California Commissioning Collaborative
Meeting Minutes
August 10, 2004
California Energy Commission
Sacramento, CA

Attendees
Board
Greg Ander
Grant Duohon
Jim Parks
Richard Conrad
Nancy Jenkins
Advisory Council
Tav Commins
Mary Ann Piette
Glenn Friedman
Martha Brooke
Doug Chamberlin
Treasa Sweek
Ken Gillespie
Randall Higa
Other Attendees
Phil Welker
Amanda Potter
Dan Borgoyne
Norman Bourassa
John Wimer
Phil Haves
Pete Keithly
Evan Mills

Introductions
Grant Duohon, CCC Board Chair, welcomed everyone.

Presentations
1. Cx Provider Qualifications/Certification Programs – Phil Welker, PECI

In previous meetings, the CCC discussed whether it wished to endorse established Cx provider certification programs. In early August a committee was formed to assess the issue. Members were: Tav Commins, Don Frey, Ken Gillespie, Tony Pierce. The committee deemed the issue of endorsement politically complicated, and suggested alternatives. Ken Gillespie suggested the following proposal, which was presented at the meeting and generally well received by attendees.

Proposal: Add three sections to CCC website to help owners search for qualified commissioning providers:

Section 1: How to Select Cx Providers, including recommended Cx provider qualifications, how to evaluate Cx document submittals, and information about available certification programs.

Section 2: Provider Profiles, including Cx documents from past projects (scope of work, design intent document, Cx plan, issues log, Cx final report, and systems manual).
Section 3: Sample Documents, including sample Cx RfQ, questions to ask potential Cx providers and best practices versions of documents listed in section 2.
Meeting attendees had a positive response to this proposal.

**Action items:** Recommend additional website content.

2. **2005 California Cx Conference Update – Phil Welker, PECI**

At the previous CCC meeting on May 7, 2004, members discussed presenting an educational forum targeting building owners. Members advocated workshop/vendor events at varying locations rather than a single central location. As follow up, PECI conducted an informal survey of 17 building owners and presented the results.

Results: The clearly preferred format is a one-day local event. A cost of $150 would not prevent owners from attending, although time and travel are a consideration. Respondents suggested several possible attendees within their organization, with the most common being the Chief Engineer/Regional Engineer, Facilities Manager/Director and Project Manager. Top five topics of interest are 1) top 10 RCx issues, 2) improving NOI through operations measures, 3) Cx team roles and responsibilities, 4) quantifying energy and non-energy benefits and 5) ensuring persistence of improved building operations.

Respondents equally split on value of a trade show. Best ways to reach possible attendees are email, direct mail and personal contact (phone, utility rep, word-of-mouth) followed by BOMA.

The group was very interested in moving forward on this event. It was agreed that PECI should look into how to reach financial decision makers before voting to approve funding for the owners forums makers since this will be the greatest challenge for this event. The targeted timeline is next spring or summer.

**Action items:** Research how to reach financial decision makers.

3. **CHPS Cx Charette Results and Next Steps – Ken Gillespie**

The CCC co-sponsored a CHPS Cx Charette on August 3, 2004 at the Pacific Energy Center. The event included an overview of the Cx process, a presentation from a school district panel, two case studies, sessions on integrating Cx and using the EDR Cx Assistant and two presentations on a new construction project and a modernizing project.

The event was very successful: the day was very interactive, school administrators were very receptive to hearing from their peers, and the Cx Assistant was well received. Interestingly, districts that had commissioning paid for the first time were now implementing commissioning as standard practice at a far higher rate than other districts.
4. Training Survey Results – Amanda Potter

FEMP funded a survey of training needs in the California Cx market. Respondents include 10 owners, Cx providers and building contractors. There is a clear need for trainings targeted to each group’s interests.

Results: Top three topics of interest for 1) owners: functional testing, finding problems through BAS and controls integration, 2) Cx providers: RCx tools and techniques, controls integration and specifying control and monitoring points, and 3) building contractors: marketing Cx services and top 10 Cx and RCx issues. Also important to respondents are the roles and responsibilities of the Cx team. Owners have a strong desire to operate buildings more efficiently but lack the tools and knowledge to detect problems. Building contractors are least likely to attend trainings and are skeptical of the value of Cx. They feel the weak market for Cx services makes marketing tactics more important than skills training at this point. Their primary need is an introduction to Cx and RCx and its opportunities to improve their bottom line.

5. Cx Assistant – Treasa Sweak, CSG

The Cx Assistant is a market transformation tool for commercial construction. It helps users specify Cx scope, cost, design intent docs, basis of design docs, Cx specifications and sequence of operations. Modules under development include Cx plan, systems manual and training plan. CCC members were asked about the tools usefulness, the situations where they use it, when they recommend it to others and whether a more specific tool would be beneficial. No one at the meeting had used the tool. Suggestions were made on how to increase the tools visibility including trainings on the tool and demonstrating the tool at ASHRAE and AIA meetings.

6. Early Results on Costs and Benefits from 80 Cx’d Buildings – Evan Mills, LBNL

DOE funded Lawrence Berkeley National Laboratory, PECI, and TAMU to assemble the largest database of commissioning and retro-commissioning costs and benefits, which currently covers nearly 30 million square feet of floor space in 208 buildings across 20 states. The analysis also captures information on the depth of commissioning across a wide range of building types, and the types of problems found and interventions implemented. Contact Evan Mills (emills@lbl.gov) for more information, to contribute data, or to have your name put on the distribution list for the final report.

7. Persistence of Savings in the SMUD Retro-Cx Program – Norman Bourassa, LBNL

This study of eight large commercial building sites in SMUD’s RCX program in 1999 and 2000, was conducted in 2003. The study evaluated the persistence of energy savings and measure implementation and recommended ways to improve SMUD’s RCx program. Researchers collected and analyzed energy and operations data.
Results: 59% of recommended measures were implemented. Average simple payback was 1.2 years. Greater than 60% of energy savings persisted four years after RCx, much longer than needed for measure payback. RCx funding from owners was limited and was usually absorbed into the O&M budget. The primary non-energy benefit was training and improved energy awareness, but building managers still lack the tools to track energy performance in a timely manner. Study recommends the SMUD program: develop measure tracking procedures and performance tracking tools, assess energy use three years after RCx and review RCx measures after four years. A final report from this study is available at: http://buildings.lbl.gov/hpcbs/Element_5/02_E5_P2_2_5.html.

8. CCC Policies – Phil Welker

Conflict of interest and anti-trust policies were discussed. It was agreed that we need more specific guidelines on the anti-trust policy.

Action items: Develop guidelines for the anti-trust policy

9. Announcements

   a. The Peralta College Project was funded and will include the development of at least 2 community college commissioning courses.
   b. Quantum is working with the Northwest Energy Efficiency Alliance to define and quantify the costs and benefits of O&M measures.
   c. ASHRAE is developing guidelines on maintenance practices.
   d. The County of Los Angeles released an RFQ soliciting Cx providers for their new retrocommissioning program.
   e. UC/CSU will also be releasing an RfQ shortly soliciting Cx providers for their monitoring based commissioning program.
   f. The San Diego Retrocommissioning Program is about to release an RFQ as well.
   g. PIER is partnering with the UC/CSU systems to demonstrate advanced Cx tools.