

**Meeting Minutes**  
**ETCC 2009 Meeting #2, June 29, 2009**  
**California Lighting Technology Center**  
**633 Pena Drive, Davis, CA**

**Attendees:**

**SEU** - A.Y. Ahmed, Ed Becker, Sharareh Moaddeli, Jerine Ahmed, Kate Zeng, Austen D’Lima (joined by phone at 11:00 am)

**SCE** – Gregg Ander, Alok Singh, Tom Antonucci, Paul Delaney, Carlos Haiad, Nada Khattar

**PG&E** – Melody Agustin, Ryan Matley, KC Spivey, Siva Setheraman, Albert Chiu, Randall Wong

**SMUD** – Bruce Baccei, Jim Parks (AM)

**CEC** – Norm Bourassa, Virginia Lew, Michael Lozano

**CPUC** – Ayat Osman

**California Energy Investment Center** – Andrew Young

**EPRI** – Ammi Amaranth

**California Lighting Technology Center** – Michael Siminovich (welcome and introductions)

**9:35-Agenda Item I:** Welcome & Introductions – Michael Siminovich welcomed everyone to the new California Lighting Technology Center. He briefly talked about the new center and about the CLTC Campus Lighting Retrofit Forum scheduled at UC Davis on July 1 and UC Irvine on July 13.

**9:45 - Agenda Item 3:** Jim Parks, Norm Bourassa and Bruce Baccei discussed the status of the 2010 Emerging Technology Summit planning activities (presentation distributed during meeting). Here are the highlights:

- Proposed dates are either September 19-21 or November 7-9—convention center availability is the determining factor for the dates.
- Location near the capital -- either the Sheraton and convention center or the Hyatt and the convention center with the exhibits and sessions at the Convention Center and the meals at either hotel and/or convention center.
- Proposed 4 sessions and 4 tracks: Residential, Commercial, Ag/Industrial and Other. There was a discussion on the topics. Here are the highlights:
  - Big ticket topics include smart grid from the customer side, net zero energy buildings, lighting and HVAC.
  - Suggestion to put the net zero energy building discussion into the Other Session.
  - Ag and Industrial session topics needs better definition
  - Eliminate Green
  - Other should include “smart” premises with “smart” meters
  - Ideas for keynote speakers—on emerging technologies and Federal Recovery programs
- Sharareh Moaddeli shared experiences from the last ET conference:

- Reserve rooms by nights stayed rather than number of rooms. If you reserve by the number of rooms and more than 10 percent of the rooms are vacant, then you need to pay for the vacant rooms.
- Estimated number of attendees—last time projected 500 attendees
- How to encourage attendance
- Need for simplifying tracks and avoiding conflicting sessions and the strategy for attracting attendees to the exhibits (e.g., food at the booths)
- Conference cost
  - Last conference: Paid registrations (\$390/person)
  - Estimated conference cost \$220,000, funding shortfall was covered by the hosting utility.
  - Estimated cost per ETCC member could be \$50,000 each with the hosting utility/organization paying more.
  - SMUD will be the prime contractor and will bill each of the ETCC members for the cost. PIER will contract directly with SMUD.
- **Action items:**
  - Jim and Bruce to determine what other conferences might be held in September or November that might conflict with the ET summit. Bruce sent an email on 7/2/2009 indicating that there are no apparent conflicts with November 7-9
  - Working group established to develop agenda and better define sessions and speakers. The group consists of Norm Bourassa and Michael Lozano (CEC), Paul Delaney (SCE), Randall Wong (PG&E), Sharareh Moaddeli (So Cal Gas), and Bruce Baccei (SMUD).
  - ETCC members to indicate amount of funding commitment, the charge for attendees, and the number of complimentary passes.
  - ETCC members to identify topics and speakers for keynotes.

**10:15 – Agenda item 4:** Andrew Young from the California Energy Investment Center discussed the EB-5 Immigrant Investor Program (Immigration and Nationality Act of 1990, Section 203(b)5). The purpose of the program is to invest “risk capital from foreign private investors in alternative energy and advanced technology and to create jobs in California.” The program, administered by Homeland Security, provides permanent visas (green cards) for qualified immigrant investors. The act requires a capital investment of \$1 million for all areas in CA, or \$500,000 for targeted employment areas (TEA) with high unemployment. In both cases, the investment must create at least 10 full time jobs. There are 10 TEA counties in California with high unemployment (San Benito, Merced, Madera, Fresno, Kings, Tulare, Kern, Imperial, Riverside and San Bernardino). Mr. Young indicated that his firm is interested investing in demand side technologies that are beyond the proof of concept stage and has the potential to foster significant investment, business grown and job creation. [Note: Andrew Young’s presentation emailed to ETCC members on 7/6]

- **Action items:**
  - Gregg Ander to assist Andrew Young with marketing his program for energy efficiency

[Break]

**10:55 – Agenda item 5:** Carlos Haiad of SCE provided a discussion of past and future demand response (DR) activities. He discussed past demand response funding (approximately \$2.75 M) and the following types of projects: lighting, refrigeration, water, wastewater, pool pumps, HVAC systems, advanced controls, programmable communicating thermostats, and software development. He also spoke about the DR market potential, and battery energy storage systems. He indicated that residential customers were receptive to demand response program and that automated shallow DR strategies (reduce power by small percentage “painless DR”) could result in demand reduction ranging from 5 to 38 percent. Carlos discussed the future 2009-11 program including bringing more DR into T-24 standards, LEED credit for DR, more battery energy storage systems and residential display. [Note-Carlos’ power point emailed to ETCC members on 7/6]

- **Action item:** CEC, IOUs and SMUD to collaborate in getting LEED credit for DR—quantify benefits, work with ASHRAE and others to support initiative.

**11:25 – Agenda Item 6:** Ammi Amaranth presented on EPRI’s DR activities. Ammi discussed EPRI’s evolution of their DR activities and highlighted the technologies studied in 2008 and 2009. He discussed EPRI’s work with Ice Bear to verify claims associated with COP and energy efficiency, home area networks, and DR ready appliances. [Note-Ammi’s power point emailed to ETCC members on 7/6]

**11:55 – 12:25:** Lunch

[CLOSED SESSION]

**12:25 – Agenda Item 7:** CEC-PIER updates: Michael Lozano discussed the industrial, agriculture and water (IAW) activities, including the 2008/09 budget of \$6.9 million and how it was divided, typical tasks and sample projects. He mentioned that there are two solicitations in place (Food/Dairy Process Grant and Emerging Technologies Program Grant) and the challenges facing the program. Norm Bourassa discussed the buildings and appliances activities, including the status of the current solicitation (Technology Innovations for Buildings and Communities (TIBC) II) and proposed budget for 2009/10 as presented to the PIER Advisory Committee in May. Norm discussed the evolution of the PIER program from component, systems, and community/networks. He indicated that the lines of communication between the different PIER research areas are blurring and there is more collaboration among the technology groups (e.g., zero net energy homes include both energy efficiency, renewable and community wide actions). He spoke briefly about the research centers and the

new one on consumer appliances at UC Irvine. [Note Michael Lozano's PowerPoint was emailed to ETCC members.]

Questions and CEC responses include:

- How do you determine future PIER research areas? This is done through road maps and focus group meeting with stakeholders
- Can the members get copies of road maps and be involved in the review and updates? We are in the process of compiling our roadmaps into a single document in a consistent format. One of the other objectives is for our consultant, Navigant, to identify research areas that need to be updated because the roadmaps are old. We will email copies of some of the recently completed roadmaps and include the ETCC members in the review of new roadmaps.
- How can the utilities play a stronger role in determining future PIER research activities? Reviewing of roadmap updates, participation in focus groups. And assistance in shaping the focus of future research centers.
- How can the utilities benefit from PIER research? The Commission's Emerging Technology Demonstration Grant (ETDG) is an example of how PIER collaborates with utilities. The utilities provide the M&V, and successful projects flow into the utility rebate program. However, in the buildings sector, the trend is to do research on a more systematic and community level.
- **Action Items**
  - CEC to email out recent roadmaps and keep ETCC members informed of future roadmaps and opportunities for comment and feedback. Michael Lozano emailed sample roadmaps on July 1?
  - Next meeting, CEC to discuss how it determines future research areas and collaborates with strategic organizations and partners.

**1:05 – Agenda Item 8:** Randall Wong and Ryan Matley discussed the results of PG&E's completed technology assessments, including: bi-level LED Parking Lot Lighting (payback of 3.3 to 4.7 years), HID electronic ballast (payback of 8.1 years), hotel ozone laundry, and Discharge Air Regulation Technique (DART) control systems (payback less than 1 year). Also discussed were the project results for forklift battery charger technologies and the results of using various air filters to reduce barriers for using outside air (economizers) for free cooling. Tested performance of MERV-7, 11 and 14 filters. Results indicate that MERV 14 filters provide better quality air than recirculated air. Randall also discussed some of the current assessments, such as hotel room controls and wireless lighting controls for DR. [Note PGE's PowerPoint was emailed on July 6 to ETCC members.]

**1:20 – Agenda Item 8:** Abdullah Ahmed, Jerine Ahmed, Ed Becker and Austin D'Lima discussed Sempra Energy Utilities' on-going and planned electric and gas related technology evaluations. On-going evaluations include: LED lighting, advanced integrated office lighting, E-Quest tool for energy efficiency measures

in data centers, zero energy small commercial offices and centralized hotel guest room controls. High potential electric energy related areas for planning and evaluation in 2009-10 include: fume hood sash controls, Truveion residential system evaluation, PV/wind systems in high rise buildings, ZERO energy homes, retail and laboratories of the future, daylighting demonstrations, plasma lighting, cold cathode displays for retail and bus stops. Natural gas related projects include: hydronic loop control assessment, IC engine and ignition, tankless water heater applications, heat saver swimming pool thermal film, suncache low cost solar water heating demonstration. Gas related projects for evaluation in 2009/10 include: building envelope measures, warm mix asphalt energy conservation demo and gas role in ZERO net energy homes. Key projects delivered by Navigant include commercial/industrial laundry, warm water recycle, and SpryroCor radiant burner insert for heat treatment service. Demand response projects discussed include: advanced lighting in collaboration with SCE and water treatment strategy development. [Note SEU's PowerPoint was emailed on July 6 to ETCC members.]

**1:35 – Agenda Item 8:** Paul Delaney discussed Southern California Edison's active projects, projects nearing completion and collaboration opportunities. Active projects include: professional wet cleaning, water treatment technologies for evaporative air conditioning, AqualChill, black box evaluations, Equest algorithms for datacenters, high efficiency billboard lighting systems, and LED streetlighting. With respect to the latter, SCE is looking for 4-5 sites (e.g., coastline and desert) to study impacts on climate on LEDs. Projects nearing completion include: high efficiency MT display cases, interlock pulsation unit for dairy milking system (average savings of over 45% but long payback) and demand control ventilation for commercial kitchens—seeing about 37-62% ventilation energy savings. Collaboration efforts include climate wizard with Sealy of Australia, drag reducing agents and variable refrigerant flow technologies (20 different technologies). [Note SCE's PowerPoint was emailed on July 6 to ETCC members.]

**1:50 – Agenda Item 8:** Bruce Baccei spoke briefly about SMUD projects including House of the Future (85% savings), lighting (LEDs), and cooling technologies (Aqua-chill units)-Beutler rebates on 200 units and rolling out 200 more. Current focus is on deep retrofits in homes—looking at insulation, window, operating shades, and wholehouse fans. There may be stimulus funds for the deep retrofits. Heliomist project was dropped because the manufacture cannot deliver. Also working on a demand response unit for small, medium commercial buildings—these units control HVAC units and reduce concurrent loads and “home area network” (HAN) technology assessments. The latter is designed for the internet and uses different approaches to minimize household energy use—testing 4-5 HAN systems.

**2:00 – Agenda Items 10 and 2:** The group decided that the Future Collaboration item on the agenda was not needed since these had already been discussed

during the individual updates. The March 17 meeting minutes were discussed. Tom Antonucci indicated that action items were missing from the Navigant item. Specifically, SDG&E to share Navigant list of electrical technology opportunities. Navigant to share example of market research informing their screening process. A brief break was held to correct the meeting minutes.

**2:05** [Break]

**2:15 – Agenda item 2:** Bob Becker corrected the March 17, 2009, meeting minutes and displayed it to the group. As a result, the meeting minutes for March 17 were reviewed and adopted. Ahmed agreed to work with Navigant to obtain the example market research information.

**2:20 – Agenda item 9:** CPUC update: Ayat Osman indicated that she is awaiting CPUC approval of the IOU staff written summaries for the ET programs. She indicated that one of the questions that the CPUC is working on is what will be new performance indicators. The CPUC does not have the performance matrices developed yet. She said that we all need to think about the performance indicators and what should be tracked. There is a webinar planned for July 1 from 10 am to 2 pm to discuss the ET program. The webinar will focus on the 2<sup>nd</sup> interim report, updates on findings and evaluation of the 06/08 for ET for energy efficiency.

• **Action Items**

- Ayat to send July 1 webinar link to everyone. Sent by email to all attendees on 6/30.

**2:35 – Agenda item 11:** CPUC Project Database Discussion: Tom Antonucci led the discussion on the CPUC database. He indicated that there are a lot of variables. Every three months there will be a budget update and he said that the IOUs do not have a system to support this level of information. Additionally for the 06/08, some documents are hard to find. He suggested that CPUC identify the variables that are most important to do the process evaluations and assessments. Can the expenditures be tracked by project without identifying labor cost? The concern is that the CPUC wants to see updates every 3 months.

Ayat's response: If you don't track projects every 3 months, how do you know project is succeeding technically and financially? The purpose of the CPUC's request is to collect data and analyze whether the savings are occurring and to track the project budget. If you have nothing to report, then there is nothing to report. She indicated that reporting on the variables identified in the database is basic project management. Approximately 2% of the budget is set aside for M&V. Firestone (consultant?) needs to track projects individually.

**3:00 – Agenda item 12:** CPUC Review Process and Schedule: When an assessment is completed, how long would it take for CPUC approval? Ayat provided the following schedule:

- 15-30 calendar days for CPUC approval of working papers (Emerging Technology Process)
- After bridge funding for 09/11, new energy efficiency measures to be accepted in the portfolio
- As we finish studies, energy efficiency folks to submit working papers to the CPUC
- Measures must be approved by CPUC before they can start
  
- **Action items:**
  - Subgroup consisting of Ayat Osman, Gregg Ander, Randall Wong and A.Y. Ahmed to assist the CEC to review and correct the minutes associated with agenda items 9, 11 and 12
  - Ayat to send links to logic models and performance indicators

**3:20 – Agenda Item 13:** Technology Transfer: A.Y. Amed briefly discussed the differences in interpretation of technology transfer by each of the IOUs. Generally, technology is considered transferred when it is part of the utility's EE program but the level of tracking of the technology in these programs is variable.

The SEU Technology Transfer Process has evolved. The first bi-annual tech transfer meeting was held on 5/18/09. The feedback from the meeting included: work with energy efficiency staff as technologies are ready for transfer, get a sponsor from the beginning, get buyoff from segment managers, provide a test plan and scheduled and the ETP dataset should be available to energy efficiency managers. One of the conclusions was the need to address energy efficiency concerns based on statewide programs and the proliferation of local programs. [Note SEU's PowerPoint was emailed on July 6 to ETCC members.]

Questions raised during the meeting:

- Do you need to get upper management approval for a tech transfer process? Sempra said no. PG&E said that they needed approval from sales and program people and upper level decision makers.
- How do you address statewide inconsistency? Suggest a meeting with the 4 major IOUs and have a meeting with managers and account executives.

**3:40 – Agenda Item 14:** Wrap Up: Future discussions on new product development and diagrams on how to get approval.

Next meeting to be hosted by PG&E (San Francisco or San Ramon?)