



California Commissioning Collaborative

California Commissioning Collaborative Advisory Council Meeting

January 15, 2009



Agenda

9:30 AM	Welcome, Introductions, and Announcements	Don Frey
9:40 AM	CCC Announcements	Kirstin Pinit
9:50 AM	Policy Overview: <ul style="list-style-type: none"> • ARB Climate Change Scoping Plan • Cx in California Energy Action Plan 	Jim Flanagan
10:20 AM	BREAK	
10:30 AM	Policy Overview, cont.: Executive Order S-20-04 and CA Green Action Plan Integrated Energy Policy Report and CEC strategy for Building Codes and Standards	Misti Bruceri
11:00 AM	San Francisco's Green Building Ordinance	Rich Chien
11:45 AM	LUNCH	
12:45 PM	Policy Initiative Brainstorming Session	
3:45 PM	Wrap - Up	Don Frey
4:00 PM	Advisory Council Meeting Adjourns	

Introductions & Announcements

CCC Announcements

- 2005-08 PIER Research – Completed
 - Task reports available on CCC website
 - Final report in progress
- 2009-11 PIER Research Proposal – Accepted

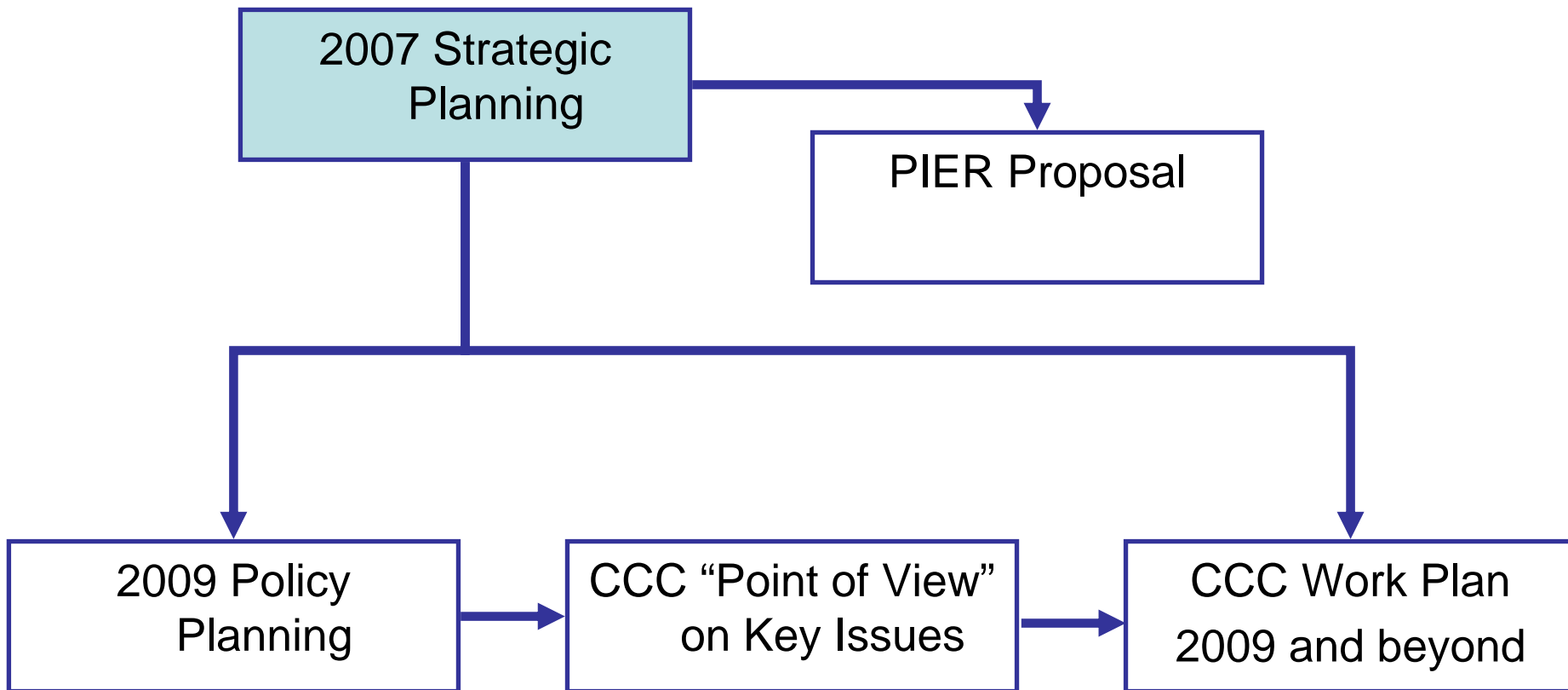
Building Commissioning: Strategies and Technologies for Energy Efficiency

Project 1	Program Administration
Project 2	Optimizing Integration of Energy Information and RCx Services in CRE Transactions
Project 3	Tools for Standardizing the RCx Process
Project 4	Best Practices for Maintaining Energy Savings from RCx
Project 5	Verification of Energy Savings from Retrocommissioning
Project 6	Title 24 Acceptance Testing Requirements and Effectiveness

CCC Work Plan

CCC 2007 Strategic Plan	PIER Research	Not Covered by PIER
Support and influence for Cx-related policies and standards	<ul style="list-style-type: none"> • Tools for standardizing RCx • Best practices for persistence • Title 24 compliance/effectiveness 	
Develop standardized M&V procedures	<ul style="list-style-type: none"> • Guidelines for verification of RCx savings 	
Support short and long-term education and training needs		<ul style="list-style-type: none"> • M&V Training • Advanced Technical Training on RCx • Owner Education and Outreach

CCC Work Plan: Next Steps



Meeting Objectives

- Morning Agenda
 - Overview of current policy drivers and relevance to Cx
 - Highlight opportunities for CCC involvement
- Afternoon Agenda
 - Collect Advisory Council and Board input on key technical, market and programmatic issues in Cx industry
 - Determine highest priority issues to address in 2009
 - Match most important issues/messages to most relevant audience (CPUC, CEC, etc.)
 - Identify outstanding research/projects needed to support CCC's point of view on key issues

Policy Overview

- ARB Climate Change Scoping Plan
- Cx in California Energy Action Plan

ARB Climate Change Scoping Plan

- Ships and trucks to rail and refineries
- Signed Sept 2006, requires reduction of GHG to 1990 levels by 2020
- Scoping Plan includes direct regulations, compliance mechanisms, monetary and non-monetary incentives, voluntary and market based mechanisms such as cap-and-trade system.
- Approved on Dec 11, 2008; next workshop/webcast Jan 29 in Sacto.
Key recommendations:
 1. **Expand EE programs and bldg and appliance standards**
 2. Increase renewable generation mix
 3. Develop cap-and-trade system
 4. Establish transportation GHG regional incentives and targets
 5. Implement assoc laws and policies such as: clean car and Low Carbon fuel standards
 6. Create targeted fees or a PGC on water use, high global warming gases and fund bills admin cost

ARB Scoping Plan and Energy Efficiency

- Targets energy reduction of 32,000 gWh and 800M therms statewide
- Recognizes and incorporates CEC Energy Action Plan and CPUC Strategic Plan and ups their goals
- Includes Zero Net buildings, voluntary and mandatory retrofits, improved compliance and enforcement, LGP, water and other measures
- Incorporates Green Action Plan and tightens standards for new buildings

Cx in California's Energy Action Plan

- Formed in response to 2001 crisis, CEC, CPUC and Power Authority
- Establish EE at head of loading order
- Revised in 2005 (EAP II) to capture policy and issues from Gov office, and state agencies
- Updated in 2008 to address AB 32 goals

Action Plan: Energy Efficiency Accomplishments

- Adoption of aggressive EE goals by both agencies
- Institution of long-term strategic planning for EE programs
- **Energy Commission building and appliance standards being upgraded on a regular schedule**
- Endorsement by both agencies of zero net energy homes by 2020 and zero net energy commercial buildings by 2030
- Adoption of a risk-reward mechanism for IOUs to earn incentives for investment in EE
- Adoption of EE requirements for customers participating in solar incentive programs

Action Plan: Next Steps

- Statewide strategic plan that will service as a “roadmap” of actions needed to achieve all cost-effective energy efficiency potential in California
- **Strategies to achieve targets for “big bold” initiatives in residential and commercial new construction, and in heating, ventilation, and air conditioning systems**
- **New strategies to address existing buildings, going beyond current utility programs and emphasizing a more comprehensive approach**
- Partnerships with local governments on energy efficiency delivery, as well as enforcement of building codes
- Utility 2009-2011 efficiency program portfolios consistent with and supportive of the statewide strategic plan
- Energy savings goals through 2020, consistent with AB32, for both IOUs and POUs
- Additional, more stringent, codes and standards for appliances and buildings and the associated technology and design research and development to support them
- Local government support in building code enforcement
- Additional low-income energy efficiency initiatives

Break

10:20-10:30

Policy Overview, cont.

- Executive Order S-20-04 and CA Green Action Plan
- Integrated Energy Policy Report
- Building Codes and Standards

Governor's Executive Order and Green Building Action Plan (2004)

- Reduce state-owned buildings grid-based electricity usage 20% by 2015 through energy efficiency and distributed generation
 - LEED Silver or LEED-EB for state buildings
 - Energy Star buildings (leased) and equipment
 - CEC benchmarking and Cx guidelines and implementation plan
 - CPUC improve EE programs; include Cx and advanced metering; report
 - CEC Title 24 and Title 20 Standards
 - Increase stringency, more Cx, expand code enforcement

Integrated Energy Policy Report (IEPR)

- Bi-annual report assessing major energy trends and issues (2008 Update-Limited Focus)
- Energy efficiency and demand forecasting
 - **Methods and Challenges**
 - Clarify methodology for including EE
 - Future EE: “Savings reasonably expected to occur”
 - committed vs uncommitted
 - Modeling and accounting variations
 - Market, price and technologies
 - **Utility Progress under AB2021**
 - Cost-Effective EE Potential
 - Goals: IOUs and POU

2009 IEPR

- Scoping Order issued January 9, 2009
 - Electricity and Natural Gas Efficiency
 - Goals
 - IEPR: 100% of cost-effective EE by 2016
 - CPUC: Utility Programs
 - ARB: Scoping Plan
 - AB 549: Existing Building Recommendations
 - Existing Buildings
 - Additional EE measures and technologies
 - Load Management
 - Zero Net Energy Buildings
 - Federal EE and Conservation Block Grants
 - Demand Forecasting

CEC Building Codes and Standards

- Acceptance Testing
 - 2005: initial inclusion, low compliance
 - 2008 (effective Aug '09): expand and refine
 - Education and training
 - Coordinate with utility rebate programs
 - Tiered Codes
 - 2011 (begins early 2009)
 - Will be several proposals to expand
- CA Green Building Standards
 - Updates beginning shortly
- “Reach” Codes

San Francisco's Green Building Ordinance

Rich Chien

City and County of San Francisco
Department of the Environment

Lunch

11:45-12:45

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Policy Initiative Brainstorming Session

1. Key Issues
 - Identify and articulate CCC point of view on programmatic, technical and market issues; develop CCC as the Cx resource
2. CPUC
 - Identify opportunities to inform and influence CPUC on Cx/RCx issues
3. CEC
 - Identify opportunities to inform and influence CEC on Cx/RCx issues, esp. Building Codes and Standards
4. CA State Initiatives
 - Identify opportunities that arise from State mandates
5. Parking Lot Issues
 - Determine most relevant and actionable “other opportunities” for policy involvement
6. Research Questions
 - Identify research needed to support policy work in 2009 and beyond

1. Key Issues

Identify and articulate CCC point of view on programmatic, technical and market issues

Utility EE incentive program design and implementation issues

- Customer incentive rates and requirements
- Measure life; measure mix in RCx programs; effect on program efficacy
- Net to Gross for RCx programs
- Impact evaluation to satisfy CPUC EM&V protocol requirements
- Demand response and RCx
- Other...

Broader Market Issues

- Owner decision-making and actions
- Integrating retrofit and RCx activities for major remodels
- Other...

2. CPUC

Identify opportunities to inform and influence CPUC

- Energy Action Plan
 - Establishes EE first in the energy loading order; states that existing programs have not yet captured all cost-effective EE options
- CA Energy Efficiency Strategic Plan
 - Opportunity for holistic, collaborative strategies employed by Cx to contribute to long-term, deeper savings goals
- EM&V
 - Guidance needed to formulate better approaches to verification of energy savings from Cx

3. CEC

Identify opportunities to inform and influence CEC

- Integrated Energy Policy Report
 - Updated every two years with strategic recommendations for code changes related to EE
- Building Codes and Standards
 - Opportunities for CCC to be a resource and leader in developing next-generation codes related to EE and Cx

4. CA State Initiatives

Identify opportunities that arise from State mandates

- Executive Order S-20-04 & Green Building Action Plan
 - Requires RCx of state buildings larger than 50,000sf
 - Under LEED certification requirement, Cx of new or renovated state buildings
 - Training and infrastructure

5. Parking Lot

Determine most relevant/actionable “other opportunities”

Utility-Related Issues

- Smart grid
- Distributed generation
- “Deemed RCx” for utility programs
- Other...

Non-Utility Issues

- ASHRAE Standard 90.1, addendum to include O&M
- USGBC and LEED standards
- Training and education needs
- EPA Portfolio Manager

Research Questions

What research is needed to support policy work in 2009 and beyond?

CCC Roadmap Recommendations (July 2007)

- Continue market research
- Verify savings and quantify costs and benefits
- Develop targeted case studies
- Outreach to owner groups and decision-makers
- Develop sample documents
- Develop tools for data mining, performance monitoring, and fault detection and diagnostics
- Distribute RCx toolkit
- Develop specialized RCx processes
- Provide specialized training opportunities
- Support college curriculum development
- Support career growth in Cx
- Disseminate the CA Commissioning Guides
- Monitor progress and publicize results

Wrap Up

2009 Meeting Schedule

Date	Location	Host
March 18	Sacramento	Green CA Summit SMUD
May 21	SoCal - TBD	SCE
August 20	SMUD Customer Service Center	SMUD
October 22	San Diego	Sempra

Next Meeting: Wednesday, March 18

Location: Green California Summit

Agenda Topics

- Follow up on outcomes of today's meeting
- Other discussion?
- Topics of Interest
 - Technical topics
 - Case studies – volunteers or invitations
 - Program updates – volunteers or invitations
 - Other needs?

Green California Summit *Green Solutions for Tough Economic Times*

8:30-9:30am: Keynote

Bill Lockyer, Treasurer,
State of California

Afternoon Session on
Commercial Buildings
(opportunity for CCC to
coordinate)

Exhibit Hall and Keynote is
free of charge

Adjourn

*Thanks to PG&E
for hosting the meeting today!*