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Purpose

Create a tool and strategies for financing the UC Davis CAP projects with a focus on building a sustainable green revolving fund.

Methodology

The 2010 UC Davis CAP was the driving document for much of our early progress. As the project continued to develop, other carbon neutrality documents were used as reference. These include Climate Action Plans for other UC's, Green Revolving Fund Implementation Guide, Green Revolving Investment Tracking System library, and more. Besides documentation, we had several interviews with the client Camille to see what her vision was for UC Davis. Overall, we found that UC Davis had a problem financing projects because they did not align with the core values of a University which is to educate and research

Results

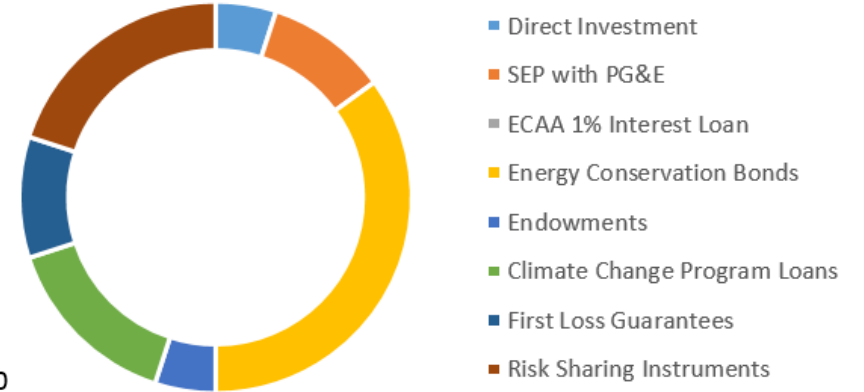
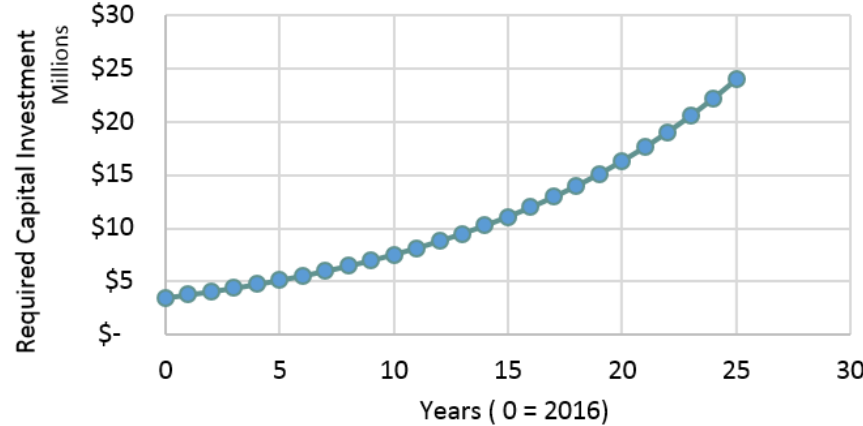
We found that UC Davis is a member of the APPA (Association of Physical Plant Administrators) and already has access to the APPA version of the GRIT system.

The main seed funding options come from operating budgets in most of those who use a Green Revolving Fund. Other sources of funding include endowments, donations & grants, utility rebates & incentives, bonds, capital budgets, cost-savings or revenue from existing projects, government funding, and an optional student fee.

References

1. "UC Davis 2009-2010 Climate Action Plan." UC Davis Catalog. Environmental Stewardship and Sustainability, 1 June 2010. Web. 31 May 2016.
2. Watson et al., "Achieving Carbon Neutrality at UCSB by 2025." UC Santa Barbara. May 2015.
3. "UC Irvine Climate Action Plan 2013 Update." UC Irvine Sustainability. 2013. Web. 31 May 2016
4. Green Revolving Investment Tracking System. Greenbillion.org/grits/
5. Indvick, Joe. "Green Revolving Funds: An Introductory Guide to Implementation & Management." Sustainable Endowments Institute & the Association for the Advancement of Sustainability in Higher Education. January 2013. Web. 31 May 2016

50 percent Lighting Initiative



Project Name	Investment Round	Year										
		0	1	2	3	4	5	6	7	8	9	10
Smart Lighting (Very-Low)	1		\$ 1,264,750	\$ 1,264,750	\$ 1,264,750	\$ 1,264,750	\$ 1,264,750	\$ 1,264,750	\$ 1,264,750	\$ 1,264,750	\$ 1,264,750	\$ 1,264,750
Smart Lighting (Low)	2			\$ 688,991	\$ 688,991	\$ 688,991	\$ 688,991	\$ 688,991	\$ 688,991	\$ 688,991	\$ 688,991	\$ 688,991
ESDVR (UCSB Aggregate)	3				\$ 422,405	\$ 422,405	\$ 422,405	\$ 422,405	\$ 422,405	\$ 422,405	\$ 422,405	\$ 422,405
MBCx (UCSB Aggregate)	4					\$ 469,281	\$ 469,281	\$ 469,281	\$ 469,281	\$ 469,281	\$ 469,281	\$ 469,281
Smart Lighting (Decks/Covered)	5						\$ 509,421	\$ 509,421	\$ 509,421	\$ 509,421	\$ 509,421	\$ 509,421
Smart Lighting (Medium)	6							\$ 549,816	\$ 549,816	\$ 549,816	\$ 549,816	\$ 549,816
Smart Lighting (High)	7								\$ 534,255	\$ 534,255	\$ 534,255	\$ 534,255
Deep HVAC (UCSB Aggregate)	8									\$ 415,940	\$ 415,940	\$ 415,940
Deep LAB (UCSB Aggregate)	9										\$ 444,962	\$ 444,962
Hot Water Loop	10											\$ 222,090
	Sum	\$ -	\$ 1,264,750	\$ 1,953,741	\$ 2,376,146	\$ 2,845,427	\$ 3,354,848	\$ 3,904,663	\$ 4,438,918	\$ 4,854,858	\$ 5,299,820	\$ 5,521,910

Recommendations

- 1) Create project categories by financing type (ex: Lighting, User Education, Steam to Hot water, Natural Gas)
- 2) Establish staff & guidelines for a Green Revolving Fund
- 3) Create approval process on the Green Revolving Fund
 - Across the CAP projects we found that many of the metrics were inconsistent. For our plans to work the CAP plan must have consistent units & metrics in each project including: annual savings in terms of overall energy (carbon, electric, water, waste), initial cost of capital, and project duration.
 - Establish the cut-off simple payback time for seed projects (Ex: 7 years done by UCSB for LED initiative)