Scaling up Energy Efficiency in Existing Buildings

Statewide Energy Efficiency Best Practices Forum

Sacramento - June 20, 2013

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California Energy Commission
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- **Energy Efficiency**
  - T24 – New Construction Building Efficiency Standards
  - T20 – Appliance Efficiency Standards
  - AB758 (Skinner, 2009) – CA Comprehensive Energy Upgrade Program for Existing Buildings
  - Proposition 39 Implementation

- **Natural Gas Markets**

  - Demand Response, Zero-Net-Energy Buildings

- **Generation Facility Siting Cases**
AB 758 Direction to the CEC

- AB 758 requires the Energy Commission to “Establish greater energy efficiency in existing residential and non-residential structures.” (PRC §25943(a) (1))
- “The comprehensive program may include...energy assessments, building benchmarking, energy ratings, cost-effective energy efficiency improvements, public and private sector energy efficiency financing options, public outreach and education efforts, and green workforce training.” (PRC §25943 (a) (2))
Existing Buildings – AB 758

- Draft Action Plan: [http://www.energy.ca.gov/ab758/](http://www.energy.ca.gov/ab758/)
- Recommends high-level *Strategies*, and within each a group of *Initiatives*
- CEC will work with CPUC/IOUs, POUs, other agencies, local governments, industry and consumer groups to develop and strengthen a variety of approaches
- Great opportunity for comment – feedback from you and your stakeholders is critical!
- Final Action Plan expected to be adopted in Fall 2013
Existing Buildings – AB 758

Overarching Themes

- Large gap between existing EE program activity and scale needed to achieve (multiple) policy goals.
- Future cannot be prescribed. Market actors need information, knowledge and support tools to thrive.
- Programs must impose the least administrative burden possible for the market to bring innovation.
- Continue to embrace home performance, at the same time aggressively seek to influence the “reactive” and routine upgrade marketplaces.
  - Leverage all opportunities for influence and messaging.
## AB 758 Strategies

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<th>&quot;No Regrets&quot; Strategies</th>
<th>Voluntary Pathways</th>
<th>Potential Mandatory Approaches</th>
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<td>Data reporting and management</td>
<td>Provide broad choice of pathways to encourage more upgrades</td>
<td>Disclosure for largest commercial and public buildings</td>
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<td>Permitting support and code enforcement</td>
<td>Engage contractors &amp; building professionals</td>
<td>Broad-coverage disclosure; basic cost-effective upgrades</td>
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<td>Education and outreach to building owners/managers</td>
<td>Standardized Assessment Tools</td>
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<td>Training to ensure skilled workforce</td>
<td>Small &amp; medium commercial upgrades</td>
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<td>Efficiency solutions for rental properties</td>
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<td>Public sector leadership</td>
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<td>Account for efficiency in property valuation</td>
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<td>Offer variety of innovative financing options</td>
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No-Regrets Strategy #1: Data Reporting and Management

- Simple access to reliable, relevant, longitudinal information is an essential tool for program design and for decision making at all levels
- Various use cases: Agencies, Researchers, Local Governments, Industry, Investors...
- Develop approaches to enable the marketplace to be much more sophisticated in providing upgrades
  - Identify data sources currently available; and package for privacy and appropriate, secure access
  - Actively develop and promote third-party analytical tools for customer engagement
- Explore additional pathways for energy-related disclosure
No-Regrets Strategy #2: Permitting Support and Code Compliance

- Better understand which installations are not complying with code, and what the savings gaps may be.
- Establish permanent, accessible, ongoing education & training regarding current code.
- Provide and/or facilitate opt-in tools to help LGs manage and streamline permitting.
- Work with local governments and CSLB to improve enforcement of building standards and local energy ordinances.
AB 758 Draft Action Plan Workshops

• Next Week!
  1. June 24, 2013: San Francisco (CPUC)
  2. June 25, 2013: Fresno (Willow CC Center)
  3. June 28, 2013: Los Angeles (UCLA)

WebEx enabled for remote participation

• Written comments encouraged

• Notice & agendas: http://www.energy.ca.gov/ab758/
Proposition 39

• The California Clean Energy Jobs Act, passed in November

• Prop 39 transfers ~$550 million annually to the Clean Energy Job Creation Fund, for 5 years beginning FY13–14.

• The California Energy Commission will:
  – Receive $28 million for year 1 into the ECAA program for low- & no-interest loans for eligible school projects.
  – Establish guidelines for participation, to be adopted publicly.
  – Evaluate and approve expenditure plans submitted by local education agencies.
  – Monitor projects funded by P39 funds.
Thank You!
State Intergovernmental Collaboration

California Air Resources Board (CARB)

California Environmental Protection Agency (Cal EPA)

Office of the Governor & State Legislature

California Energy Commission

California ISO (CAISO)

California Public Utilities Commission (CPUC)
Energy Policy Drivers

• Energy Efficiency 1st in the Loading Order
• 2006 AB32 California Global Warming Solutions Act
• Zero Net Energy Buildings
  – Newly constructed homes to be ZNE by 2020
  – Newly constructed commercial buildings to be ZNE by 2030
• 2008 Energy Action Plan
• 2008 CA Long Term Energy Efficiency Strategic Plan
• 2010 Governor Brown’s Clean Energy Jobs Plan
• 2010 Clean Energy Future Initiative
• 2012 Governor Brown’s Executive Order for State Buildings
Residential Electricity Consumption with Efficiency Scenarios (GWh)

- 25% homes decrease by 70% by 2020
- 75% homes decrease by 30% by 2020
- 75% homes decrease asset energy use by 40% by 2030
- ZNE - new homes
- 2013-2016 IOU Economic Potential
- Baseline (CEC demand forecast)
Commercial Electricity Consumption with Efficiency Scenarios (GWH)

- 2013-2016 IOU Economic Potential
- 50% Existing Buildings are ZNE by 2030
- 75% Buildings decrease asset energy use by 40% by 2030
- ZNE New Buildings
- Baseline (CEC Demand Forecast)