

**Zero Energy Commercial Buildings Consortium
MELs Working Group First Call
June 8, 2010**

Attendees:

Chad Lobato, NREL
Devon Rauss, SCE
Rich Brown, LBNL
Jeff Harris, Alliance
Shanti Pless, NREL
Matt Wiggins, TIAX

Brad Hollomon, ASERTTI
Jonathan Livingston, Consultant
Christopher Larry, Teng Associates
Gregg Hardy, Ecos
Kate Marks, NASEO

Key Conclusions

- Scope will be based largely on that in the TIAX CMELs report, except we will stick with loads inside the building (i.e. excluding water treatment , transformers, etc.)

Next Steps

- Read [TIAX report](#)
- Recruit other industry experts who you think can add value—Coordinate with Diana Lin (dlin@ase.org) to get them signed up.
- Next call will be in the beginning of July
- If you have any comments or other ideas for the outline, scope, or approach—please send to Gregg, Rich, and Brad. See [Overview and Outline](#) document. They will compile and share on the next call.
 - Gregg Hardy (ghardy@ecosconsulting.com)
 - Rich Brown (rebrown@lbl.gov)
 - Brad Hollomon (bradhollomon@mac.com)

Member Assignments before July call

- Matt Wiggins from TIAX is checking with other staff and will confirm their lead on:
 - Scope (based on TIAX CMELs report)
 - Automation
 - DC building microgrids
- Christopher Larry volunteered to lead on:
 - Integration of building systems
 - Refrigeration
 - Including low-grade heat recovery and heat venting
- Gregg Hardy will take the lead on:
 - Computers
 - Following-up with BPA on the recent results Emerging Technologies (E3) project recommended by Jonathan Livingston. The current posted report is dated from Feb/Mar this year.
- Rich Brown will take the lead on compiling related studies and resources

- Shanti Pless noted that NREL is doing some work now on PCs and work stations, and through the Commercial Building Partnerships (CBPs) they are working on refrigeration in grocery stores. NREL can contribute in:
 - PCs and work stations
 - What is best in class for refrigeration
- Jeff Harris would like to work with Gregg and Rich on cross-cutting actions and recommendations
- Brad Hollomon will request from DOE permission to share the results of their technology screening database

Meeting Discussion

Opening Comments

Diana Lin provided an overview of the CBC

- Launched in Oct 2009
- Two major tasks in 2010 are:
 - *Next Generation Technologies Report* (Task lead: Brad Hollomon)
 - *Analysis of Cost and Non-Cost Barriers Report* (Task lead: Dave Hewitt)

The objective of the report is to make recommendations from an industry perspective to DOE on how to get to net zero energy commercial buildings and also to share the body of knowledge we develop with all the CBC members.

How does DOE plan to use the reports?

- The CBC hopes to use the activity as a way to collaborate and coordinate with other groups working on related efforts within the DOE's broader Commercial Buildings Initiative (CBI), i.e. the CBEAs, national labs and others.
- For instance, Rich Brown is leading the roadmapping for CMELs for DOE and is very interested in the outcome of this process.
- The results from these reports will ultimately help inform development of a High Performance Building Clearinghouse and a roadmap for the commercial buildings sector.

MELs Working Group Overview

MEL Chapter Key Timeline

- Prelim draft chapter: mid-August
- Draft chapter: August
- Draft Integrated Tech Report: September
- Final Reports: December

Breakthrough technologies that are beyond current "best in class" technologies will be important to explore and highlight in our report. Further, even for some technologies that are considered best in class, there may still be remaining barriers to higher levels of market adoption. For instance, the TIAX report includes OLED screens as best in class, however, they are not in wide circulation.

There will be many areas of overlap between this group and other working groups. When we run across them, the idea is to pass things back and forth between groups and have crosstalk early on so an integrated and coordinated report comes out at the end. Especially, once our group begins to examine barriers and challenges, we will want to be mindful of pulling other groups into the discussion.

For more details on the scope, process, and outline please see the [MELs Working Group Overview](#) document.

Group Discussion on Scope

- We will want to focus on services not products.
- This can roughly be based on the scope in the TIAX report.
- However, given the short timeline, the CBC will not be looking at loads outside of the building for now. This would exclude water treatment, transformers, etc.
 - One possible exception might be to include DC power and micro-grids. For these issues, this group should coordinate closely with the CHP, Multi-Building Systems, & Grid Integration group.
- How do you evaluate what is best in class?
 - Gregg: Let's use the TIAX report as a starting point to understand what's in the market and then evaluate and propose technologies that go beyond that. We may have to do this for every technology.
 - Brad added that we should not confuse products and technologies. For instance, displays are products and OLED (and its applications) is a technology.
 - Rich Brown suggested it may be useful to think about what function or service is needed and then identify technologies (best in class and beyond) that can fill that need. In the display example, the service is information.
- In terms of technologies, what is the time horizon? Are looking at 10-15 years into the future or more? Past 15 years will be hard to evaluate.
 - Gregg responded that we will want to do more than what is philosophical. Whatever we identify and recommend should also include concrete stepping stones.