

October 25, 2013

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: Second AEO2014 Buildings Sector Working Group Meeting  
Summary (presented on 09-26-2013)

Attendees: James Berry (EIA OES)  
Stephanie Burns (IMT)  
Gwendolyn Bredehoeft (EIA OEA)  
Colin McMillan (NREL)  
Bill McNary (EIA OES)  
Shirley Neff (EIA OA)

Attending by Phone: Justin Baca (SEIA)  
Ed Cureg (EIA OES)  
John Ackerly (Alliance for Green Heat)  
Xiaojing Sun (Georgia Tech)  
Matt Cox (Georgia Tech)  
Frances Wood (OnLocation)  
Kenneth Dubin (OnLocation)  
Robert Lorand (SAIC)  
John Meyer (SAIC)  
David Belzer (PNNL)  
Sameer Kwatra (ACEEE)

Presenters: Owen Comstock  
Kevin Jarzomski  
Steve Wade

**WORKING GROUP PRESENTATION FOR DISCUSSION PURPOSES ONLY  
DO NOT QUOTE OR CITE AS RESULTS ARE SUBJECT TO CHANGE**

The buildings presentation provided a discussion of the progress on projects and preliminary results for AEO2014. An overview of the projects discussed is included in the presentation materials provided as a separate attachment.

Specific discussion/questions:

1. When discussing 2009 residential end use consumption for AEO2014 compared to AEO2013, a participant asked how the changes in heating and cooling for 2009 came about. EIA staff explained that the changes were a result of the update to 2009 Residential Energy Consumption Survey (RECS) data, which allocates more energy use to space heating than the model results for 2009 in AEO2013.
2. Discussion of the decision to tie data center server growth to the growth rate for service sector output led a participant to ask what is included in service sector output. EIA staff explained that the NEMS Macroeconomic Activity Module includes projected service sector output. For AEO2014, data center servers are assumed to grow at the same rate as total service sector output after subtracting out utilities.
3. During solar-related discussion, participants asked if EIA has plans to incorporate third-party financing for solar photovoltaic (PV) systems given that an increasingly large portion of these systems are sold under lease or power purchase agreement structures. EIA staff explained that there are no immediate plans to include additional financing alternatives. EIA has talked with NREL analysts conducting research on PV pricing trends and will continue to follow developments in the PV market. Further discussion revealed that only data from the “top states” can be obtained at this time for analysis of third-party financing and participants commented that even if included in NEMS, projected adoption would probably not increase relative to the current modeling structure that assumes PV systems are financed with the mortgage.
4. A participant asked why EIA does not look at residential biomass heating more. EIA staff responded that biomass heating is included in the residential projections and in the AEO tables as well as in the Winter Fuels Outlook report that accompanies the Short-Term Energy Outlook. Scarcity of comprehensive consumption and pricing data limit opportunities for more detailed projections.

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)

Azevedo, Ines (Carnegie Mellon)

Baca, Justin (SEIA)

Bahei-Eldin, Ahmed (GE)

Barbour, Edward (Navigant)  
Barker, Breton Nmn (DOE EERE)  
Bell, Mathias (Rocky Mountain Institute)  
Belzer, Dave (PNNL)  
Bergman, Aaron (DOE PI)  
Berry, James (EIA OES)  
Bredehoeft, Gwendolyn (EIA OEA)  
Brodrick, James (DOE EERE)  
Brown, Austin (NREL)  
Brown, Marilyn (Georgia Tech)  
Burns, Stephanie (IMT)  
Carmichael, Robert (Navigant)  
Carroll, Ryan (Alliance for Green Heat)  
Chase, Alex (Energy Solutions)  
Cogan, Jonathan (EIA OC)  
Conti, John (EIA OEA)  
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)  
Feldman, Dave (NREL)  
Fireovid, James (SAIC)  
Friedrichs, Mark (DOE EERE)  
Frisch, Carla (DOE EERE)  
Garg, Rishi (Office of the People's Counsel-DC)  
Gruenspecht, Howard (EIA)  
Harris, Jeff (ASE)  
Harvey, Stephen (EIA OES)  
Henry, Dave (DOC)  
Hodson, Elke (DOE)  
Holtberg, Paul (EIA OEA)  
Hunter, David (EPRI)  
Kaarsberg, Tina (DOE EERE)  
Kelso, Jordan (D&R International)  
Kwatra, Sameer (ACEEE)  
Laitner, Skip (Economic and Human Dimensions Research Associates)  
Larsen, John (DOE PI)  
Leifman, Michael (GE)  
Lewis, Katie (EIA OES)

Livingston, Olga V (PNNL)  
Lorand, Robert (SAIC)  
Lu, Ruey-Pyng (EIA OES)  
Majersik, Cliff (IMT)  
Margolis, Robert (NREL)  
Marnay, Chris (LBNL)  
Mayclin, Danielle (EIA OES)  
Mayes, Fred (EIA OEA)  
McDonald, Sean (PNNL)  
McMillan, Colin (NREL)  
McNary, William (EIA OES)  
Meyer, John (SAIC)  
Michaels, Joelle (EIA OES)  
Mignone, Bryan NMN (DOE PI)  
Nachbaur, James (DOE EERE)  
Narayanan, Raj (GE)  
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)  
Palmer, Karen (RFF)  
Pearson, Gina (EIA)  
Ramea, Kalai (UC Davis)  
Rosenquist, Gregory J. (LBNL)  
Schuur, Arah (DOE EERE)  
Steinberg, Daniel (NREL)  
Stellberg, Sarah (IMT)  
Stokes, Kem (DOC)  
Swenson, Alan (EIA OES)  
Taylor, Cody (DOE EERE)  
Ulrey, Peri (NGSA)  
Utzman-O'Neill, Diane (HHT)  
Wang, Joy (Georgia Tech)  
Wang, Yu (Georgia Tech)  
Wiser, Ryan (LBNL)  
Wood, Frances (OnLocation)  
Yeh, Sonia (UC Davis)  
Zakerinia, Saleh (UC Davis)