California Public Utilities Commission

Energy Efficiency in California

Discussion with the EPA State Energy Efficiency/Renewable Technical Forum

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Key Areas of Focus in Energy Efficiency

• Savings Goals and Targets
• Funding
• EE Administration Structure, and
• Evaluation, Measurement and Verification
California Public Utilities Commission

Electricity Demand Trends

Statewide Coincident Peak Demand (MW)

Source: California Energy Commission
California Public Utilities Commission

Total Electricity Use, per capita, 1960 - 2001

California

U.S.

kWh

12,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0


April 14, 2005

Source: California Energy Commission
California Public Utilities Commission

Cumulative Efficiency Program Impact

Source: California Energy Commission
Energy Action Plan
Goals for Efficiency

• CPUC and CEC jointly developed and adopted the “EAP” in May 2003*
• Establishes a ‘loading’ order of energy resources that first optimizes increased conservation and efficiency
• **Goal:** Decrease per capita energy use and reduce toxic emissions and greenhouse gases through increased conservation and efficiency

The EAP can be found at: www.cpuc.ca.gov/PUBLISHED/REPORT/28715.htm
Estimated Savings Impacts for Program Years 2003 and 2004-2005
(Note that new administration structure and process goes into effect beginning program year 2006)

<table>
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<tr>
<th>Program Year</th>
<th>2003 Achieved</th>
<th>2004-2005 Estimated</th>
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<tbody>
<tr>
<td>Funding</td>
<td>$300 million</td>
<td>$823 million</td>
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<tr>
<td>kWh savings</td>
<td>1.3 billion</td>
<td>3.72 billion</td>
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<tr>
<td>therm savings</td>
<td>34.2 million</td>
<td>44.3 million</td>
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<tr>
<td>kW savings</td>
<td>291 thousand</td>
<td>770 thousand</td>
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Funding for Energy Efficiency Programs and Activities

• **Funding Increase Approved:** CPUC increased energy efficiency funding beginning in program year 2004 by instructing the utilities to integrate cost effective EE programs into resource planning.

**Result:**

• EE statutory Public Goods Charge funding through rates: Approximately $289 million/year.
Savings Goals and Targets: 2005 and Beyond

Decision Approved in September 2004*
Establishes a 3 year planning cycle
- Coordinates EE savings & IOU procurement planning
- Sets cumulative EE savings goals for 2004-2013:
  - 26,508 Gwh,
  - 6,892 MW, and
  - 290 million therms
- Incremental increases in demand met first through EE
- This is a return to an Integrated Resource Planning state of mind

*See www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/40212.htm
### Adopted EE Savings Goals

#### Total Electricity and Natural Gas Program Savings Goals (all IOUs)

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<tbody>
<tr>
<td>Total Annual Electricity Savings (GWh/yr)</td>
<td>1,838</td>
<td>1,838</td>
<td>2,032</td>
<td>2,275</td>
<td>2,505</td>
<td>2,538</td>
<td>2,465</td>
<td>2,513</td>
<td>2,547</td>
<td>2,631</td>
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<tr>
<td>Total Cumulative Savings (GWh/yr)</td>
<td>1,838</td>
<td>3,677</td>
<td>5,709</td>
<td>7,984</td>
<td>10,489</td>
<td>13,027</td>
<td>15,492</td>
<td>18,005</td>
<td>20,552</td>
<td>23,183</td>
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<tr>
<td>Total Peak Savings (MW)</td>
<td>379</td>
<td>757</td>
<td>1,199</td>
<td>1,677</td>
<td>2,205</td>
<td>2,740</td>
<td>3,259</td>
<td>3,789</td>
<td>4,328</td>
<td>4,885</td>
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<tr>
<td>Total Annual Natural Gas Savings (MMTh/yr)</td>
<td>21</td>
<td>21</td>
<td>30</td>
<td>37</td>
<td>44</td>
<td>52</td>
<td>54</td>
<td>57</td>
<td>61</td>
<td>67</td>
</tr>
<tr>
<td>Total Cumulative Natural Gas Savings (MMTh/yr)</td>
<td>21</td>
<td>42</td>
<td>72</td>
<td>110</td>
<td>154</td>
<td>206</td>
<td>260</td>
<td>316</td>
<td>377</td>
<td>444</td>
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</table>
EE Administration Structure

• Effort completed to develop common language, shared view of administration functions and roles, and to establish criteria for evaluation proposals.
  – RFP & proposal process conducted in Spring & Summer 2004
    • www.cpuc.ca.gov/PUBLISHED/RULINGS/35120.htm
  – CPUC administration decision adopted January 2005
    • www.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/43628.htm
  – Program selection and portfolio management managed by the utilities with significant input from stakeholders through Program Advisory Groups
  – Evaluation, Measurement, and Verification strengthened through removal of conflict of interests, and through increased transparency

• Currently in the process of administration process (including finalizing program policies and reporting requirements) in order to solicit for 2006-2008 programs in June.
SUMMARY of ADOPTED ADMINISTRATIVE STRUCTURE for ENERGY EFFICIENCY

1) Policy Oversight
   CPUC

2) Quality Assurance
   CPUC. ED staff lead in coordination with CEC Convenes ad hoc policy or technical advisory committees, as needed.

3) Research and Analysis in Support of Policy Oversight
   Same as #2

4) Program Choice
   Utilities with input from regional working groups (PAGs) and Peer Review Group assessments. 20% minimum open bidding requirement.

5) Portfolio Management of Programs
   Utilities with input from regional working groups (PAGs) and Peer Review Group assessments.

6) Management of “Program Design Evaluation & Market Assessment Studies”:**
   ED selects contractor with input from ad hoc technical committee. Utilities manage and hold contracts.

7) Management of “Program and Portfolio Impacts-Related Studies”:**
   ED manages studies and holds contracts with input from ad hoc technical review committee(s).

8) Fiscal Agent
   Utilities and Board of Equalization

9) Dispute Resolution
   CPUC

10) Program Implementers
     Utilities and Non-Utilities*

*Implementers cannot be EM&V contractors at same time, or within 6 months of completing contract for program delivery.

**See Decision text for a description of these types of studies.

ED = Energy Division
PAGs = Program Advisory Groups
Peer Review Groups = subset of PAGs comprised of nonfinancially interested members.
Conclusion

• Energy Efficiency has become a priority resource in California
  – Most cost-effective than supply-side resources
  – Key Component of Integrated Resource Plan

• Energy Efficiency Efforts are Underway
  – Aggressive Pace Set and Met to Maximize Cost Effective EE Savings