budget for the last five years).
- Cause of Outcome: Cost-effective energy efficiency projects are part of his job description.
- **Next Step: N/A**

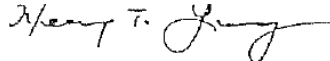
**Recommendation #6:** Work with administrators at other UC schools to press UCOP and the state legislature for capital budget funding reform as one of the top priorities.<sup>24</sup>

- Outcome: No action taken.
- Cause of outcome: The problem of the separation of budgets is actually a misconception (Williams interview, 2007). It is really a problem of a separation of decision making. The people who decide how to spend the capital budget are not responsible for impacts on the operating budget. There is no incentive structure to pay for sustainability in new buildings. Todd Lee adds that the separation actually protects the operating budget: “Most capital projects do not have a financial payback so if operating dollars could be used for capital projects, the actual operating budget would be reduced” (Lee interview, 2007).
- Next Step: The University must include Operations and Maintenance representatives in the value engineering process, and not just symbolically. Decisions made in this process impact *both* budgets. The budgets do not need to be combined, but decisions that affect them do.

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<sup>24</sup> Energy efficiency projects often get cut from new construction to save capital costs (in a process called value engineering), which burdens the operating budget in the future. But because the capital and operating budgets are separate, new construction projects cannot borrow from the operating budget to put in energy efficiency projects at the outset, which would save more money in the future.

## APPENDIX F: LEED SILVER—UCSB GREEN BUILDING POLICY

FROM: Henry T. Yang 

RE: Green Building Standards

I have received the recommendations of the Campus Planning Committee and the Central Campus Sustainability Committee that our campus establish the LEED Silver rating as a standard for new buildings beginning July 1, 2004. As you are aware, in July 2003, the UC Regents adopted a Green Building Policy for the University of California. This policy calls for the University to adopt energy-efficient, sustainable principles in the design and construction of capital projects to the fullest extent possible recognizing budgetary, regulatory, and programmatic constraints.

Due to the expertise of our faculty and staff and, especially, the enthusiasm and dedication of our students, our campus has become recognized as a leader in the field of green building design and construction. Accordingly, I place a very high priority on our campus meeting the policy established by The Regents, in particular the section calling for campuses to “strive to achieve a standard equivalent to LEED Silver rating. . . .” Since collectively you have the responsibility for overseeing our capital program or serve as control points on specific capital projects, I am asking that as a matter of practice you take the necessary steps to implement The Regents’ Green Building Policy *and* strive to achieve LEED Silver certification for new buildings approved after July 1, 2004. We should continue to monitor and evaluate rating systems for new green buildings (and eventually existing buildings as LEED policies develop) to ensure that our campus makes use of the most environmentally sound and cost-effective rating system available.

I want to thank everyone who has worked to establish our campus as a leader in green building design, particularly our students who continue to be leaders in the field of sustainability and green buildings.

[http://sustainability.ucsb.edu/client/pdf/Yang\\_LEED\\_Silver.pdf](http://sustainability.ucsb.edu/client/pdf/Yang_LEED_Silver.pdf)

## APPENDIX G: LEED PORTFOLIO

### UCSB & USGBC CORRESPONDENCE

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

PHYSICAL FACILITIES  
SANTA BARBARA, CALIFORNIA 93106-1030

October 30, 2006

Thomas W. Hicks  
Vice President, LEED®  
U.S. Green Building Council  
1015 18<sup>th</sup> Street NW, Ste. 508  
Washington, DC 20036

Dear Mr. Hicks:

At University of California, Santa Barbara (UCSB) we strongly believe that we have the responsibility to care for the environment of our planet and the health of the employees and other building occupants. We believe that performance under the LEED® Green Building Rating System is a key indication that we are achieving this important goal. As such, we seek to implement immediate & measurable actions that improve the environmental performance of our building portfolio. We anticipate that this enterprise-wide approach to green building will have significant financial benefits in addition to minimizing environmental impact.

We commit to work with USGBC on establishing a LEED-based system that we will be able to use to measure and improve environmental performance throughout all of our buildings, both new and existing. As an initial participant, we understand that we will have the first opportunity to take advantage of streamlined and volume-based LEED certification processes. We are pleased to enclose our commitment form outlining specific building commitments that will help us take significant steps towards making green building and operation our standard practice.

We understand that there are appropriate public recognition opportunities for our organization through participation in this endeavor, including during a public announcement of this program in November 2006 at the Greenbuild International Conference & Expo. By method of this letter we agree to allow USGBC to include us in that announcement as well as the list of organizations that are formally part of this initiative.

UCSB anticipates a long-term relationship with USGBC that benefits our organization and helps ensure that we have a healthy, sustainable and profitable future.

Sincerely,

A handwritten signature in black ink that reads "Jon Cook".

Jon Cook  
Acting Director Physical Facilities  
University of California Santa Barbara

Courtesy of Perrin Pellegrin

PILOT COMMITMENT FORM



1015 18th St. NW  
Suite 508  
Washington, DC 20036  
T: 202 828-7422  
F: 202 828-5110  
www.usgbc.org

**USGBC PORTFOLIO PROGRAM PILOT  
EXISTING BUILDING COMMITMENT FORM**

As part of its participation in the USGBC Portfolio Program ("Participant")  
UCSB pledges to:

- Register and actively work towards certification on 25 buildings, approximately \_\_\_\_\_ square feet, using the LEED for Existing Buildings Rating System.
- Establish clear internal performance guidelines and quality control procedures to ensure consistent performance throughout all specified building projects.
- Educate staff, vendors and stakeholders about commitment to green building and LEED.

**We understand that the U.S. Green Building Council will provide the following to support this commitment:**

- LEED-based verification and recognition of incremental steps toward certification that are implemented throughout all specified buildings.
- A volume-based certification process designed to minimize documentation by leveraging consistencies in building performance throughout the set of specified buildings.
- Discounted LEED registration and certification fees as specified on USGBC's Volume-Based Certification Discount Schedule, as may be amended from time to time by USGBC, at their sole discretion.
- Opportunities for public recognition of the Participant's commitment to green building and specific achievements verified using the LEED® Green Building Rating System.

**General terms:**

- All press releases and other publicly disclosed details about this commitment will be jointly issued and approved.
- This commitment will remain in force until December 31, 2011, and can be terminated by either party at any time with or without cause with no penalty. Notice must be given in writing by the signatory or representative of equal or greater authority.
- Good faith and informal procedures will be used as the general principle for resolving conflict, so as to preserve maximum public confidence in all entities involved.
- Discounted registration and certification fees only apply to projects specified under this commitment that are utilizing the volume-based certification process.
- No refunds will be given for already paid registration/certification fees.
- It is expressly understood that this Agreement does not create a partnership or common enterprise with respect to separate operations now being conducted by the USGBC and Participant.

**Senior Management Signatory:**

On behalf of UCSB, I commit to the specific commitment and terms outlined in this form. I understand that this commitment goes into effect upon the receipt and approval of this form by USGBC.

Signature J. Cook Date 11/3/06

Print Name: Jon Cook Title: UCSB Acting Director, Physical Facilities

Immediate & Measurable Achievement → Long-term Organizational Sustainability

Courtesy of Perrin Pellegrin

## APPENDIX H: CPC SUBCOMMITTEE ON SUSTAINABILITY



### Chancellor's Sustainability Committees Conference Session UCSB

1. **Committee Name:** Campus Planning Committee Subcommittee on Sustainability  
Formerly this work was completed under the Central Campus Sustainability Committee (CCSC)
2. **Formed:** CPC Subcommittee - January 2005  
CCSC was formed in 2002
3. **Reports to:** The CPC Subcommittee on Sustainability reports to the Campus Planning Committee
4. **Frequency of meetings:** The CPC Subcommittee meets once or twice per year  
The CCSC met quarterly (at times much more frequently)
5. **Membership composition:** The CPC Subcommittee is composed of the Associate Vice Chancellor for Campus Design & Facilities, Faculty, Staff, a Graduate Student, and a number of Undergraduate Students.  
CCSC was composed of Senior Managers, Faculty, Staff, Undergraduate and Graduate Students.
6. **Mission statements:**  
CPC Subcommittee was charged with developing the first Campus Sustainability Plan. They were to help select, and then work directly with, the campus sustainability consultant to develop the plan during this academic year.  
  
The CCSC's Mission: In striving to enhance UCSB practices and to make a truly "sustainable campus," we use the current budget constraints as an opportunity to look for ways to redefine roles played within our organization and reassess how we manage and assign work. On an annual basis we identified a number of areas for improvement, as they not only provided opportunities to reduce our environmental impact, but also opportunity to save the campus capital over time.
7. **Goals:** CPC Subcommittee: To craft the campus sustainability plan  
CCSC: Determined on an annual basis
8. **Funding:**  
The CPC Subcommittee:
  - a) Approximately \$150,000 in funding for 2005/06 to develop the campus sustainability plan.  
Through other methods (not under the CPC Subcommittee)  
On-going funding for the Campus Sustainability Manager, Perrin Pellegrin, provided by DCS/Facilities.  
Funding for the Campus Sustainability Procurement Coordinator-Scott MacKenzie (joint funding from various sources).  
Funding for the Sustainability Education and Outreach Coordinator-Katie Maynard (funded from various sources).  
Funding for a portion of Mo Lovegreen's work in sustainability is provided by the Department of Geography.
9. **Structure – Subcommittees or working groups?**
  - a) Change Agent groups met as needed to complete drafting their sections of the plan.
  - b) The Sustainability Working Team –formerly under the CCSC had met as often as 2 hours per week depending on what goals were being accomplished. In 2006, this group was reformulated to work under the CPC Subcommittee and met approximately once per month.
  - c) The Chairs of the change agent topic groups were pulled together 3 or 4 times to review work and talk about progress.
10. **Activities/events organized by the committee:** In Fall 2005 the campus consultants provided four workshops in the Natural Step process to train 75 Change Agents. As part of this process, Chairs of topical areas were identified to lead working teams and draft portions of the plan. Their work included goal setting, rough cost estimating, and prioritization. Perrin Pellegrin and Shari Hammond staff the CPC Subcommittee and are pulling together the required material (formatted like an EIR) for the plan.  
  
Work not under the CPC Subcommittee:  
Campus Sustainability Day  
ESLP Coordination  
Strategic Sourcing/Environmental Procurement Training  
Miscellaneous Guest Speakers and Presenters  
UC/CSU/CCC Sustainability Conference 2002, 2004, 2006, & 2007
11. **Accomplishments or achievements to date:**
  - When we completed the indicators, we found that many areas of the campus were already doing great things. Some examples are energy conservation measures by Physical Facilities and Housing & Residential Services, recycling,



water conservation, alternative transportation, and constructed wetlands (bioswale). Additional work in these areas has been encouraged by the committee.

- Following the success at Bren Hall, the construction waste management plan was used as a requirement for all campus projects.
- Hosted the first (2002), third (2004), fifth (2006), and soon the sixth UC/CSU Sustainability Conference.
- Fall 2002, formed Virtual Office of Sustainability, Central Campus Sustainability Committee (CCSC) and Sustainability Working Team (SWT).
- Academic year 2002/03 completed costing assessment of green buildings to assist Regental subcommittee with their recommendation on the clean energy and green building policy.
- Winter/Spring 2003 created a full-time position to work on sustainability (LEED NC/EB, Climate Emissions, Commissioning, Campus Sustainability Plan -Perrin Pellegrin's position).
- Academic year 2003/04 SWT/CCSC reached a consensus on UCSB indicators and populated them for benchmarking (General Information, Energy, Water, Land/Built Environment, Recycling/Waste Disposal, Transportation, and Purchasing).
- Academic year 2004/05 Perrin began to pilot LEED EB, handled oversight of all LEED NC projects and gathered documentation for ~5 buildings, worked to green seal certify custodial products to reduce the number of cleaning products used in the buildings.
- Physical Facilities piloted in-house commissioning.
- Education for Sustainable Living program began.
- Grounds department begins reduction of pesticides and starts their move to organic products.
- The SWT and CSSC completed the population of indicators for the campus.
- Late 2005 the CPC Subcommittee on Sustainability was formed. Consultants were hired to train change agents in the Natural Step process.
- Green Campus Interns began work on campus to save energy by student led conservation programs and to build student awareness around energy efficiency.
- Academic year 2005/06 Perrin completed LEED EB certification for Girvetz Hall – the first LEED EB project in the UC system. In addition, Perrin completed data collection and worked with a third party verifier to certify the campus under the California Climate Action Registry.
- Funding secured for an EPP Coordinator-Scott MacKenzie, and a Sustainability Education and Outreach Coordinator-Katie Maynard. Scott MacKenzie began the Sustainable Procurement Program. Katie Maynard began to pilot Education and Outreach initiatives and coordinate the UC/CSU/CCC conference. SCUP funding allowed us to fund ESLP projects in support of the campus sustainability plan.
- 75 Change Agents (made up of Faculty, Staff, & Students) were trained in the Natural Step process and began to create the Campus Sustainability Plan. A rough draft of their plans can be found at <http://www.sustainability.ucsb.edu/plan/goals/>

The teams are as follows:

Academic & Research	Landscape
Built Environment	Purchasing
Communications	Transportation
Energy	Waste
Food-UCen	Water
Food-Residential	Student Affairs

**12. Future plans:**

In 2006/2007 we will complete the vetting process for the Campus Sustainability Plan. Change Agent Topic Teams have identified short-term goals that will be reviewed by the CPC Subcommittee on Sustainability and prioritized.

[http://sustainability.ucsb.edu/client/pdf/conference2006/pres/Institutionalizing%20Sustainability/Chancellors%20Advisory%20Committee Institutionalizing%20Sustainability%20Track/UCSB\\_Chancellors%20Advisory%20Committee Institutionalizing%20Sustainability%20Track.pdf](http://sustainability.ucsb.edu/client/pdf/conference2006/pres/Institutionalizing%20Sustainability/Chancellors%20Advisory%20Committee%20Institutionalizing%20Sustainability%20Track/UCSB_Chancellors%20Advisory%20Committee%20Institutionalizing%20Sustainability%20Track.pdf)



## APPENDIX I: CPC REVIEW PROCESS FOR MAJOR CAPITAL PROJECTS

**CAMPUS PLANNING COMMITTEE**  
**PLANNING AND REVIEW PROCESS FOR MAJOR CAPITAL PROJECTS**  
*(Revised September 1998)*

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### I. INTRODUCTION

- An effective major capital planning and review process will:
- Encourage appropriate participation of faculty, staff, students and administration;
- Strengthen consultation and enhance confidence and trust between, and among the several campus constituencies;
- Ensure that the academic and physical planning objectives of the campus are appropriately coordinated and facilitate the successful implementation of UCSB's 1990 Long Range Development Plan (1990 LRDP) and the 2003 Campus Plan;
- Facilitate the identification and definition of major capital projects;
- Enhance priority setting;
- Ensure that the ground rules for funding of major capital projects are well understood;
- Ensure that the project planned is the project delivered by providing a mechanism for monitoring projects from inception to completion.

### II. OBJECTIVES OF THE REVIEW PROCESS

- Design and implement Major Capital Projects (State and non-State) that are consistent with the UCSB *Academic Planning Statement*, the UCSB 1990 LRDP and the 2003 Campus Plan in a timely, efficient and cost effective manner;
- Maximize the capital dollars available to UCSB from all sources. (Effective planning will enhance UCSB's credibility with the Office of the President, as it competes with other campuses for scarce resources.);
- Optimize the use of capital dollars;
- Establish a clear understanding of the academic, budgetary, land use, environmental, and aesthetic impacts for each major capital project.

### III. DEFINITIONS

#### A. MAJOR CAPITAL PROJECT:

A project that involves construction of a new building, renovation or addition to an existing building or improvements to the physical environment of the campus; whose total cost is over \$400,000.

- B. 5-YEAR STATE-FUNDED MAJOR CAPITAL IMPROVEMENT PROGRAM:**  
This document is prepared by each campus and updated on a yearly basis for inclusion in the Regents Capital Improvement Budget submitted to the Governor. Campus priorities for state funding are displayed in this plan. The Office of the President provides a yearly 5-Year funding target to each campus.
- C. PRELIMINARY PROJECT PROPOSAL (PPP):**  
A document that is used to explain the need for, benefits to the campus and general description of a proposed new major capital project prior to investment of campus resources.
- D. DETAILED PROJECT PROGRAM (DPP):**  
This is a process and document that studies in detail the requirements of the program and site associated with a new building or major renovation project and includes a detailed cost estimate.
- E. PROJECT PLANNING GUIDE (PPG):**  
This document is required for all State funded projects and for non-state funded projects over \$5 million. It justifies and describes the project for Office of the President and serves as a formal contract in regards to program and budget scope with State approval bodies. It includes a capital improvement budget and schedule along with narrative justification and project description.
- F. PRELIMINARY PLANS:**  
This is the phase of project development that includes schematic design and design development drawings.
- G. WORKING DRAWINGS:**  
This phase of project development follows preliminary plans and involves the preparation of the documents necessary for a contractor to bid and construct the project.

**IV. DESCRIPTION OF THE REVIEW PROCESS**

- A. REVIEW OF MAJOR CAPITAL IMPROVEMENT PROGRAMS (CIP)**  
The time line to develop the campus 5-7-Year State-funded CIP is the following:
  - Presentations of Needs and Priorities by campus leadership- Sept.-December
  - Planning Assumptions and Packet of potential projects provided to CPC- January
  - Review of 2-3 Alternative Plans prepared in consultation with CCP- February
  - Discussion by CPC - January-March
  - Recommendation of campus preferred plan by Chancellor- April
  - Campus submits 4-Year Plan to Office of the President- May 1
- B. GENERAL GUIDELINES FOR CAPITAL IMPROVEMENT PROGRAM**

- 5-Year funding target for State-funds for major capital projects is provided by the Office of the President;
- Areas that are fee-funded such as: Housing, Parking, University Center, Inter-Collegiate Athletics, and some student areas, are not eligible for state funding.
- Projects that are directly related to meeting the needs of undergraduate and graduate education, life safety and code corrections, major replacement or construction of campus infrastructure; e.g. sewer lines; and modernization of existing instruction and research buildings are given the highest priority.
- The campus strives for a balanced 5-7-Year Plan that addresses new building needs, campus infrastructure and modernization of existing buildings.
- Generally, a prior year's 5-7-Year Plan is considered a building block for the next year's Plan, to demonstrate continuity and planning. However, exceptions are not uncommon as a result of changes in Governor or Legislative priorities.

**C. SUBMISSION AND REVIEW OF NEW CAPITAL PROJECTS**

At any of the regularly scheduled Campus Planning Committee meetings, the Chancellor or any member of CPC may submit a Preliminary Project Proposal for a new, major capital project. Meetings are held on the last Tuesday of each month, with the exception of December. Normally CPC does not meet in July and August.

Prior to a proposed project being reviewed by the Campus Planning Committee the following steps should be completed: *(Anyone who has questions about procedures can contact the Director of Capital Development at ext. 8541.)*

- A clear written statement of the problem that requires a capital improvement and proposed solution;
- Review of problem and proposed solution by appropriate academic and/or non-academic administrators. For example, a proposal by a faculty member requires review by Chair, then review by Dean, and in the case of L&S review by Provost, and finally review by Executive Vice Chancellor. Proposal by a unit in Student Affairs requires review by Division head and then by Vice Chancellor.
- Proposing campus control point should contact Office of Capital Development within the Budget and Planning Office for assistance in preparing Preliminary Project Proposal (PPP). *(An outline is available in Office of Budget and Planning).*
- Campus Planning Committee reviews Preliminary Project Proposal over two meetings. At first meeting, Proposal is presented by Proponent. During next month, members consult with their constituents regarding the proposed project. At the next meeting, a recommendation is made to the Chancellor on whether the project should proceed with more detailed planning.

- Following approval by the Chancellor, proponent can proceed with more detailed planning, which typically involves hiring architectural consultant, site studies and preparation of cost estimate. Proponent works with Office of Capital Development and Office of Design and Construction during this phase. At this point, a Building Committee is appointed by the campus control point to oversee project planning, and ensure campus constituencies are represented and involved in the project planning process. The Chancellor, or upon assignment by him/her, a Vice Chancellor, appoints all Building Committees.
- Following completion of Detailed Project Program (DPP), project is presented to Campus Planning Committee for review. Again review takes place over two months, with DPP presented in first month and recommendation made to Chancellor at second meeting. Recommendation to Chancellor is whether project should be approved by Chancellor and as necessary, by Office of the President and Regents, and if the project should proceed into schematic design. Proceeding with formal University approval requires all funding for the project to be identified.
- Following formal University approval and selection of an Executive Architect, the project proceeds into schematic design. This phase is managed by a project manager from Design and Construction Services, who works with Executive Architect and Building Committee.
- Following completion of schematic design, the project is presented to CPC for its final review. CPC reviews the program, design, site layout, and budget. Again review occurs over two meetings. During second meeting CPC recommends to the Chancellor whether the project should proceed into Working Drawings. If project is over \$5 million, schematic design and any environmental review documents must be approved by The Regents, prior to start of Working Drawings.

**(All projects are reviewed by the campus' Design Review Committee, during the detailed planning, and the beginning-middle-end of schematic design.)**

- No further reviews of the project by CPC are required unless significant budget or program changes are proposed.
- D. CHANCELLOR REVIEW AND APPROVAL OF NEW CAPITAL PROJECTS**  
 In conjunction with the Design Review Committee, recommendations are forwarded to the Chancellor for his/her review. The Chancellor will make the final determination regarding Preliminary Project Proposals, Siting, Detailed Project Programs, Schematic. H/she will then direct the Office of Budget and Planning to incorporate approved projects in the Campus State and Non-State Funded Capital Improvement Programs.
- E. MONITORING CAPITAL PROJECTS**
- To facilitate project monitoring, a copy of the Project Planning Guide (PPG), Detailed Project Program (DPP), and Environmental Impact Report (EIR) will be made available to members of CPC.
  - The Campus Planning Committee will review the selection process for executive architects for major capital projects.

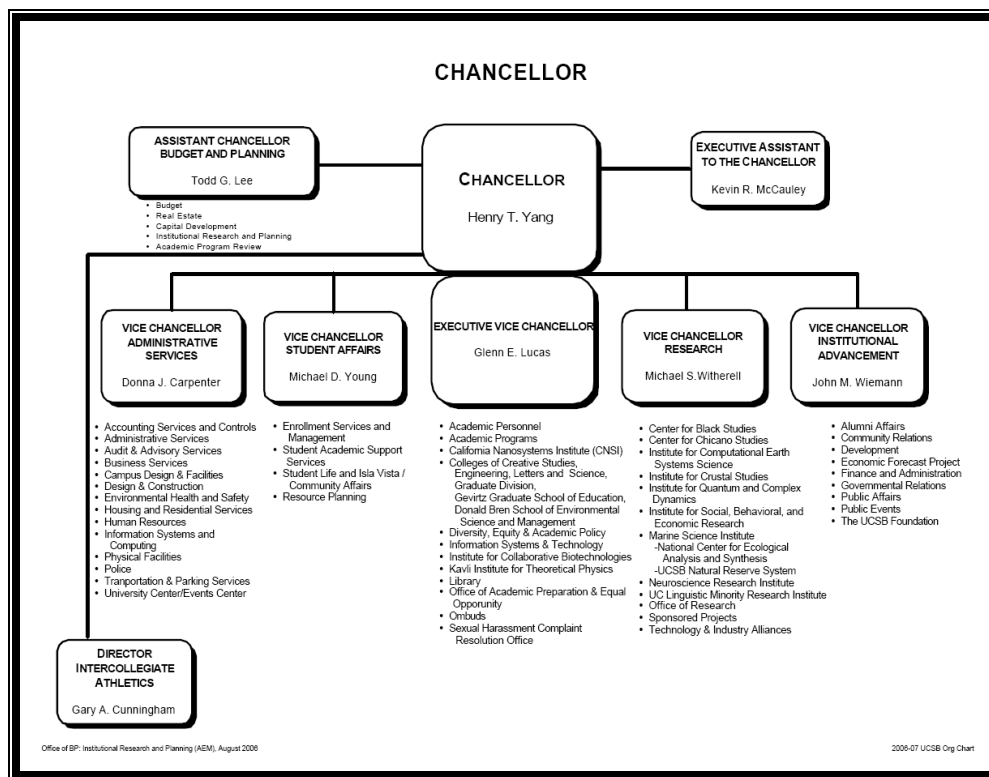
- DRC will participate in selection of an Executive Architect; review the schematic design of each major capital project, and make recommendations to the Campus Planning Committee and to the Chancellor.
- The Campus Planning Committee will receive a status report on all major capital projects at its monthly meeting.
- The Campus Planning Committee will periodically receive a comprehensive up-to-date list and schedule of potential building renewal and modernization projects and descriptions. *(See Committee Amendments, beginning pg.4)*

Items 6a through 6e will allow members of the Campus Planning Committee to monitor the progress of all major capital projects and assess, or reassess the academic impacts of projects as they evolve, in response to changes in budget, scope, site selection or other variables.

[http://bap.ucsb.edu/capital.development/cpc/cpc\\_planning\\_review\\_process.pdf](http://bap.ucsb.edu/capital.development/cpc/cpc_planning_review_process.pdf)

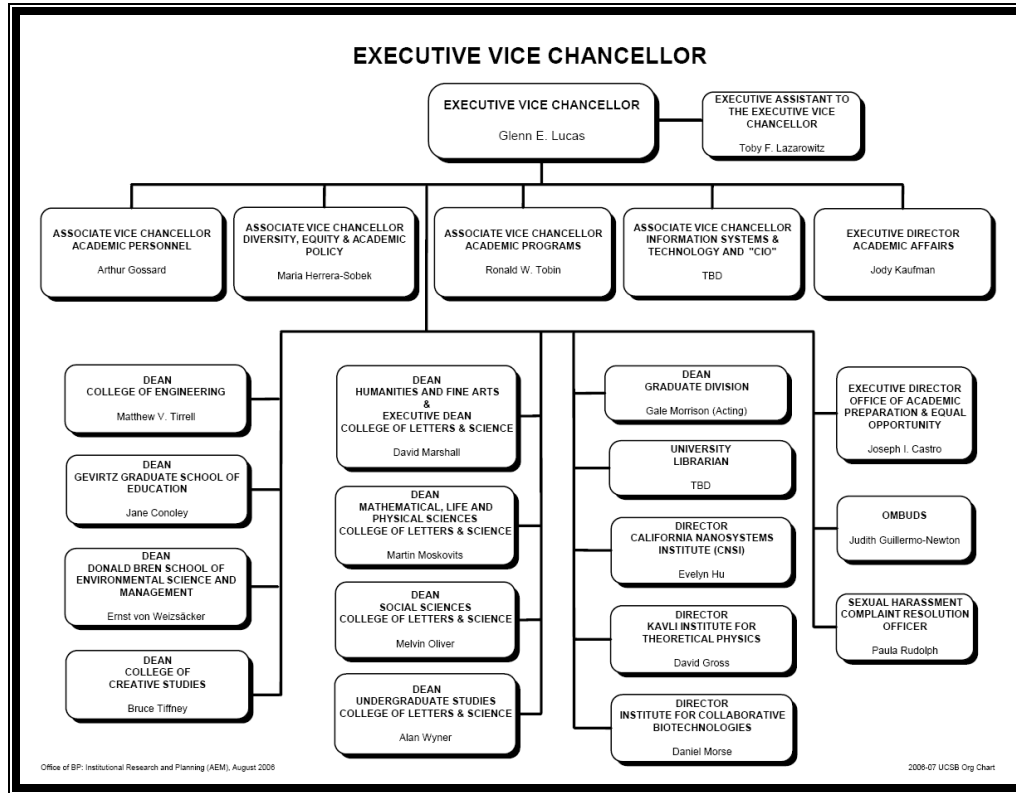
## APPENDIX J: UCSB ORGANIZATION CHARTS

### CHANCELLOR



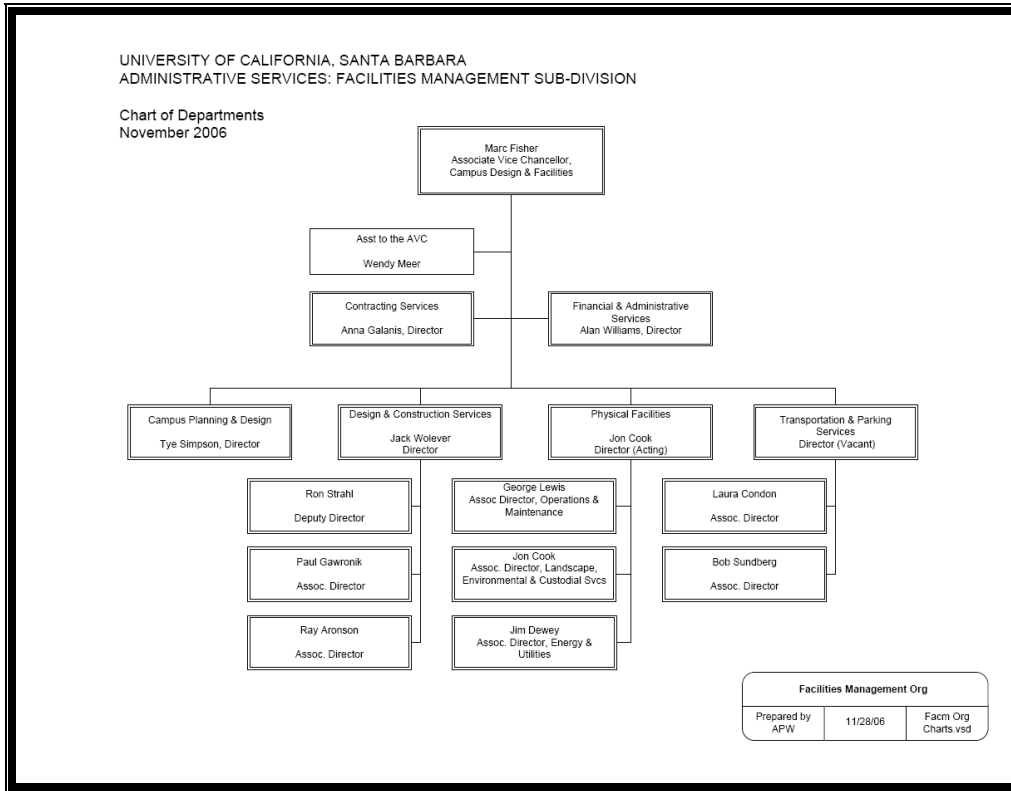
<http://bap.ucsb.edu/IR/orgcharts/charts0607/chancellor.pdf>

EXECUTIVE VICE CHANCELLOR



<http://bap.ucsb.edu/IR/orgcharts/charts0607/evc.pdf>

# FACILITIES MANAGEMENT

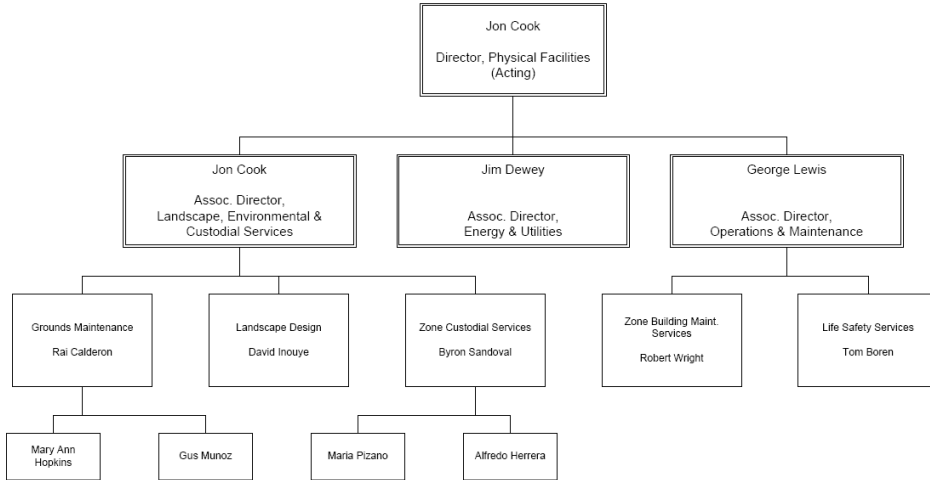


[http://facilities.ucsb.edu/client/pdf/fm\\_org\\_chart.pdf](http://facilities.ucsb.edu/client/pdf/fm_org_chart.pdf)



PHYSICAL FACILITIES

UNIVERSITY OF CALIFORNIA, SANTA BARBARA  
 ADMINISTRATIVE SERVICES: FACILITIES MANAGEMENT SUB-DIVISION  
 Physical Facilities Organizational Structure  
 November 2006



FM: Physical Facilities Org		
Prepared by APW	11/28/06	FACM Org Charts.vsd

[http://facilities.ucsb.edu/client/pdf/pf\\_org\\_chart.pdf](http://facilities.ucsb.edu/client/pdf/pf_org_chart.pdf)

## **APPENDIX K: UC GREEN BUILDING AND CLEAN ENERGY POLICY**

### **UNIVERSITY OF CALIFORNIA POLICY GUIDELINES FOR THE GREEN BUILDING DESIGN, CLEAN ENERGY STANDARDS, AND SUSTAINABLE TRANSPORTATION PRACTICES**

Resource sustainability is critically important to the University of California, the State of California, and the nation. Efficient energy use is central to this objective, and renewable energy and energy-conservation projects provide a means to stabilize campus budgets, increase environmental awareness, reduce the environmental consequences of University activities, and provide educational leadership for the 21<sup>st</sup> century.

On July 17, 2003, The Regents of the University expressed their support for a Presidential policy to promote "...the principles of energy efficiency and sustainability in the planning, financing, design, construction, renewal, maintenance, operation, space management, facilities utilization, and decommissioning of facilities and infrastructure to the fullest extent possible, consistent with budgetary constraints and regulatory and programmatic requirements." At their September 2005 meeting, The Regents authorized the President to incorporate sustainable transportation practices into this Policy. Transportation to and from and within the campus grounds has a significant impact on air quality, and affects both the campus landscape and relations with surrounding communities. It is desirable, therefore, to effectively manage transportation demand, provide transportation options and encourage the use of low-impact vehicles, non-fossil fuels, and creative modes of transport, while ensuring maximum campus access and preserving lifestyle features. This approach to transportation services is a necessary component of the University's sustainability efforts.

The University of California is committed to improving the University's effect on the environment and reducing the University's dependence on non-renewable energy. Guidelines for implementing practices in support of Green Building Design, Clean Energy Standards, and Sustainable Transportation Practices are explained in detail in the following plan for achieving these goals.

#### **I. Green Building Design**

- a. Given the importance of energy efficiency to Green Building design, the University has set a goal for all new building projects, other than acute-care facilities, to outperform the required provisions of the California Energy Code (Title 24) energy-efficiency standards by at least 20 percent. Standards for energy efficiency for acute care facilities will be developed in consultation with campuses and medical centers.

- b. The University of California will design and build all new buildings, except for laboratory and acute care facilities, to a minimum standard equivalent to a *LEED*<sup>TM</sup> 2.1 “Certified” rating.
- c. Campuses will strive to achieve a standard equivalent to a *LEED*<sup>TM</sup> “Silver” rating or higher, whenever possible within the constraints of program needs and standard budget parameters.
- d. Given the importance of specifically addressing sustainability in laboratory facilities, the University of California will design and build all new laboratory buildings to a minimum standard equivalent to a *LEED*<sup>TM</sup> 2.1 “Certified” rating and the *Laboratories for the 21<sup>st</sup> Century (Labs21) Environmental Performance Criteria (EPC)*, as appropriate. The design process will include attention to energy efficiency for systems not addressed by the California Energy Code (Title 24).
- e. Any proposed exception from the above standards may be requested administratively during preparation of the Project Planning Guide (PPG). Any exception proposed after approval of the PPG will be treated as a scope change and processed in accordance with standard University procedures.
- f. Further study will be conducted before a similar sustainable design policy for new acute-care facilities is adopted.
- g. Any significant renovation projects involving existing buildings will also apply sustainability principles to the systems, components and portions of the building being renovated.
- h. In consultation with the campuses, the Office of the President will develop an internal evaluation and certification standard based on the *LEED*<sup>TM</sup> and *Labs21* measures.
- i. Campuses may choose to pursue external certification through the *LEED*<sup>TM</sup> process, augmented with *Labs21* criteria as appropriate for laboratory systems, in lieu of the internal process for a given project.
- j. The measures required by this policy will be incorporated into all new building projects, other than acute care facilities, submitted for first formal scope and budget approval as of July 1, 2004.
- k. To the extent feasible within approved funding, campuses are encouraged to apply sustainability principles to all projects currently in design.
- l. 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.
- m. For existing buildings, the University will explore the development of a standard methodology for sustainable policies and standards for facilities management, including assessing the *LEED*<sup>TM</sup> Existing Building (*LEED*<sup>TM</sup> *EB*) evaluation tool being developed for this purpose. These policies and standards will address aspects of building cleaning, maintenance, and operation to include factors such as chemical usage, indoor air quality, utilities, and recycling programs.
- n. The University will work closely with the U.S. Green Building Council, *Labs21*, the Department of Energy, the U.S. Environmental Protection Agency, State government, and other organizations to facilitate the improvement of evaluation

- methodologies to better address University requirements. Additionally, the University will work with the U.S. Green Building Council to develop a self-certification tool for University use.
- o. The University will use its purchasing power to promote the availability of products that are resource-efficient, energy-efficient, water-efficient, and of recycled and rapidly renewable content for building materials, subsystems, components, equipment, and supplies.
  - p. The University will work with regulatory agencies and other entities to speed the development, approval, and implementation of products and technologies that improve energy efficiency and support sustainable design, construction, and operating practices.
  - q. The University will develop a program for sharing of best practices.
  - r. The University will incorporate the Green Building Design policy into existing facilities-related training programs, with the aim of promoting and maintaining the goals of the policy.

## II. Clean Energy Standard

- a. The University will implement a systemwide portfolio approach to reduce consumption of non-renewable energy. The portfolio will include a combination of energy efficiency projects, the incorporation of local renewable power measures for existing and new facilities, green power purchases from the electrical grid, and other energy measures with equivalent demonstrable effect on the environment and reduction in fossil fuel usage. The appropriate mix of measures to be adopted within the portfolio will be determined by each campus. Since each campus's capacity to adopt these measures is driven by technological and economic factors, the campus will need to reevaluate their energy measures mix on a regular basis. The portfolio approach will provide valuable analytical information for improving energy efficiency, resulting in an overall improvement in the University's impact on the environment and reduced reliance on fossil fuels during the next decade of capital program growth.
- b. The University will strive to achieve a level of grid-provided electricity purchases from renewable sources that will be similar to the State's Renewable Portfolio Standard, which sets a goal of procuring 20 percent of its electricity needs from renewable sources by 2017. The University will initiate progress towards this objective in 2004 by purchasing 10 percent of grid-supplied electricity from renewable sources, subject to funding availability, and will track progress annually toward achievement of the year 2017 goal.
- c. With a goal of providing up to 10 megawatts of local renewable power by 2014, the University will develop a strategic plan for siting renewable power projects in existing and new facilities. The plan will include demonstration projects for photovoltaic systems and other renewable energy systems, such as landfill gas fueled electricity generation or thermal energy production. The strategic plan will include criteria for evaluating the feasibility of a variety of projects, such as incorporating photovoltaic systems in replacement roofing projects and in new

buildings, as well as forecasting the accommodations necessary for eventual installation of photovoltaic systems. The University will assess the progress of renewable energy technology improvements, both in terms of cost and technical efficiency. To achieve the renewable power goal, the University will maximize the use of available subsidies and negotiate pricing reductions in the marketplace, and will develop funding sources for financing the costs of renewable energy measures.

- d. With a goal of reducing systemwide non-renewable energy consumption, the University will develop a strategic plan for implementing energy efficiency projects for existing buildings and infrastructure to include operational changes and the integration of best practices. The plan will identify opportunities to incorporate energy retrofit projects into major building renovations as funding is available, and to initiate standalone retrofit projects as justified by future energy savings. The University will monitor industry progress in energy retrofits and implement technical improvements as they become available. As with renewable energy projects, the University will develop funding sources and establish a program for financing retrofit projects. The initial goal for energy efficiency retrofit projects will be to reduce systemwide growth-adjusted energy consumption by 10 percent or more by 2014 from the year 2000 base consumption level. The University will strive to achieve even greater savings as additional potential is identified and funding becomes available.
- e. The University will continuously evaluate the feasibility of other energy-saving measures with equivalent demonstrable effect on the environment and reduction in fossil fuel usage. In particular, campuses will strive to implement the Sustainable Transportation Practices described in Section III, below.
- f. The University will develop a variety of funding sources and financing alternatives for energy efficiency, renewable energy, and clean energy projects that will enable campuses to be flexible in addressing their energy needs.
- g. The University will pursue marketing of emissions credits as a means to bridge the cost-feasibility gap for green power projects.
- h. With an overall goal of reducing greenhouse gas (GHG) emissions while maintaining enrollment accessibility for every eligible student, the University will pursue the development of a long term strategy for voluntarily meeting the State of California's goal, pursuant to the Governor's Executive Order S-3-05, that is: by 2010, to reduce GHG emissions to 2000 levels; by 2020, to reduce GHG emissions to 1990 levels; by 2050, to reduce GHG emissions to 80 percent below 1990 levels.
- i. The Senior Vice President, Business and Finance, in coordination with campus administration, faculty, students and other stakeholders (the Sustainability Group), will research options for collection, monitoring, and certification of energy use and greenhouse gas (GHG) emissions. The Sustainability Group will develop an in-house methodology by which to collect, monitor, and certify energy use and GHG emission, and will pursue an affiliate membership with the California Climate Action Registry (CCAR). The methodology will include development of a "higher education protocol" to allow for normalization of data

and accurate reporting procedures. The Sustainability Group will monitor progress toward reaching the stated goals for GHG reduction, and will evaluate suggestions for programs to reach these goals. The Sustainability Group will also examine the feasibility of developing benchmarking processes to measure overall energy use over time.

### III. Sustainable Transportation Practices

#### Metrics and Benchmarking

- a. In implementing a most efficient and effective economic and environmental strategy for campus fleets, campuses shall implement practicable and cost-effective measures, including, but not necessarily limited to, the purchase of the cleanest and most efficient vehicles and replacement tires, the use of alternative fuels, and other conservation measures. With the goal of measuring all campus fleet vehicles fuel consumption reduction, campuses will collect and report to the Office of the President fuel consumption for 2005-06.
- b. Campuses will be encouraged to collect data on Average Vehicle Ridership (AVR) of commuters. AVR is defined as the number of trips to campus divided by the number of automobiles used for those trips ( $AVR = \text{trips}/\# \text{ automobiles}$ ). Campuses may use this data to set goals for reduction of fuel consumption. AVR data may also be used in conjunction with transportation mode split data to develop maps of distance “zones” surrounding the campus, and to model each zone’s proportionate share of various commuting modes (e.g., percentage of bicycle or single-occupancy vehicle trips within 0-2 miles from the central campus core).
- c. The Senior Vice President, Business & Finance has made a written request to major automobile manufacturers expressing both the University’s commitment to work with industry to provide vehicle and fuel choice, and the expectation that industry will provide these choices to the fullest extent possible. The Sustainability Group will continue to work with State agencies to facilitate the purchase and use of LEV, ZEV, and alternative fuel vehicles by the campuses, and to find solutions for increasing the availability of an affordable supply.
- d. Using the time period 2004-2005 as a baseline, campuses will strive to increase the percentage of low (PZEV) or zero-emission vehicles (ZEV) by 50% by the year 2009-2010, or to increase the number of PZEV and ZEV vehicles by 20% by the year 2009-2010, whichever is more feasible, and/or to convert campus vehicles to 50% non-carbon based fuel by year 2009-2010.
- e. The University will work with regulatory agencies and other entities (e.g., regional transit agencies, air quality management districts) to speed the development, approval, and implementation of programs and technologies that support the goals of sustainable transportation as related to the increased use of biodiesel or other alternative fuel sources.

#### Transportation Programs

- a. The University will continue to facilitate the sharing of best practices within the University and among other educational institutions. In particular, the University will continue to participate in Transportation Sessions at the annual UC/CSU/CCC Campus Sustainability Conference, building on the success of transportation information shared at the 2005 Conference.
- b. The University will develop a mechanism for ongoing involvement of undergraduate and graduate students in efforts toward achieving sustainable campus transportation. The means may include but are not limited to undergraduate and graduate internships and/or scholarships for relevant conference attendance. The Office of the President will begin funding an internship for one to two students in Academic Year 2005-06 and continuing until Academic Year 2009-10 or longer. At that time, the program's results will be reviewed and the Senior Vice President, Business and Finance will determine whether or not to extend the program.
- c. Within three years of issuance of these guidelines, each campus will implement a pre-tax transit pass program to facilitate the purchase of transit passes by University employees, or will establish a universal access transit pass program for employees.
- d. The University will pursue the introduction of ride-share programs at each campus for all eligible program participants, where available. In conjunction with this effort, campuses will engage in advocacy efforts with local transit districts to improve routes in order to better serve student and staff ridership.
- e. To the extent practicable, campuses will develop a business-case analysis for any proposed parking structure projects.

#### IV. Authority and Report Schedule

The Regents have delegated authority to the President for promulgating policy promoting sustainable new capital projects, existing University facilities, and campus transportation resources. The President has delegated authority to the Senior Vice President, Business and Finance for further definition of measures to implement University policy regarding sustainability. Chancellors are responsible for implementation in the context of individual building projects, facilities operations, and transportation projects and programs.

On an annual basis, the President will provide a report to The Regents detailing the impact of the University's sustainability efforts on the overall capital program, University operating costs, energy use, and campus transportation resources. The University's sustainability guidelines will be subject to continuous review. The guidelines will be reexamined every three years, with the intent of developing and strengthening implementation provisions and assessing the influence of the guidelines on existing facilities, new capital projects, plant operating costs, fleet and transportation services, and campus accessibility, mobility, and livability. The University will provide means for the ongoing active participation of students,

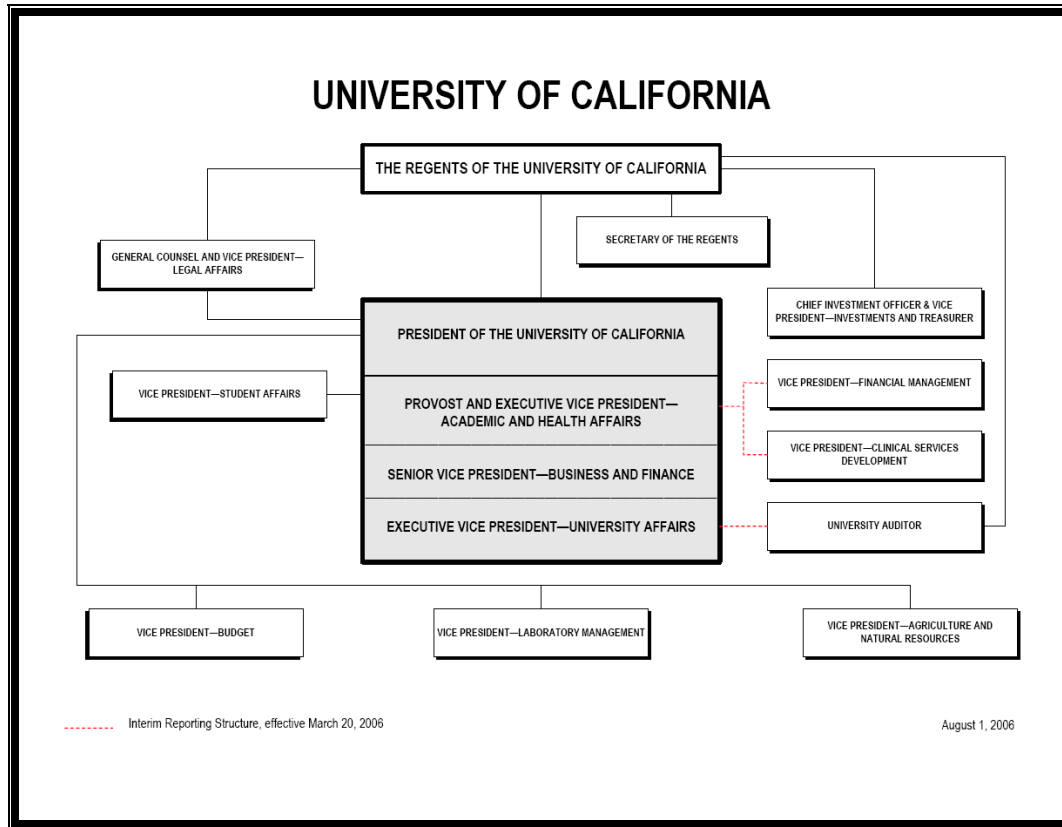
faculty, administrators, and external representatives in further development and implementation of the Policy on Green Buildings, Clean Energy and Sustainable Transportation Resources.

<http://www.ucop.edu/facil/sustain/documents/ucregentgreenbldg.pdf>



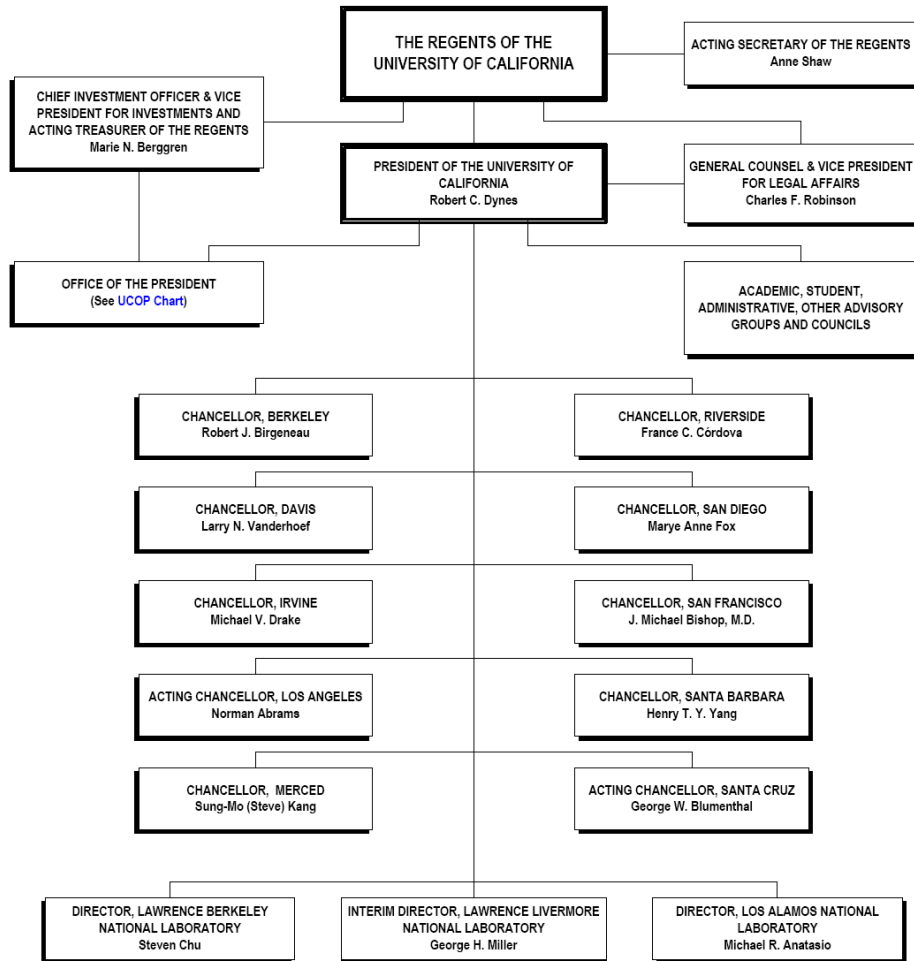
## APPENDIX L: UC ORGANIZATION CHARTS

### UNIVERSITY OF CALIFORNIA 1



<http://www.ucop.edu/ucophome/coordrev/images/pdf/ucchart.pdf>

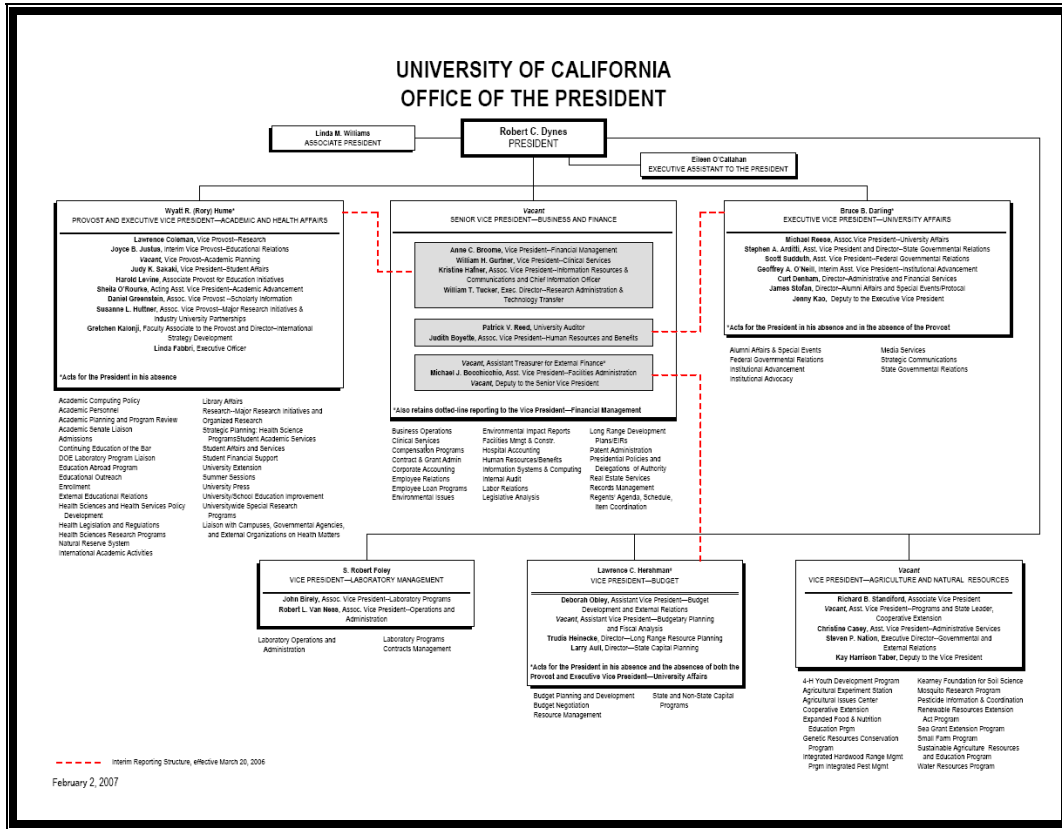
## UNIVERSITY OF CALIFORNIA ORGANIZATION CHART



March 1, 2007

<http://www.ucop.edu/ucophome/coordrev/images/pdf/chancs.pdf>

OFFICE OF THE PRESIDENT



<http://www.ucop.edu/ucophome/coordrev/images/pdf/opchart.pdf>

## APPENDIX M: OTHER CCN CAMPAIGNS

### CCN Campus Projects

#### **UC – Santa Barbara:**

- CCN 1 – a group research project under Professor Oran Young - was a great success – with students helping to find and support a potential \$1.5 million in energy savings per year on the UCSB campus. The group created a set of model materials: project proposal, periodic updates, a final brief, a final poster, and a final report on getting the campus to climate neutrality.
- The project has renewed and CCN 2 will focus on how to change the behaviors of the various groups on campus (students, professors, administrators, etc.) to begin to implement the students' plan. CCN 2 will also create a model for others to follow.

#### **UC-Boulder:**

- CU Law School's Energy and Environment Security Initiative – EESI Director Professor Lakshman Guruswamy and Fellow Kevin Doran – have proposed a law-student driven energy audit, GHG inventory, and climate neutral reduction plan.
- EESI is interested in collaborating on a project to catalyze creation of Multidisciplinary Environmental Centers & Clinics for Advanced Solutions (MECCAS). This overlaps with the past Clinical Task Force work NAELS students have done and a survey of multidisciplinary environmental clinics done by EESI. The goal is to give students the resources they need to catalyze creation of similar clinics, and projects, at their schools.

#### **University of Florida & Costa Rica:**

- NAELS Board member & UFL Professor Tom Ankersen – who runs the Environmental & Land Use Law Clinic – will run a CCN project with law students at the Levin College of Law at UFL as part of the Clinic. The group will analyze UFL's carbon footprint and lay out paths to go climate neutral.
- Professor Ankersen, who also runs the Conservation Clinic (a joint program between UFL and Costa Rica) has recently encouraged UCR to use the CCN model to go climate neutral as well, developing a carbon budget as the starting point for going neutral.

#### **UCLA**

- Presented CCN to Mary Nichols, Director of the Institute for the Environment at UCLA, and her sustainability committee.
- Mary is an advisor on CCN 1 at UCSB and gave the project much praise.
- Mary hopes to replicate the project at UCLA, but has not responded to recent e-mails.

#### **UC - Berkeley**

- Law student (and NAELS Governing Board member) Scott Zimmerman, and undergraduate Brooke Oywang, used the CCN 1 model to help convince UC – Berkeley to measure and reduce their emissions. Brooke has now been hired on as sustainability coordinator for UCB. Scott will continue to work on the effort next year with the UCB ELS.

### **Roger Williams U (RI)**

- The Roger Williams U ELS – which has two NAELS GB members on it – plans to launch CCN on their campus as a research project in the fall.
- They already have two law professors – faculty and ELS advisors - interested in hosting the project.
- RWU is interested in both the campus GHG reduction and state policy projects.

### **Vermont Law School**

- NAELS Governing Board member Vincent Calvano and the VLS ELS are spearheading a CCN campaign at Vermont. Vince is looking into changing endowment investment practices, and convince the school to move towards GHG reduction and eventual climate neutrality.
- This work will also connect NAELS to VLS' new Institute on Energy and the Environment, run by Professor Michael Dworkin.

### **Pace**

- In 2005-2006, Pace worked with NAELS to host a Climate Summit at the law school. The event was co-sponsored by the Environmental Consortium of Hudson Valley Colleges and the Pace Environmental Center (run by John Cronin). The event was a huge success
- In 2006-2007, NAELS will look to work with Pace's ELS to launch a CCN campus GHG reduction project. I have been invited to – and will be speaking at – a Consortium event on November 17 in New York.

### **Yale**

- Yale recently completed a GHG inventory and is now looking to reduce emissions. I will meet with Dean Gus Speth and Sustainability Coordinator Julie Newman on August 9 to discuss using the CCN model.
- Devorah Ancel (NAELS Governing Board), a joint degree student at VLS and Yale will spearhead efforts next year as she spends her year in New Haven.

### **Harvard**

- Harvard's ELS recently joined NAELS for the first time in several years.
- I will meet with the Director of Harvard's Green Campus Initiative – Leith Sharp – on August 11 to discuss the possibility of CCN at Harvard.

### **University of Michigan**

- There is interest in CCN from the U of M ELS and students at the School of Natural Resources and the Environment (SNRE), and Business school. U of M recently opened up a sustainable energy center, though, so it is not clear what value an additional graduate student initiative would have. I will meet with students in the fall to pursue this.

### **University of Indiana – Bloomington**

- A cross section of students from the law school, business school, and school of public and environmental administration, are interested in launching a CCN project at UI-B.

Professor Kenneth Richards – who teaches environmental economics at SPEA – has advised.

#### **University of Arkansas – Fayetteville**

- NAELS Summer Intern Craig Raysor is working on a paper, website, and event to highlight the overlap between agricultural and climate/energy issues. Craig's research will focus on Ethanol, but he has also amassed a good summary of links and resources for other students who would like to follow threads of the ag/climate interface.

#### **CCN State Policy Projects:**

##### **Chicago – Kent**

- *IL State Climate Policy Research Project*
  - This past fall, Chicago-Kent's Program in Environmental and Energy Law (PEEL) took on the first of CCN's law and policy projects.
  - The individual research led to a CCN in Illinois ppt that the students presented to the Environmental Section of the IL State Bar Association.
  - Participating students - Stephen Janasie, Aakruti, and Ellen Bluestone registered for Professor A. Dan Tarlock
  - Format: Two-credit environmental law seminar: International Environmental Law & two-credit independent study.

##### **Roger Williams U (RI)**

- *RI State Climate Policy Research Project*

##### **University of South Carolina**

- *Possible SC State Climate Policy Research Project*

##### **PIRGs**

- PIRGIM (MI) is looking for law students to work on state energy policy
- Texas PIRG is looking for law students to work on state energy policy
- Ohio PIRG looking for law students to work on state energy policy

Courtesy of Dan Worth, NAELS

**APPENDIX N: BIO-BIBLIOGRAPHY FORM FOR FACULTY REVIEW**

I-28

**BIO-BIBLIOGRAPHY UPDATES**

(Revised 11/06)

Each faculty member is responsible for updating his or her bio-bibliography (bio-bib) on an annual basis to assist the department chair in the annual review of all faculty (APM 220-80 b). The annual bio-bib update is maintained in the departmental file and an updated bio-bib must be submitted with each personnel review.

**Sample Bio-Bibliography Form**

(Page 1)

**BIO-BIBLIOGRAPHY**

**University of California, Santa Barbara**

**Name**

**Date**

**Academic Title**

**Last update filed on**

**This update refers to the period**

Curriculum Vitae

**Education**

**Institution, degree, date of degree**

**Area of Specialization**

**Previous Academic or Professional Appointments**

**Year, title, institution**

**Professional Organizations**

(Page 2)

**PART I. RESEARCH**

**Cumulative List of Publications (or Creative Activities)**

<b>#</b>	<b>Year</b>	<b>Title and Authors</b>	<b>Publisher</b>	<b>Category</b>

(Please draw line after items listed for prior review; indicate items previously listed as Work In Press, Work Submitted, or as Work In Progress.)

(Indicate priority of authorship when possible on jointly authored work.)

**Work In Press**

#	Year	Title and Authors	Publisher	Category
B-1 etc.				

**Work Submitted**

#	Yr Subm.	Title and Authors	Publisher	Category
C-1 etc.				

**Work In Progress (optional)**

Title and Authors	Potential Publisher	Category

\*Previously listed as Work In Press

\*\*Previously listed as Work Submitted

\*\*\* Previously listed as Work In Progress

{ENTER STATEMENT OF DEPARTMENTAL TEACHING LOAD; AND EXPLANATION OF ANY COURSE RELIEF}

**PART II. TEACHING**

(Annual Teaching List, available from Budget and Planning, may be substituted for the bio-bib list of catalog courses)

**Catalog Courses**

Qtr	Course no., Title	Class Type	Units	Hrs/wk	Enrollment	Eval. Avail.

**Undergraduate Projects Directed**

Student	Project	Chair/Member	Yr Deg Compl.

**Graduate Degree Committees  
MA Committees**

Student	Yr Deg. Compl.	Chair/Member	Optional Info (e.g., Current Employment)

**PhD Committees**

Student	Yr Deg. Compl.	Chair/Member	Optional Info (e.g., Current Employment)



**Postdoctoral Scholars Supervised**  
Year

**Name**

**Other Teaching Contributions** (course improvements, new courses, honors seminars, etc.)

**PART III. PROFESSIONAL ACTIVITIES**

**Lectures Presented**

Month/Yr	Title	Meeting/Place

**Grants and Contracts**

Years	Source	Title	Amt.	PI

**Awards and Honors**

**Reviewing and Refereeing Activity**

Date	Activity and for Whom

**Special Appointments** (e.g., Editorships, Officer of Prof. Organization)

Years	Position	Type of Service

**Other Professional Contributions** (e.g., Consulting or other application of your professional expertise)

**PART IV. SERVICE**

**University Service** (Including administrative posts held)

Years	Position	Type of Service

**Public Service** (including service to K-12 Education)

Years	Position	Type of Service

<http://www.acadpers.ucsb.edu/forms/>