

CHP, Multi-Building Systems, and Grid Integration

April 16, 2010; 1:30 – 3:00pm EDT

Kick-off Working Group Conference Call

Call: 1-800-250-2600

Pass code: 574784#

CALL AGENDA

1. Introduction by Co-chairs

Bill Sisson and Nick McLellan introduced themselves and why they are involved in this process

2. The ZECBC and 2010 Deliverables

*Compile and review data on current and emerging technologies, systems, and practices needed for zero-energy commercial buildings, and to work with DOE to identify and address the strategies to address cost reductions and non-cost barriers to widespread market adoption of these technologies.*

3. Working Group Draft Charter

Bill—lots of interrelated and overlapping issues, it isn't unlikely that the fundamental premise will be a technology slant but also some options for process slant and implementation and barriers.

Many things may overlap with other groups, so we will want to collaborate.

Diana: Also please review the Commercial Interest and Antitrust Guidelines online.

4. CHP, MBS, Grid Proposed Work Structure

Bill and Nick as co-chairs want to provide structure to allow rich input and development of a solution set.

1. Develop set of framing questions to allow members to engage in a level of interest and expertise. –will be developed in the next 2 weeks
2. Members fill out a repository of information by responding to those questions—bodies of work/research, funding/research pipelines, etc. Questions will also help chairs get to know members better
3. Build a library/respository
4. Chairs will synthesize information, structure it and perhaps facilitate member break outs along certain topics/areas. (stay in one group or a couple of subgroups—to be determined)
5. Dedicated phone calls over next 3 months
6. Synthesize information down into a chapter for the report
  - a. Develop a working document to present to steering committee

Nick—important for members to provide information as soon as possible.

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5. Work Outline, Approach and Timeline
6. Working Group Support
7. Questions, Suggestions, and Feedback
8. Next Steps
  - Bill and Nick will convene next week to develop those framing questions and begin the work process. It will be iterative in nature, and inform subsequent structure and organization of the group. Expect it at most in 2 weeks if not earlier.

### Q&A

What level of participation is expected from members? (21<sup>st</sup> century telecommunications)

- 3 types of engagement—active who want to be involved as much as possible, some who come in periodically, passive participants who want to learn?

Frank Capella: 1<sup>st</sup> step with questions sounds good and he thinks he will have more questions once those framing questions come out. Looking forward to it and wants to be active as much as he can.

Bill—we will be trying to leverage parallel and similar initiatives. This is a valuable input members can provide

Nick—Mechanical Systems call brought this up too—how can we make use of contacts in academia and labs

Nick—Are CHP, MBS, and Smart Grid related enough to fit into 1 group? Maybe it's more than 1 subject.

- Bill: we don't know yet what we don't know without getting into it more. We'll be able to feel this out more as we begin to execute

### DRAFT SCOPE

The CHP, Multi-Building Systems, and Grid Integration Working Group includes CHP technologies, on-site and off-site generation, and the systems needed to support thermal and electrical integration of those and other technologies for large campuses and multi-building systems. It also includes smart grid and ICT, grid connectivity for integrated renewable technologies, and net metering. Members may include utilities, building owners and operators, information and communications technology groups, and renewable energy groups.

- Defining the energy footprint of a single building vs a cluster of buildings – are the performance metrics different?

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- Do the tools and decision processes available today allow for consideration of multi-building systems in an integrated design process?
- What are the technical and non-technical challenges to integrating on-site and/or grid-connected wind, solar, geothermal, biomass resources at the building and multi-building levels?
- How do the opportunities for multi-building systems differ in new large-scale developments vs. existing communities? How can we design new developments today to more easily allow for future multi-building systems
- What are the sources and uses for thermal energy recovery and exchange (with or without power generation) at the building, campus, and district levels?
- What is a useful framework for optimizing active and passive energy storage (thermal and electrical) at the building, multi-building, and grid scales?
- What features are needed for future buildings to allow for on-site vehicle charging and active use of electric and fuel cell vehicles as a power generation or load management resource?

#### Co-chairs

Nick McLellan, Johnson Controls, Inc.

William Sisson, United Technologies Corporation