



*ENVIRONMENTAL STEWARDSHIP WITH COMMUNITY PROSPERITY*

January 27, 2016

To the Association for the Advancement of Sustainability in Higher Education:

I am writing to state my strong support for considering the University of California Santa Cruz (UCSC) for an Innovation credit in the 2016 AASHE Sustainability Tracking, Assessment & Rating System (STARS) submission. The Climate & Energy Strategy is a unique initiative on the campus that can serve as a model for other institutions of higher education wishing to advance campus sustainability. This interdepartmental approach to energy management has also inspired actions within City of Santa Cruz municipal operations which seek to replicate many of these technical prioritization exercises.

The Climate & Energy Strategy meets the criteria for an Innovation Credit for several reasons. This study, with a budget of almost \$1M, will provide a roadmap for UCSC to most cost-effectively achieve carbon neutrality through aggressive onsite action. It is true that many campuses throughout the country are now developing climate action and energy plans. But this study, which is in its final stages of completion, will likely serve as a national model due to its level of depth, comprehensiveness, collaboration, deep complexity and technicality. The study involved engaging a team of innovative energy & sustainability consultants, several dozen staff throughout many operational departments on campus, as well as faculty and students, in a yearlong effort that included four main components to help the campus achieve its goal of carbon neutrality by 2025: 1) Level I and II ASHRAE audits in over 50 complex buildings, 2) a campus wide renewable energy feasibility study, 3) development of a techno-economic scenario analysis tool to help the campus optimize strategies, prioritize project implementation and plan for GHG emissions reduction, and 4) development of a living lab program to support experiential learning and research around climate action.

The study resulted in the development of over 350 energy conservation measures, 20 onsite renewable energy project measures which are being incorporated into an RFP for a PPA, 12 district level energy conservation measures, curriculum development, designation of lab & outdoor space, equipment and materials to support a living lab, and a complex and robust scenario analysis tool to support climate action decision-making at all levels throughout the organization.

The excel-based techno-economic analysis tool that will help UCSC to strategically plan for carbon neutrality by providing specific projects that need to be implemented and specific procurement strategies that need to occur year-by-year for the next decade in order to reach their goals. The tool will also help them to

update the metrics associated with any given project or global assumption so that the cash flow, net present value, simple payback, and savings to investment ratio can all be automatically updated as existing carbon reduction measures' metrics change, as new measures are added, and as sensitivities such as utility costs and escalation rates change. The recommended strategies resulting from the study will reduce scope 1 & 2 campus emissions by 100% by 2025, include a Net Zero Design policy for all new capital projects, and provide a net present value of over \$38M over the next 30 years. The tool provides graphical outputs that can be easily interpreted by any audience and will help to tell the story that more energy efficient design and investment in energy efficiency in existing campus buildings, as well as adding onsite renewables generation is a better business case when considering the life cycle costs of infrastructure. Also, UCSC is sharing this excel-based tool with all other UC campuses and has provided training and a user manual so that other campuses can utilize the tool for their climate action planning purposes.

The Climate & Energy Strategy meets the criteria to earn a STARS Innovation credit. Please feel free to contact me with any further questions.

Thank you for your consideration,

A handwritten signature in black ink, appearing to read 'Ross Clark', with a long horizontal flourish extending to the right.

Ross Clark  
Climate Action Manager  
City of Santa Cruz