

## Buildings Technology Research and Development Subcommittee Meeting

October 21, 2010

Location: 950 L'Enfant Plaza DOE

Time: 1:30-3:30 p.m.

<b>Attendees<sup>1</sup></b>	<b>Agency/Office</b>
Shyam Sunder	DOC/NIST BTRD Co-chair
Roland Risser	DOE/EE-Buildings BTRD Co-chair
Kevin Hurst	EOP/OSTP
Todd Roden	EOP/OSTP
Paul Domich	DOC/NIST BTRD Ex-Sec
Robert Chapman	DOC/NIST
George Hernandez	DOE/EE-Buildings
Brian Holuj	DOE/EE-Buildings
Alan Schroeder	DOE/EE-Buildings
Kurt Knight	VA
Dale Manty	EPA
Diane Stewart	HHS
Ted Kozak	HHS
Joni Teter	GSA
Judith Heerwagen	GSA
Ken Sandler	GSA
Jonathan Hertz	HHS
Charles Iliff	AOC
Ilker Adiguzel	USACE
Marty Savoy	USACE
Sarah Ryker	STPI
Chris Weber	STPI
John Taggart	STPI

**Next Meeting:** October 21, 2010 1:30 - 3:30 PM, 950 L'Enfant Plaza DOE

### Meeting Calendar:

October 21, 2010

November 18, 2010

December 16, 2010

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<sup>1</sup> Active Members not attending identified in light gray

**Introductions:** Subcommittee co-chair Shyam Sunder (NIST) opened the monthly meeting of the Subcommittee for Buildings Technology Research and Development (BTRD) welcoming the agency representatives and thanking them for their participation. Participants provided self-introductions.

**Review of Minutes:** Minutes were reviewed prior to the start of the meeting.

**BTRD Submetering Whitepaper:** Sunder opened the discussion by stating that the whitepaper is nearing completion and that subcommittee members will be asked to provide a final review and approval of the document. There remain several areas where content is still required. Sunder instructed BTRD Ex Sec Paul Domich to develop a list of items that are required and the names of the persons responsible for providing the content. Sunder also suggested that the subtitle to the report be changed to Planning Guidance reflecting more accurately the scope and intent of the document. Such a document is intended to provide facility owners and operators with a summary of the full range of topics that should be considered in a submetering project, provide resources and references, and case studies on the costs and benefits of such an effort.

Following the subcommittee's final review and approval of the document, the members will be tasked with confirming their agency's approval to proceed with an OSTP review and a request the Committee on Technology to approve the document for public release. We will allow for two weeks following the final subcommittee review for the agency approval.

The Subcommittee members suggested that the cost and benefit analysis needs to be developed further and that examples of the submetering configurations and their related costs would be helpful to include in the next version. Dale Manty (EPA) suggested that additional information would be helpful in the area of future research and development. GSA's Joni Teter and Judith Heerwagen similarly suggested that research data and results are needed to better understand behavioral issues and operational improvements, Teter also suggested report balance the business case and implementation plan development with the needed R&D. Both R&D topics would constitute appendices to the current document. Manty and Heerwagen agreed to provide short write-ups in these topic areas for the report's appendix.

Manty and George Hernandez (DOE) reiterated the need to provide costing data. The question of "how to submeter" needs to be combined with "how much will it cost" and "how deep should the strategy go". Domich indicated that even with the broad range of options available that finding examples proved to be difficult. Hernandez, Savoy (USACE), and Knight (VA) offered to help identify examples of submetering configurations and costs to include on the document. Kevin Hurst (EOP) offered that due to Executive Order mandates, federal agencies, such as GSA, may have interesting case studies to include. Teter and Domich will pursue this to determine whether any published data is available at this time.

Sunder briefly described a joint initiative under consideration by NIST, CEQ, and OSTP and others in developing an Energy-Use Data Center. Such a center would provide an open standards platform for energy technologies, user needs and requirements, data types needed for energy-related studies. This center would include residential, commercial, and federal buildings and facilities. User requirement data could come from stakeholder groups such as GSA and others, and may include recent data generated by ARRA activities. Improved data could drive improvements in codes and standards (e.g., ASHRAE), building performance requirements, and related product offerings. To successfully implement a data center there must be standard data formats that can be customized for particular needs. Data may also include user behaviors as accurate economic analysis relies on understanding the human behavior component. Such a center could include data from DOE's BT pilots and ARRA activities led by GSA and others. Manty offered that Alison Kinn-Bennet (EPA) has worked on the behavioral framework and institutional capacities analysis related to this topic.

Manty suggested that international activities related to submetering should be investigated. Finland was suggested as one country that may have significant activities in this arena.

The cost of maintaining submeters was also raised. Data on maintenance costs is needed to inform facility managers on expected future costs. FEMP has provided guidance on the scheduled maintenance requirements for submetering devices. Utility companies such as PGE also have meter shops who may have some historical data on maintenance issues and costs that can be used.

Another topic raised was whether energy and water resources needed to be submetered in order to conserve these resources. A resource such as water can be conserved both through behavior changes and improved technologies. A related topic was the sensitivity of the data used in water and energy analyses. Further investigation is needed for particular resource types to quantify the data sensitivity issue, and the level of data resolution needed for different resources to develop effective conservation strategies.

The issue of financing these improvements was raised as this represents a significant barrier to implementation. Budget initiatives and appropriations for large capital improvements is a difficult and time-consuming effort. Federal agencies are driven by legislative and executive order mandates to implement conservation measures and can lead by example to the private and nonprofit communities.

**Closure:** Sunder closed the meeting at 3:30 p.m. and thanked the agency representatives and guests for their participation.