California Commissioning
Collaborative December Meeting
SCE Commercial Building RCx Program Lessons Learned – A Provider’s Perspective

December 6, 2012
Agenda

- Program Overview
- Buildings Implemented – Overview of Results
- Lessons Learned – Program Process
- Lessons Learned – Program Structure
Program Overview

- Commercial Facility Focus
  - Flexibility in Building Type

- Incentive Structure
  - Program Pays Provider Based on $/SF
  - Program Offers Owner Additional Incentives
  - Owner Commits to 1 Year Payback Projects Subject to Cap

- Provider Commits to Pay for Performance Component
  - Based on Deliverable Timing and Final Approved Savings
  - Targets 0.79 kWh/SF + Natural Gas
  - 25% of Project Fee + 5% Bonus
Program Overview

Program

Committed to Pay for Performance Requirements

Committed to Implement 1.0 year payback projects

Provider

Delivers RCx Study

Owner
Program Process

- Screening Activities
  - Conducted by Program via 3rd Party

- Scoping
  - Performed by Provider – Establishes Decision Point

- Investigation
  - Provider Makes Recommendations, Owner Selects Based on Incentives, Budget, and Requirements of Agreement

- Implementation
  - Owner Required to Implement with Limited Program Assistance

- Follow Up
  - Provider Required to Validate Implementation and Savings
Building Results Overview

- 8 Facilities Scoped But Not Recommended
  - Almost All Retail
- 15 Facilities Completed
  - 3 Facilities Selected During Scoping That Did Not Proceed
  - 3 Facilities Cancelled During Investigation
- Savings Targets
  - 100% Success Rate in Buildings Completed
  - Average kWh Savings = 1.64 kWh/SF
## Building Results Overview

<table>
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<tr>
<th>Building Size (conditioned sq.ft)</th>
<th>Building Type (from drop down menu)</th>
<th>Final Annual Electric Savings (kWh with interactions)</th>
<th>Final Peak Demand Savings (kW with interactions)</th>
<th>Final Annual Gas Savings (therms with interactions)</th>
<th>Final GHG Avoided in U.S. Tons (C02e)</th>
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Building Results Overview

Square Feet Percentage By Building Type

- Industrial: 40%
- Hospital: 38%
- Mis. Commercial: 13%
- Large Retail: 3%
- Large Office: 6%
Building Results Overview

Saving Percentage By Building Type

- Industrial: 34%
- Hospital: 27%
- Mis. Commercial: 29%
- Large Retail: 4%
- Large Office: 6%
Lessons Learned - Program Process

Effectiveness of Screening/Scoping Efforts
- 100% of Targets Met in Buildings Proceeding from Scoping
- Typical Profile for Facilities Not Recommended Emerged
- Significant Avoided Cost for Program:
  - Scoping Cost for No-Go Facilities - ~$35k
  - Avoided Cost for No-Go Facilities - ~$182k

Conclusions
- Scoping Approach Could Be Altered or Streamlined
- Alternative Programmatic Approach Could be Considered for Retail
Lessons Learned - Program Process

- Implementation SOW Challenges
  - Provider Not Responsible for Development of SOW
  - Nearly Every Owner Had Challenges During Implementation Phase
  - In Most Cases Implementation Not Done Correctly the First Time

- Conclusions
  - Program Would Likely Benefit from Alternative Approach in Future Cycles
Lessons Learned - Program Process

◆ Incorporation of Standardized Analytical Tools
  ◆ BOA Tool deployed on All Projects – Captured Most Measures
  ◆ Proved to Be Effective Time Saver
  ◆ Simplified Review Cycles
  ◆ Proved to Successfully Enhance Commercial Viability of Program

◆ Conclusions
  ◆ Enhance Tool Capabilities Moving Forward
  ◆ Continue to Standardize Formats for Analyzing and Presenting Data
Lessons Learned - Program Structure

- Some Commercial Challenges Continue to Linger
  - Payment Structure Proved Nightmarish
  - Review Cycle Times Still Not Optimal
  - Budget Challenges for Smaller Facilities

- Conclusions
  - Consider Options to Enhance PFP Bonus on Projects Greatly Exceeding Targets
  - Better Coordination with Review Parties
  - Fixed Fee Structure Preferable to T&M
Lessons Learned - Program Structure

♦ Challenges with Implementation Commitment
  ♦ Owners Required to Commit to 1 Year SPB Projects
  ♦ Cap Was a % of Total Utility Bill
  ♦ This Proved Problematic with Larger Facilities
  ♦ Program Likely Lost 3-4M kWh Savings as Result

♦ Conclusions
  ♦ Simplify Cap and Tie to Savings Target
  ♦ Allow for Greater Flexibility in Extenuating Circumstances
Lessons Learned - Program Structure

- **Challenges with Owner Implementation Capability**
  - Owners Not Sophisticated Enough to Implement without Substantial Provider Assistance
  - Owners Have Inadequate Internal QC and Oversight Processes in Place
  - Often Contractors Misinterpret Findings

- **Conclusions**
  - More Provider Assistance Is Needed During Implementation
Lessons Learned - Program Structure

◆ Challenges with Owner/Program/Provider Relationships
  ◆ Competing Agendas with Murky Contractual Relationships Has Proven Problematic
  ◆ No Accountability of Owners to Providers and Vice Versa
  ◆ Current Structure Does Simplify Terms Issues

◆ Conclusions
  ◆ As a Provider, We Would Prefer an Approach More Closely Aligned with Approach of Partnership Programs
Lessons Learned - Program Structure

❖ Lack of Long Term Persistence Component
  ❖ Program Weak on Persistence
  ❖ Majority of Facilities Will Likely Not Persist in Savings
  ❖ Most Owners Not Aligned with Persistence Goals
  ❖ Still Regard RCx as an ‘Event’ Rather than Process

❖ Conclusions
  ❖ Can Future Program Structures Incorporate Persistence Component?
Closing Thoughts

QUESTIONS?