

SCE Retro-Commissioning (RCx) Program 2006-2008

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RCx Program Overview

- RCx is a new SCE QA and Optimization Program for Existing Buildings and their Energy Consuming Systems.
- Program provides engineering services and incentives to encourage building owners to RCx their buildings.

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Program Specific Definitions

- What is Building Optimization?
 - Since existing buildings are being addressed, the original Design Intent and technology may have changed; Therefore, building operation will be optimized to best serve the current customer needs using current technology and methods. Building optimization is part of this program.
- What Does this Program Not Do?
 - This program is NOT an energy efficiency equipment retrofit program. Although some repair work will likely be addressed and some enhancements made, the intent is that most equipment retrofits will be referred to and funded by other programs.

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RCx Program Rationale



- RCx Program addresses a need that is not met by energy efficiency retrofits: Making existing systems work better
- RCx is a relatively new process that is now being addressed in an SCE Program.

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Commissioning (Cx) Strategy



- How Does the SCE RCx Program Work?
 - Candidate buildings are screened by the program
 - RCx providers will evaluate the design and current operation of the building using plans, inspections, data logging and owner interviews to determine what deficiencies exist
 - RCx providers will identify deficiencies along with correction costs and energy savings estimates
 - Owners will implement the recommended fixes
 - RCx provider will ensure that the required fixes are made
 - RCx provider to provide training and documentation on system operation

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RCx Program Goals



- Goals
 - Net kWh 39,000,000
 - Summer Peak Net kW 9,600
- Number of buildings
 - 300 – 400 (roughly 40 million sq. ft.)
- Incidental Improvements
 - Increase occupant comfort, increase equipment life, better system operation through training, increased RCx provider pool
- Incentive Budget
 - Approximately \$7 Million

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Related Programs-

- This is a New SCE Program
- Others:
 - Building Tune Up (Third party program that was in 2004-2005 program cycle).
 - Partnerships with RCx/MBCX elements
 - California Community Colleges
 - University of California/California State Universities
 - County of Los Angeles
 - County of Riverside
 - California Department of Correction and Rehabilitation

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Targeted Customers

- Commercial Customers with interest and capability
- Buildings over 100,000 SF (Offices, hospitals, hospitality, retail, grocery stores (over 40,000 SF), educational, museums, etc.
- Owner Occupied Preferred
- Entire SCE Territory
- High Relative Energy Usage (from Benchmarking)
- At Least part of HVAC is on BAS system
- Equipment is still in good, operational condition

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Program Tools

- Program will utilize a Screening Process that will evaluate:
 - Relative Building Energy Usage (Energy Star® Benchmarking)
 - Building Suitability (Age, size, etc.)
 - Financial Buy In- Ability/Timing of Owner to do Required Work
 - Owner/Operator Buy in- Evaluate interest/ability to devote time to assist with RCx project tasks
- Financing: Program may have third party financing available for costs not covered by incentives

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Program Tools



- Forms for data collection, such as a table to record Owner's Operating Requirements
- Findings Workbook/database, including easy-to-print versions of key deliverables
- Sample calculations
- Templates for reporting
- Guidelines for collecting EM&V baselines and documenting O&M improvements
- Energy Star® Benchmarking

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Program Marketing



- Direct contact using leads from prior programs, BOC graduates and SCE account management
- Marketing partners with current contacts with building owners (Real Win Win, Pinnacle One, Consumer Powerline, full service HVAC firms, others)
- Recruitment of RCx Service Providers from previous programs
- Program Workshop
- Marketing materials to include a brochure, a website, PowerPoint Presentation, and a white paper on RCx

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Program Process



- Customers will be enrolled by signing and MOU or similar after they have passed the screening process
- RCx Providers will evaluate facility and make recommendations
- Owner and SCE program will review and approve recommendations
- Customer will make needed maintenance fixes and small repairs
- Customer will contract out any major work
- RCx Providers to provide training and inspect completed work
- SCE program to approve RCx incentives, Coordinate with BOC training and with Energy Star® Benchmarking and LEED™ documentation

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Program Incentives



Phase	Incentive	Paid to	Description of Service
Investigation	\$0.05-\$0.10 per square foot	RCx Provider	The program will calculate the investigation incentive based on building size and systems and, in most cases, the incentive will cover the investigation in full.
Implementation	Custom incentive estimated at \$0.05 per square foot	Building Owner	The program expects owners to implement measures that payback in less than one year using their own funds, while a custom incentive is available to help implement measures with longer paybacks.
Follow-up	\$2,000-10,000, estimated at \$0.02 per square foot	RCx Provider	The program pays to retain the provider through implementation to provide oversight, verify the measures are implemented correctly, and provide documentation and training that will help to ensure building operators have resources to monitor and maintain the implemented measures.

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Program Questions



- Questions???

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