October 22, 2009
Hilton San Diego Airport/Harbor Island
9 a.m. – 3 p.m.

Attendees
Advisory Council
James Bryan, Arden Realty
Don Frey, Architectural Energy Corporation
David Jump, QuEST
Tony Pierce, Facility Dynamics Engineering
Reinhard Seidl, Taylor Engineering

Board of Directors
Bruce Baccei, SMUD
Dan Burgoyne, State of California DGS
Tav Commins, California Energy Commission
Greydon Hicks, PG&E
Chuck Poindexter, San Diego Gas & Electric
Glenda Towns, So Cal Gas

CCC Staff and Consultants
Eliot Crowe, California Commissioning Collaborative
Kirstin Pinit, California Commissioning Collaborative
Phil Welker, California Commissioning Collaborative

Guests
Jay Bradley E&A Engineering/EMSI
Nick Burton Harmonics Limited
Beth Chambers California Energy Commission
Tim Chin Enovity
Stephen Clarke Best Infrared Services
John Cullum So Cal Gas Company
Rick Dale Abbott
Michael Datte University of California San Diego
Erik Emblem 3 E International Incorporated
Stephen Gay San Diego Unified School District
Glenn Hubbard G. B. Hubbard & Associates, LLC
Eric Kirchhoff So Cal Gas Company
Mugimine Lukito Southern California Edison
Ann McCormick Newcomb Anderson McCormick
Kevin Norris University of California San Diego
Joe Powell Sheet Metal Workers in San Diego
Michael Putich Climatec
Tom Reichert E&A Engineering/EMSI
Joseph Romero University of California, San Diego
Patty Witty Dynamic Commissioning Solutions, inc.
Welcome, Introductions, and Announcements
Don Frey called the meeting to order at 9:30 a.m. Attendees introduced themselves.


*Eliot Crowe, CCC Research Program Manager*

Eliot Crowe presented a brief summary of the recent Evan Mills Report on costs/benefits of Commissioning. The purpose of the presentation was to highlight the key benefits in terms of percentage savings and payback that could be used to promote commissioning and retrocommissioning.


AEC / DGS work on new construction program

*Don Frey, Architectural Energy Corporation*

Don Frey presented an overview of AEC’s work supporting DGS’s mission to integrate Cx into their new construction process. This included discussion of organizational issues - skills and experience of staff - and clearly communicating the message that Cx is not just acceptance testing. Also covered was a case study on a Cx pilot project at CalTrans Maryville, including specific examples of issues uncovered. The presentation ended with lessons learned and a short video that was used to communicate the benefits of Cx within DGS.

Update & discussion on Cx into California’s Green Building Standard

*Dan Burgoyne, DGS*

Dan Burgoyne walked through the proposed language for mandating Cx as part of California’s Green Building Standard (period for comment ends November 16). Key discussion points included:

- How would the standard be enforced?
- Is 10,000 square feet too low as a size threshold for the mandate?
- Will there be a list of approved certification bodies for Cx providers?

CCC staff will prepare a comment to submit to the California Building Standards Commission, and will provide an opportunity for CCC participants to provide input and suggestions to assist in developing this statement. An email will be sent the week of October 26 with more information.

CCC Title 24 Project Updates

*Kirstin Pinit, CCC Program Manager*

Kirstin Pinit presented the CCC’s ongoing and upcoming activities relating to Title 24, including:

- Training for Building Inspectors, relating to the 2008 Standard
- Development of an “Acceptance Testing Field Guide” for building inspectors
- Research project to inform potential addition of design-phase commissioning requirements to Title 24

CCC PIER - Projects update and discussion (PAC Meeting)

*Eliot Crowe, CCC Research Program Manager*

*Beth Chambers, CEC Contract Manager*

Beth Chambers discussed CEC activities relating to 2009 programs contracting, ARRA stimulus funding, and also gave updates on the proposals process for 2010 programs (“TIBC#2”) and Building Energy Research Grant (BERG).
Eliot Crowe presented a short overview of the five projects included in the CCC PIER Program. He then went on to talk through some of the central questions for two of the projects:

**Project 2: Integrating Energy-related information into Commercial Real Estate (CRE) Transactions**

This project will pilot three approaches that could be incorporated into CRE purchases: Benchmarking, RCx Screening, and RCx Scoping. Following the pilots, a single recommended approach will be developed.

Central questions include:
- Cost/time limitations – how deep can you go?
- Benchmarking is a big deal for a lot of property owners, so RCx screening might be a stretch?
- What are the technical capabilities of the “average” Property Condition Assessment (PCA) firm?
- Need to be careful in giving recommendations, if a multi-million dollar transaction is in the balance

**Project 4: Best Practices Guideline for Performance Tracking**

This project will create a guideline and cases studies that will assist building owners/engineers in establishing performance tracking systems in their buildings that are best suited to their needs and budget. Eliot Crowe presented a project overview, and Tim Chin of Enovity presented a draft of a matrix that is being developed for categorizing the various systems on the market.

Central questions include:
- With so much tool development in this area, how do we ensure the guideline isn’t obsolete in six months?
- How do we reach the audience and inspire action?
- How do we strike the right balance of comprehensiveness and brevity?
- How do we ensure the guideline is relevant to both commercial office and institutional buildings?

"Arden Access“ Ongoing Cx tools and implementation plan

*James Bryan, Arden Realty*

*Michael Putich, Climatec*

James Bryan described Arden’s approach to setting up a portfolio-wide performance tracking system. As a means to justify investment, data was presented from five of their buildings, to demonstrate the energy impact of building “drift” from optimized state of operations.

Michael Putich described the architecture of the performance tracking system, which is built upon AEC’s Enforma software tool.

**Wrap - Up**

*Don Frey*

Don Frey presented the CCC Meeting schedule for 2010:

<table>
<thead>
<tr>
<th>Date</th>
<th>Host</th>
<th>Location</th>
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<tbody>
<tr>
<td>March 25</td>
<td>SMUD</td>
<td>SMUD Customer Service Center</td>
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<tr>
<td>June 10</td>
<td>SCE</td>
<td>TBD</td>
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<tr>
<td>September 16</td>
<td>PG&amp;E</td>
<td>TBD</td>
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<tr>
<td>December 2</td>
<td>Sempra (SoCal Gas)</td>
<td>TBD</td>
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The meeting adjourned at 3 p.m.