Proposal to Transform the UCSC Campus into UC's Sustainable Community (UC-SC)

Assuming there is no need for further debate about the sweeping social changes that will be necessary to transform the world's communities and especially our communities in the United States into sustainable societies, we should now be asking ourselves: where should these changes begin and how should they be implemented? What better place to begin than at the universities and what better university than UCSC? Universities are the expected sites of innovation and the obvious training ground for the generations that will confront the future issues of sustainability and they will live with the consequences of their success and failure. Why UCSC? The campus itself has an abundance of open land, California sunshine, natural springs and is populated by a progressive student body, faculty, staff, and administration, which are already committed to sustainability in many ways. There are already numerous organizations focused on sustainability on campus (e.g., the CASFS program, the Student Environmental Center, the Food Systems Working Group, the Campus Sustainability Council, the Program in Community and Agroecology, and the Green Campus Program). Important goals for the campus are outlined in the UCSC 2007 Sustainability Assessment. Indeed, the campus is an ideal location and the groundwork has been done. The question becomes: Is UCSC ready to unify and expand all the sustainability activities on campus and to make a comprehensive campus-wide sustainability agenda that would transform UCSC into UC’s sustainable community (UC-SC)?

The concept: As a sustainable community, everyone on campus, regardless of their major or area of responsibility would participate in sustainability in one way or another. The campus would strive to produce 100% of its energy needs locally with renewable energy and produce its own food and water, while creating zero net waste, including zero net greenhouse gas emissions, using in-house recycling, composting, and efficient capture and sequestration systems. By setting such ambitious goals, living on campus or just attending classes would become a learning experience in sustainability. While all these goals may not be achievable, just by pursuing these goals UC-SC would become, if not self-sufficient, sufficiently self-aware to minimize import, export, and impact. In other words, the underlying goal of UC-SC would be to educate future generations on the meaning of sustainability, by creating a sustainable community.

To create a sustainable campus would require a significant commitment from faculty, staff, and students and, above all, unprecedented leadership from the Chancellor and the administration. If this commitment and leadership are realized, then the natural advantages of the campus itself come into play. For example, the abundance of sun and land on campus could be used for the installation of large solar (PV and thermal) arrays that could easily meet all the campus' energy needs (electricity, heating, cooling). This could be done using a power purchase agreement, rather than by up-front investments. With solar power on campus, a fleet of electric vehicles becomes feasible to move people onto and around campus.¹

The existing organic farm could be expanded to increase food production and a much larger

¹ These need not be simply electric cars; the campus could set an example for the world by developing an efficient and effective people-moving system like personal rapid transit (PRT).
cross-section of students than currently work on the farm would learn about what it means to produce food. Obviously, the UC-SC farm would not produce the quantities or the diversity of foods needed for the whole campus, but student projects could expand to involve networking with local farms in the community, with the goal of providing, if not all the food requirements for UC-SC, at least an understanding of what that would mean.

Longs Marine Lab could expand its interests in wind, wave, and ocean thermal energy, as well as algal bio-fuels. It could include practical projects in aquaculture for food and even further research on small-scale desalination for water. Indeed, the critical needs for water at UC-SC could become a topic of sustainability research on campus. This objective could involve optimizing wells and expanding the use of cisterns, as well as developing new methods for purifying and recycling grey and black water on campus. UCSC's mountainside geography could be leveraged to combine water capture, storage, and purification with experimentation in local small-scale hydrologic energy generation. Indeed, anyone who knows the campus will realize that the list of possibilities for developing UC-SC is as large as the collective imagination of the creative people on campus (see Fig. 1).

**Implementation:** By combining the diversity of systems for producing energy, food, water, and waste recycling, with research and development in each of these areas, and with courses or initially even limited lectures in existing courses on efficiency, conservation, and sustainable lifestyles. This pervasive theme of sustainability would become a significant part of campus consciousness. It would not replace or compromise the breadth of education and research extant at UCSC.² Professors and lecturers in all departments could include sustainability concepts in their existing courses or transform the focus of courses currently in the curriculum. For example, there could be sections of classes or entire courses on the physics of sustainability or on methods of communicating sustainability; students could investigate sustainable methods in art, or sustainable lifestyles in 19th century Europe; they could study the concept of engineering sustainability (cradle to cradle), or the history and sustainability of

² [http://www.youtube.com/watch?v=jpEnFwiqdx8&feature=related](http://www.youtube.com/watch?v=jpEnFwiqdx8&feature=related)
consciousness in Hist. Con. Student projects could focus on sustainability on campus and also in the surrounding communities. With regard to research, the theme of sustainability could help facilitate and motivate activities on campus. In addition to research into sustainability itself, research in all other areas could become the focus of meta-level projects to provide rational and responsible ways of maximizing research goals, while minimizing environmental impacts. Such self-scrutiny would provide local solutions to problems on campus that are currently exported or solved from the outside, a process that would make the campus more self-sufficient and resilient, while improving the relationship between the university and the city of Santa Cruz.

The transition to UC-SC would be greatly facilitated by the fact that the campus is already divided into separate colleges and has focused core courses. The process could therefore begin with one college designated as the “Green College,” but all incoming students would take core courses with some focus on sustainability, regardless of their college or major. By monitoring successes and moderating expectations, experiences gained from the Green College and core courses would determine the feasibility of including additional colleges and courses, until the entire campus would be engaged. Once fully implemented, UC-SC would continue to be an on-going experiment in sustainable practices, conducted by students, faculty, staff, and administration. It would provide continuous results on best practices, as our understanding of and experience with the real meaning of sustainability evolves. UC-SC would become an inspiration to other campuses to follow suit, and a valuable, practical resource for the development of green communities outside the universities.

**Funding sustainability:** In the last state of the State address, Governor Schwartzenegger declared that California is in a state of emergency with a $42 billion deficit and that, among other austerity measures, funds for public education will be cut. The Deputy Chancellor at UCSC, Ashish Sahni, recently said that the combination of this CA budget deficit and the more general economic downturn, which affects donors for endowments and gifts, has made the funding situation at UCSC dire-- threatening, according to Ashish, even our ability to fulfill our primary mission of teaching the curriculum, let alone starting a new program of this scope.

* What if Chancellor Blumenthal would establish UC-SC by fiat, rather than by funding?

The two most valuable resources at UCSC are its brain-trust and labor force. These strengths, rather than funding, are the resources that are needed to establish UC-SC. Indeed, if UC-SC could be established now, amid the current fiscal calamity, and if it developed successfully without hiring new people or redirecting funds, then not having startup funds would be the project’s greatest asset.

We acknowledge that funding limitations and the expanding size and number of classes have made everyone on campus far too busy to consider starting a new project and certainly not a project of this magnitude. On the other hand, the longest journey begins with a single step and sustainability means, above all, doing more with less. There will never be an ideal time to start such an ambitious project. We must ask ourselves, “What are the consequences of waiting? How important would UC-SC be for the future of the campus and even the country?”
To demonstrate that UC-SC was conceived, developed, and subsequently flourished based on the
determination of students, faculty, staff, and administration, despite the lack of adequate funds,
would itself be an object lesson in sustainability. It would prove that it is possible to do more
with less! What a contrast this would be to other programs that are so dependent on funding.
Stanford, for example, recently received a gift of $100M to start a new sustainability center.
What is creative about building a campus devoted to sustainability with unsustainable infusions
of funding?

Without startup funds, a great deal of careful thought and planning would be required to make
UC-SC successful. However, when it does succeed, other campuses would not only admire UC-
SC, but would be able to emulate us even without funding, which is always limiting… And
inevitably, if UC-SC were able to succeed without initial funding, then funds would surely
appear. The example that UC-SC would offer to the world would attract financial support from
both government and private sources. The government already has made a commitment in this
area. On July 31, Congress passed all provisions of the Higher Education Sustainability Act
(HESA) as part of the new Higher Education Opportunity Act of 2008 (HR 4137). This law
creates a pioneering "University Sustainability Grants Program" at the Department of Education,
which will offer competitive grants to institutions and associations of higher education to
develop as well as implement and evaluate sustainability curricula, practices, and academic
programs. From private sources, there would be funds from donors and industry, which would
want to support the success of UC-SC. The project would also create opportunities for
partnerships with industry through volunteer student programs, power purchase agreements, and
community programs and opportunities to help create, test, develop, or just advertise sustainable
products or methods.

The UC-SC demonstration model for sustainable education would be fundamentally based on
learning about a new lifestyle—this is a creative concept. At the foundation of the
transformation to a sustainable community is the notion that the campus would become largely
self-sufficient. Such a transformation in itself would make the campus more resilient to the
vicissitudes of external support and make the campus more sustainable. In addition, it is directly
related to the core mission of the university—education. What better education can the
University be passing on to future citizens and what better way is there to teach them than by
example? The innovative spirit that was the hallmark of UCSC when it was founded over 40
years ago could experience a timely renascence in UC-SC--one that would represent a significant
contribution to the future of our community, our country, and, indeed, to the planet.

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