Higher Education Energy Efficiency Partnerships

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Higher Education Energy Efficiency Partnerships

- These collaborative Partnerships are designed to:
  - Identify energy savings opportunities
  - Provide funding and support for energy efficiency projects
  - Provide a framework to implement a comprehensive sustainability policy

- Partners include
  - All four Investor Owned Utilities (IOUs): PG&E, SCE, SDG&E, SCG
  - California Community Colleges (CCC)
  - California State University (CSU)
  - University of California (UC)
2006-2008 UC/CSU/IOU and CCC/IOU Partnerships Combined Savings Achieved

- 20 MW
- 116 million Kwh
- 6.1 million Therms
- 74,000 metric tons CO2 reduction annually - equivalent to over 10,000 cars/year off the road

Over $18 million in incentives left on the table – this money did not roll over into 2009!
## Partnership Program Incentives for 2009-2011

<table>
<thead>
<tr>
<th>Measure</th>
<th>Incentive Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaged HVAC, HVAC Controls, Motors, Drives</td>
<td></td>
</tr>
<tr>
<td>Lighting, Lighting Controls, Daylighting</td>
<td>$0.24/kWh</td>
</tr>
<tr>
<td>Central Plants, Chiller Retrofits, Whole Building, and other major Energy Efficiency Infrastructure Projects</td>
<td></td>
</tr>
<tr>
<td>MBCx</td>
<td></td>
</tr>
<tr>
<td>Plug and Process Loads</td>
<td></td>
</tr>
<tr>
<td>IT Projects (PC Power Mgmt @ $15/PC or $0.24/kWh WITH IOU M&amp;V)</td>
<td></td>
</tr>
<tr>
<td>All Gas Measures</td>
<td>$1.00/therm</td>
</tr>
<tr>
<td>50% project cost cap (lighting)</td>
<td></td>
</tr>
<tr>
<td>80% project cost cap (non-lighting)</td>
<td></td>
</tr>
</tbody>
</table>
New Construction for Partnerships (UC/CSU/CCC)

### “Whole Building Approach” Incentives

<table>
<thead>
<tr>
<th>Incentive Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner Incentive</td>
<td>$0.10 above Core $/kWh. Escalate same rate as Core. $1.00/therm with no escalation.</td>
</tr>
<tr>
<td>Owner Incentive kW “Kicker”</td>
<td>$100/kW</td>
</tr>
<tr>
<td>Design Team Incentive</td>
<td>1/3 of Owner Incentive and kW kicker. Includes rate escalation for percentage achieved over Title 24. Cap at $50,000</td>
</tr>
</tbody>
</table>

### “Systems Approach” Incentives

<table>
<thead>
<tr>
<th>Incentive Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner Incentive</td>
<td></td>
</tr>
<tr>
<td>Daylighting</td>
<td>$0.15/kWh</td>
</tr>
<tr>
<td>Interior Lighting</td>
<td>$0.15/kWh</td>
</tr>
<tr>
<td>HVAC and Refrigeration</td>
<td>$0.25/kWh, $1.00/therm</td>
</tr>
<tr>
<td>Others</td>
<td>$0.19/kWh, $1.00/therm</td>
</tr>
<tr>
<td>kW “Kicker”</td>
<td>$100/kW</td>
</tr>
</tbody>
</table>
Partnership Process Overview

- Develop energy savings calculation
- Submit project application to IOU
- IOU conducts pre-construction review and field verification
- Campus implements project
- Campus notifies IOU of completion
- IOU conducts post-construction review and field verification
- IOU issues incentive check
How to Find Additional Money

- Historical level of spending on utility programs = $3-$4 billion proposed statewide over the next 3 years
- Performance contracting – ESCO’s
- Local and State Bonds
  - CCC Construction Bonds
  - UC Strategic Energy Plan (SEP) bond financing
- Utility Financing Options
- Scheduled Maintenance Budget and Block Grant Funding
- Federal Stimulus (ARRA)
- Energy $Mart, CA Department of General Services
- CEC Loan Program
- Don’t Forget…many projects simply pay for themselves in 3-5 years through avoided costs!
Typical Lighting Projects at Colleges and Universities

- New generation 25 watt T8 lamps
- T5 or T8 high bay lighting in gyms
- LED exit signs
- Bi-level stairwell lighting
- Occupancy sensors in classrooms, offices, gyms
- Parking lot lighting conversions
- Integrated Classroom Lighting Systems
- Integrated Office Lighting Systems
- Daylighting control
Example project – SF State Multiple Building Lighting Retrofit

- Multiple measures in multiple buildings
  - ICLS
  - Troffer retrofits
  - Occupancy Sensors
- Timeline
  - Six months from application to incentive payment

<table>
<thead>
<tr>
<th></th>
<th>Total kW Approved</th>
<th>Total kWh Approved</th>
<th>Total Approved Incentive $</th>
<th>Total Approved Project Cost $</th>
<th>Net Cost to University $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>108.9</td>
<td>413,064</td>
<td>$99,135</td>
<td>$432,942</td>
<td></td>
</tr>
<tr>
<td>Installation</td>
<td>115.0</td>
<td>406,892</td>
<td>$97,654</td>
<td>$324,062</td>
<td>$226,408</td>
</tr>
</tbody>
</table>

- Annual Savings (@ 11.5¢/kWh) = $46,793
- Simple Payback: 4.8 years
Summary

• Higher Education Energy Efficiency Partnerships are here to help you fund your projects
• Most campuses are already taking advantage of the program, but the Partnerships are always ready to do more!
• For more information, contact your Energy Manager, Facilities Manager, IOU Representative or Newcomb|Anderson|McCormick

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