

# 24<sup>th</sup> Annual NAESCO Conference

The Expanding Horizon for the Energy Service Industries

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## Achieving a Sustainable University Campus

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# California Public Higher Education Annual Energy Use

System	GWh/yr	Million th/yr	Greenhouse gas emissions (million tons of CO <sub>2</sub> )
UC	1,405	155	1.8
CSU	800	25	0.7
CCC	576	14	0.4
<b>Total</b>	<b>2,781</b>	<b>194</b>	<b>2.9</b>

# California Public Higher Education Annual Energy Cost

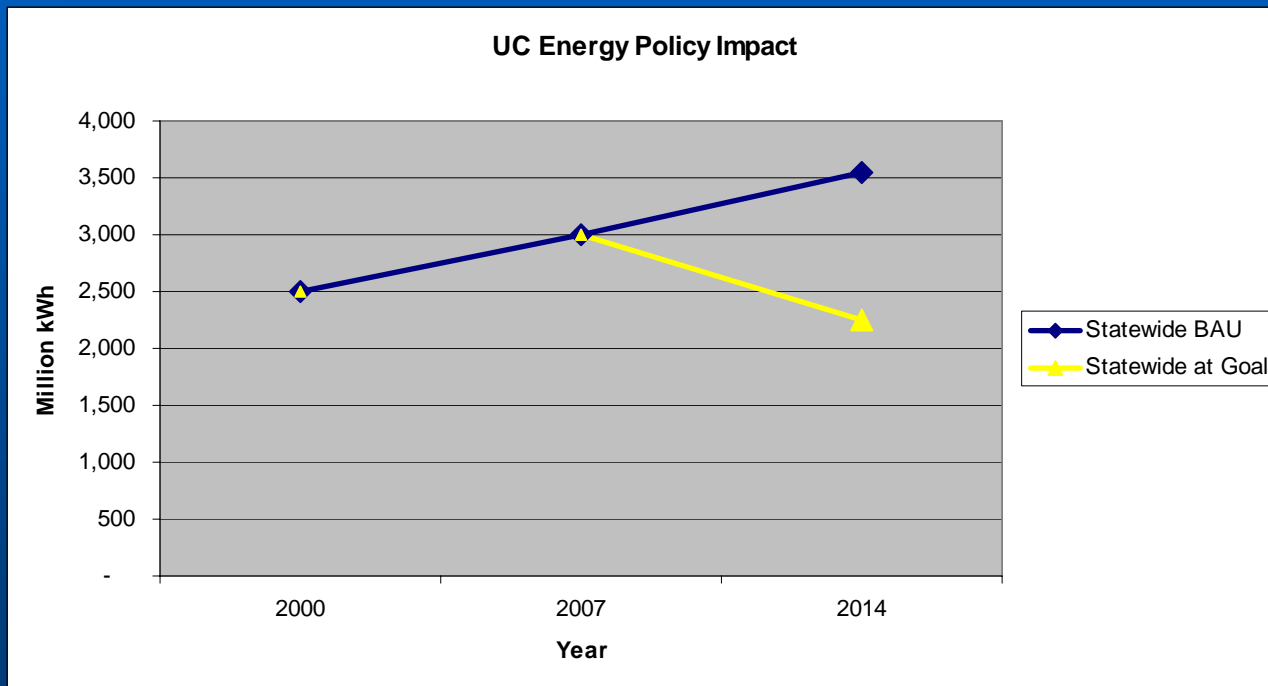
- UC – 15 campuses = \$300 million
- CSU – 23 campuses = \$120 million
- CCC – 108 campuses = \$83 million

**Total ~ \$½ billion annually**

# All Three Institutions Have Energy Efficiency Policies and Reduction Goals

- **UC – 10% below 2000 levels by 2014**
- **CSU (EO 987) – 15% below 2003 levels by 2010**
- **CCC (BoG draft) – 15% below 2002 levels by 2012**

# UC Energy Policy Impact



# UC – Cost to Achieve Goal

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- Assume 5-year average simple payback
- Assume \$0.10/kWh levelized rate
- Total project cost - \$500 million

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Current UC Confirmed Budget  
Allocated for This Effort:

\$0

# The Big Picture

- **CPUC approved over \$2B in energy-efficiency funding for 2006-2008**
- **CPUC expected outcomes**
  - **Cut energy costs by more than \$5 billion**
  - **Eliminate the need to build 3 large power plants over the next 3 years**
  - **Reduce global warming pollution by an estimated 3.4 million tons of carbon dioxide by 2008**
  - **Help meet Governor's Executive Order S20-05**
- **Local Government and Statewide Partnerships constitute a significant portion of investment – approximately 20% of PG&E's program funding**

# UC/CSU/IOU Energy Efficiency Partnership

- **Funded by California Investor Owned Utilities under the Auspices of the California Public Utilities Commission**
- **University of California**
- **California State University System**
- **Pacific Gas and Electric**
- **Southern California Edison**
- **Southern California Gas**
- **San Diego Gas and Electric**

# What Are the UC/CSU/CCC Partnerships?

- **Unique, statewide, multi-million dollar, multi-year energy efficiency program for higher education**
- **Funded by ratepayer public goods charges and administered by IOUs under direction from CPUC**
- **Investor-owned utilities and campus systems contribute personnel, resources, infrastructure, and technical, administrative and financial skills**
- **Successful UC/CSU 2004-05 Program set stage for more expansive program approved for 2006-08**

# Objectives

- **Provide immediate, cost-effective, reliable energy savings**
  - IOUs avoid investment in capacity increases
  - Offset rising utility bills for users
- **Meet aggressive CPUC energy savings targets**
- **Improve energy efficient operations and maintenance practices**
- **Showcase the Partnership model**
- **Train personnel to identify and implement energy efficient opportunities and help meet universities' sustainability goals**
- **Leverage the resources and contributions of all partners**
- **Set the course to maximize long-term energy savings**

# Who Is Involved?

- **Utilities**
  - All four investor-owned utilities
- **College and University System offices**
  - UC Office of the President (UCOP)
  - CSU Chancellor's Office (CO)
  - CCC Chancellor's Office (CCCCO)
- **Newcomb Anderson McCormick (NAM)**
  - Program administration and management

# Utility Role

- **Administer Partnership program**
- **Integrate Partnership into overall energy efficiency initiatives and ongoing programs**
- **Contribute technical, financial and program expertise**
- **Meet customer needs**
  - **Provide outreach to campuses with program information**
  - **Account representatives regularly touch base**
- **Ensure overall program energy savings goals are met**

# University and College Role

- **Develop and implement projects**
- **Provide project co-funding**
- **Contribute technical, financial and program expertise**
- **Integrate with internal policy requirements and drivers**
  - **UC Sustainability and Green Building Policy adopted 2003**
  - **CSU Sustainable Design Policy**
  - **CCC various policies by District (72 total Districts)**
- **Demonstrate project success to enable additional funding both this cycle and beyond 2008**



# Newcomb Anderson McCormick Role

- Provide overall program management, technical support and administration
- Coordinate activities among the four IOUs and partners
- Create and facilitate program processes
  - Forms
  - Agreements
  - Outreach
- Track projects and report results
  - Website
- Lead partnership teams and committees

# Program Elements

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- **Training and Education**
- **Energy Efficiency Retrofits**
- **Monitoring Based Commissioning (MBCx)**
- **New Construction**

# 2006-2008 Program Goals

- UC/CSU IOU incentive budget \$29.7M

	kWh/yr	th/yr
06-08 IOU Goals	102,014,944	3,688,114

- CCC IOU incentive budget \$22.1M

	kWh/yr	th/yr
06-08 IOU Goals	84,089,217	2,522,362

- IOUs have committed to providing additional program funding based on demonstrated success

# Incentive Levels

- UC/CSU Incentive Levels
  - \$0.24/kWh
  - \$1.00/therm

# UC Strategic Energy Plans

- **\$500 million in projects over 6 years (2009-2014) approximately \$83 million per year**
- **UCOP brings \$200 million to the table**
- **UC-CSU-IOU Partnership brings \$300 million to the table**

# Who Wins?

- **UC – Meets cost reduction goal and saves \$130 million annually from 2014**
- **IOUs – Meet program goals and receive stockholder incentives**
- **CPUC and California**
  - **Avoid building more power plants**
  - **Reduce greenhouse gas emissions by 400,000 tons of CO2 per year**
- **California Energy Companies (ESCOs) - \$500 million in private sector energy projects over 6 years**