



## Labs21 Breakfast Session Summary

### Federal Roundtable: Labs21 and Federal Energy Reduction Requirements *The Energy Policy Act of 2005 and OMB Energy Management Scorecard*

San Antonio, Texas  
Wednesday, October 18, 2006

**A**T THE LABORATORIES FOR THE 21ST CENTURY (Labs21) 2006 Annual Conference, held in San Antonio, Texas, the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy (DOE) co-hosted a breakfast session entitled, *Federal Roundtable: Labs21 and Federal Energy Reduction Requirements*. The primary goal of this session—which served as a follow-up to the inaugural Federal Roundtable breakfast session hosted at the Labs21 2005 Annual Conference in Portland, Oregon—was to provide a summary of the key energy reduction requirements included in the Energy Policy Act of 2005 (EPAct) and the Office of Management and Budget (OMB) Energy Management Scorecard and related key milestones achieved in FY 2006. The session also provided a forum for open discussion concerning the challenges of and strategies for meeting the federal mandates, as well as potential methods of integrating the Labs21 Approach. This session was moderated by Dan Amon, National Energy Manager, EPA (202 564-7509 or [amon.dan@epa.gov](mailto:amon.dan@epa.gov)), Will Lintner, Labs21 Project Manager, DOE (202 586-3120 or [william.lintner@ee.doe.gov](mailto:william.lintner@ee.doe.gov)), and Bucky Green, Chief, Sustainable Facilities Practices Branch, EPA (202 564-6371 or [green.bucky@epa.gov](mailto:green.bucky@epa.gov)).

Approximately 25 people attended the breakfast session, including representatives from:

- EPA (Headquarters and Regions)
- DOE (Headquarters and national laboratories)
- U.S. Department of Agriculture (USDA)
- U.S. Navy

- Building technology vendors
- Biotechnology firms
- Architecture and engineering firms
- Consulting firms

### Discussion Topics

Each attendee participating in the breakfast session received a handout that summarized the energy reduction requirements and important actions completed throughout 2006 related to EPAct and the OMB Energy Management Scorecard. The format of the breakfast session followed the handout and allowed for open discussion of each topic. To view a complete copy of the handout, visit [www.labs21century.gov/conf/past/2006/breakfast.htm#epact](http://www.labs21century.gov/conf/past/2006/breakfast.htm#epact).

### Energy Policy Act of 2005

#### Section 102 – Annual Energy Reductions

- **Adjustment of FY 2003 baseline energy intensity** – Mr. Amon asked attendees if their agencies anticipated adjusting their FY 2003 energy intensity baselines for the first year of reporting progress toward the required two percent energy reduction requirement. Several attendees expressed that their agencies will need to consider adjustments to account for facilities where process loads have increased due to the changing scope of research. An attendee representing DOE's Princeton Plasma Physics Laboratory (PPPL) said that PPPL tracks "house" and "research" energy separately.



- **EPA's ConservE Program** – Mr. Amon introduced EPA's "ConservE Program," which serves as the agency-wide strategy for meeting annual energy reduction requirements. Under ConservE, EPA is working with DOE's Lawrence Berkeley National Laboratory and contractors to model and forecast anticipated energy savings from ongoing and identified future projects. During FY 2006, EPA also began to assign each of its reporting facilities a quarterly, color-coded "ConservE Progress Rating" modeled after OMB's scoring system (green = success; yellow = mixed results; red = unsatisfactory). Mr. Lintner announced that, in a similar fashion, DOE sends individual energy scores to the different DOE offices. Mr. Amon emphasized EPA's experience thus far that red dots are a very effective method for gaining the attention of underperforming facilities. Mr. Amon also distributed a copy of EPA's "Energy Conservation Plan," which EPA distributed to OMB. To obtain a copy of this report, please contact Dan Amon.

### *Section 103 – Advanced Metering*

- **Agency-wide Advanced Metering Plans** – All federal agencies were required to submit agency-wide advanced metering plans to DOE by August 3, 2006. Approximately half of all federal agencies were not able to submit their advanced metering plans by this deadline. For a copy of EPA's advanced metering plan submitted in August 2006, please contact Dan Amon.
- **EPA's Advanced Metering Work** – Mr. Amon discussed EPA's work to develop and begin implementing its advanced metering plan. EPA is fortunate in that it only has 33 facilities for which it is responsible for reporting energy and installing advanced metering (where cost effective). While EPA is one of the smaller agencies, Mr. Amon expects advanced metering will still cost the agency several million dollars. EPA's goal with advanced metering is to establish a flexible framework for utility-level metering for all energy commodities (e.g.,

electricity, natural gas, propane, fuel oil, chilled water, high temperature hot water) at each site (where cost effective). Each facility will have the flexibility to develop tailored, site-specific plans for sub-metering as desired. Ultimately, EPA hopes to collect all of its metered data in a centralized database that will automate reporting functions that are currently performed manually. Mr. Amon also discussed some of EPA's experiences evaluating potential software vendors for this service. While there are numerous vendors that appear to providing promising and innovative options, Mr. Amon announced that EPA has found there to be two primary players.

- **National Renewable Energy Laboratory's (NREL's) Advanced Metering Work** – Mr. Otto Van Geet, Senior Engineer at the National Renewable Energy Laboratory (NREL), discussed NREL's experiences implementing advanced metering on its campus, which consists of 10 buildings and approximately 30 meters. In addition to utility-level metering, NREL has also implemented sub-metering to monitor: heating, ventilation, and air conditioning (HVAC); process; and lighting loads. NREL's advanced metering system is completely separate from the campus' building automation system (BAS), and relays a variety of data over its local area network (LAN) to a central computer. NREL has a dedicated facilities group that monitors and analyzes the advanced metering data.

### *Section 104 – Procurement of Energy Efficient Products*

- **EPA's Progress** – To meet its requirements under EPCA Section 104, EPA's Facilities Management and Services Division (FMSD) drafted an amendment to its existing Architectural and Engineering (A&E) Guidelines requiring the consideration and procurement of energy efficient equipment that is either ENERGY STAR® or FEMP-designated.
- **DOE's Progress** – DOE is working to ensure that both the Defense Logistics Agency (DLA)

and General Services Administration (GSA) include ENERGY STAR and FEMP-designated products in their schedules and that these products are prominently displayed in their Web catalogs.

- **New ENERGY STAR Guidelines** – Ms. Beth Shearer, of the International Institute for Sustainable Laboratories, announced that EPA will soon be releasing new ENERGY STAR performance guidelines for laboratory refrigerators and freezers and is also looking at developing new performance guidelines for hospital equipment.
- **Challenges** – One participant expressed a concern regarding the challenge of communicating these procurement requirements down from the Headquarters level to the Regional level, where many of the procurements are made. Another attendee pointed out that there is currently no system in place to track purchases, which makes it extremely hard to enforce this requirement.

### *Section 109 – Energy Efficient Building Design*

- **Experiences in Energy Modeling** – Mr. Van Geet mentioned that NREL has modeled two facilities to analyze the feasibility of reducing energy use in a facility by at least 30 percent below the current American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) standard. NREL concluded that with extremely aggressive energy reduction strategies, a 30 percent reduction is possible. Mr. Amon discussed that EPA performed energy modeling on the Agency's buildings that have received Leadership in Energy and Environmental Design (LEED®) ratings and discovered that none of the facilities came close to meeting the reduced energy consumption standard. Both Mr. Amon and Mr. Van Geet mentioned that the ability to meet this aggressive requirement is highly dependent on geographic location (i.e., facilities with higher heat loads can utilize innovative strategies, such as heat recovery, which can save a significant amount of energy).

- **Confusion Over Modeling Practices** – Mr. Van Geet pointed out an important distinction that makes modeling for this requirement somewhat confusing and problematic. While Section 109 requires a minimum 30 percent reduction of energy use below the current ASHRAE standard, ASHRAE modeling provides an output of energy cost. Many attendees voiced confusion over this and expressed a concern over this discrepancy in output units due to the volatile nature of energy prices.

### *Section 203 – Renewable Energy Purchases*

- **FY 2007 Rule for Green Power Credit** – The rule regarding how green power credits will be applied in FY 2007 is expected to be released in November 2006. There are several points of contention concerning how green power should be credited towards agencies' annual energy reduction goals. One issue concerns the percent of green power purchases (zero percent as the minimum or 100 percent as the maximum) that should be credited. Another issue is whether agencies should be required to purchase "new" green power (versus green power originating from renewable sources that have been in existence for several years). Once the draft rule is published, there will be a brief comment period, in which federal agencies are encouraged to provide feedback.
- **New Draft Executive Order** – The new draft Executive Order, which will roll many of the existing environmental Executive Orders into one, contains a statement that permits only 50 percent of agencies' procured green power to be credited to annual energy reduction goals. The final language, however, is still unclear.
- **Procuring Renewable Energy** – Mr. Van Geet discussed that purchasing renewable energy credits (RECs) has become increasingly simple over the past couple of years. Green power contracts can be made very specific (e.g., specifying either existing or new sources). DLA and GSA are two agencies that are especially good at helping agencies pro-

cure RECs. NREL can also help federal agencies procure green power. For more information, contact Otto Van Geet at <[otto.vangeet@nrel.gov](mailto:otto.vangeet@nrel.gov)>.

## Office of Management and Budget (OMB) Energy Management Scorecards

- **Initial Scores** – EPA's Bucky Green announced that of the 17 OMB Energy Management Scorecards distributed in 2006 to federal agencies, 14 of them received a red score, indicating unsatisfactory energy results.
- **Use of Biodiesel** – The attendee representing DOE's PPPL mentioned that its New Jersey facility was having an extremely difficult time getting B-20 biodiesel delivered for use in its grounds fleet. To overcome this obstacle, the facility has begun to blend its own B-20 fuel onsite. A representative of EPA's Region 10 laboratory in Manchester, Washington, mentioned that the facility had been using B-20 biodiesel; however, the fuel began to clog filters. As a result, the laboratory has switched over from B-20 biodiesel to ultra low-sulfur diesel.