

July 24, 2012

MEMORANDUM FOR: JOHN CONTI
ASSISTANT ADMINISTRATOR FOR ENERGY
ANALYSIS

PAUL HOLTBERG
TEAM LEADER
ANALYSIS INTEGRATION TEAM

JAMES TURNURE
DIRECTOR
OFFICE OF ENERGY CONSUMPTION AND EFFICIENCY
ANALYSIS

FROM: BUILDINGS CONSUMPTION & EFFICIENCY ANALYSIS
TEAM

SUBJECT: First AEO2013 Buildings Sector Working Group Meeting
Summary (presented on 07-23-2012)

Attendees: Aaron Bergman (DOE PI)
James Berry (EIA OES)
David Daniels (EIA OEA)
Danielle Mayclin (EIA OES)
Bill McNary (EIA OES)

Attending by Phone: John Ackerly (Alliance for Green Heat)
Elena Alschuler (DOE EERE)
Justin Baca (SEIA)
Dave Belzer (PNNL)
Marilyn Brown (Georgia Tech)
Matt Cox (Georgia Tech)
JD Doliner (Alliance for Green Heat)
Kenny Dubin (OnLocation)
Mark Friedrichs (DOE EERE)
Skip Laitner (ACEEE)
Olga Livingston (PNNL)
Fred Mayes (EIA OEA)
Greg Rosenquist (LBNL)
Alex Smith (Georgia Tech)
Joy Wang (Georgia Tech)

Presenters: Erin Boedecker
Owen Comstock
Behjat Hojjati

Kevin Jarzomski
David Peterson
Steve Wade

The buildings presentation provided a discussion of the projects underway and anticipated for AEO 2013. An overview of the projects discussed is included in the presentation materials provided as a separate attachment.

Specific discussion/questions:

1. Discussion of 2009 RECS included questions about the method used to develop end use estimates and whether unit energy consumption estimates for specific appliances were developed using additional analysis. Conditional demand regression analysis is being used to develop end use estimates. It was noted that total consumption estimates for the 2009 RECS are posted but end use estimates are not yet available.
2. During discussion of the use of a Weibull distribution for residential equipment retirement, attendees mentioned the availability of an LBNL report providing specific Weibull parameters for specific residential technologies that could be used as an additional reference source. We received the report shortly after the working group meeting and will consider its use.
3. EIA requested recommendations for sources on housing decay rates. This led to questions regarding the treatment of houses that have been gutted and rebuilt. NEMS includes a certain amount of renovation of and additions to existing residential floorspace each year.
4. EIA also asked for recommendations for reference sources on the non-linearity of the effects of increases in cooling degree days on energy consumption for cooling and for reference sources on energy consumption in data centers.
5. The discussion of commercial hurdle rates led to questions about whether the Johnson Controls surveys provided discount rates or merely simple paybacks required. Georgia Tech will share a literature review that looks at commercial sector discount rates as a potential reference source.
6. Solar-related discussion included questions regarding the handling of third-party financing for solar water heating in the commercial sector. New financing options for the commercial sector compare energy savings to the avoided rate for natural gas or purchased electricity. NEMS does not currently include this type of financing option, but a segment of the commercial sector has “lower” hurdle rates. A lowering of hurdle rates could be considered the effective result of this type of financing. Also, a question was raised about the cut-off date for a reference to be considered in our update of photovoltaic (PV) technology costs. We are aiming for mid-August for completion.
7. EIA was asked if we plan to include a technology providing heating, cooling, water heating, and ventilation, like the one recently licensed by Oak Ridge National Laboratory. Preliminary code was prepared in the late 1990s to incorporate the triple function heat pump that was discontinued soon after development. If a technology becomes widely available and starts capturing significant market share, we will consider its inclusion.

8. In other discussion, there are no plans to update heat pump water heater costs for AEO 2013.

Complete Listing of Invitees:

Ackerly, John (Alliance for Green Heat)
Alex, Aileen (DOE)
Alschuler, Elena (DOE EERE)
Amann, Jennifer (ACEEE)
Ames, Mark (ASHRAE)
Anderson, David (PNNL)
Antypas, Yanna (EIA OEA)
Baca, Justin (SEIA)
Baek, Young Sun (ORNL)
Barbour, Edward (Navigant)
Barker, Breton (DOE EERE)
Belzer, Dave (PNNL)
Bergman, Aaron (DOE PI)
Berry, James (EIA OES)
Blessing, Colleen (EIA OC)
Brodrick, James (DOE EERE)
Broene, Thomas (EIA)
Brown, Marilyn (Georgia Tech)
Carroll, Ryan (Alliance for Green Heat)
Cogan, Jonathan (EIA OC)
Conti, John (EIA OEA)
Cox, Matt (Georgia Tech)
Cureg, Edgardo (EIA OES)
Cymbalsky, John H (DOE EERE)
Daniels, David (EIA OEA)
deLaski, Andrew (Appliance Standards Awareness Project)
Dion, Jerry (DOE EERE)
Dirks, James A (PNNL)
Doliner, JD (Alliance for Green Heat)
Drury, Easan (NREL)
Farese, Philip (NREL)
Friedrichs, Mark (DOE EERE)
Garg, Rishi (Office of the People's Counsel-DC)
Gruenspecht, Howard (EIA)
Harris, Jeff (ASE)
Harvey, Stephen (EIA OES)

Henry, Dave (DOC)
Holtberg, Paul (EIA OEA)
Kelso, Jordan (D&R International)
Laitner, Skip (ACEEE)
Larsen, John (DOE PI)
Leifman, Michael (GE)
Lewis, Katie (EIA OES)
Lowenberger, Amanda (ACEEE)
Lu, Ruey-Pyng (EIA)
Majersik, Cliff (IMT)
Margolis, Robert (NREL)
Marnay, Chris (LBNL)
Mayclin, Danielle (EIA OES)
Mayes, Fred (EIA OEA)
McDonald, Sean (PNNL)
McNary, William (EIA OES)
Michaels, Joelle (EIA OES)
Mignone, Bryan (DOE PI)
Neff, Shirley (EIA)
Neubauer, Max (ACEEE)
Nicholls, Andrew (PNNL)
Niebling, Charles (Alliance for Green Heat)
Nordman, Bruce (LBNL)
O'Brien, Eileen (EIA OES)
Olsen, Jay (EIA OES)
Pearson, Gina (EIA)
Ramea, Kalai (UC Davis)
Rosenquist, Gregory J. (LBNL)
Sachs, Harvey (ACEEE)
Steinberg, Daniel (NREL)
Stellberg, Sarah (IMT)
Stokes, Kem (DOC)
Swenson, Alan (EIA OES)
Taylor, Cody (DOE EERE)
Ulrey, Peri (NGSA)
Utzman-O'Neill, Diane (Alliance for Green Heat)
Wang, Joy (Georgia Tech)
Wang, Yu (Georgia Tech)
Wiser, Ryan (LBNL)
Wood, Frances (OnLocation)
Yeh, Sonia (UC Davis)