

CHARGE

The Department of Energy (DOE) conducted the peer reviews in accordance with the requirements outlined in Bulletin from OMB (Available at: <http://www.whitehouse.gov/omb/memoranda/fy2005/m05-03.pdf>). The selection of reviewers, including consideration of expertise, panel balance, conflicts of interest, and independence; employment of the peer review mechanisms (e.g., letter reviews, panels, etc.); and maintenance of transparency of the review process were in compliance with OMB guidance.

DOE assembled a panel of experts to review the analysis used in the standards rulemaking process. The peer review panel consisted of seven reviewers DOE determined to be qualified to evaluate the assigned group of analyses, in accordance with the Bulletin. Each group of analyses displayed some technical diversity. Therefore, in the reviewer-selection process DOE strived to have each analysis covered by at least two reviewers who are experts in the principal scientific or technical disciplines of the project. Panel members included reviewers from academic institutions, industry, research laboratories, consultancies and other entities, as appropriate. (The panel members are identified in section 6, below.)

DOE and BT structured the Peer Review based on the EERE Peer Review Guide dated August 2004 (Available at: <http://www1.eere.energy.gov/ba/pdfs/2004peerreviewguide.pdf>). DOE used the EERE Peer Review guide to develop the “Guidelines for Peer Reviewers” that DOE provided to the reviewers in advance of the Peer Review. The reviewers based their evaluation of each project on: a) written material (a project description and supporting documentation) and b) a formal presentation of the project, including a question-and-answer period at a peer review meeting for the relevant program area. The Principal Investigator (PI) for each project was responsible for preparing the written material and delivering the presentation before the Peer Review Panel.

The peer review was based on a consistent set of criteria for evaluating all analyses in all subprograms. The Building Technologies Program derived these criteria from the EERE Peer Review Guide, tailored to meet BT needs. The evaluation criteria are listed below.

- **Approach** – This criterion is primarily a measure of the inputs to the project: the quality of the technical approach, people, facilities and other resources involved. This criterion also includes technical quality in the execution of the technical approach.
- **Accomplishments** - Accomplishments are a measure of progress and outputs: what has been achieved. This includes the overall progress (as measured by internal milestones) and the quality, volume and probable effectiveness of the deliverables and external outputs from the project.

- **Productivity** - Productivity is a relative measure of progress and outputs: what has been achieved and what is the value of the program's output compared to costs and risk levels.
- **Relevance** – Relevance is a measure of importance. Relevance means the degree to which the project contributes to the Program's and DOE's mission, goals, or strategy, and to society. For most analyses, relevance measures how well the project addresses important technical, market, or policy barriers. For more basic research, this criterion includes the project's contribution to the underlying science and the knowledge base.
- **Overall Assessment** - A general, overall rating of the project.

DOE asked the Peer Review Panel to review analyses with the EERE mission, BT Program goal, and the goal of the Appliance Standards program in mind.

- **EERE Mission:** Strengthen America's energy security, environmental quality, and economic vitality through public-private partnerships that: enhance energy efficiency and productivity; bring clean, reliable, and affordable energy production and delivery technologies to the marketplace; and make a difference in the everyday lives of Americans by enhancing their energy choices and their quality of life.
- **BT Program Goal:** By 2025, the Building Technologies Program will create technologies and design approaches that enable the construction of net-zero energy buildings at low incremental cost.

All principal investigators (PIs), who are the lead researchers at the National Laboratories or consultancies that support the Appliance Standards Program, had to complete and submit a project abstract limited to 2 pages, a project description not to exceed 10 pages, and supporting documentation, such as key project technical reports, before the start of the peer review meetings. Principal investigators were also required to give formal presentations at the meetings.

Reviewers received the project description and supporting documentation at least two full weeks before the peer review meetings. DOE expected reviewers to fully review the project description and selectively review supporting documentation prior to the meetings. The panel convened in a formal meeting to hear the oral presentations by the PIs, ask questions and evaluate analyses against the criteria. Reviewers completed their reports using the peer reviewer evaluation forms during the meetings so that the review process was essentially completed at the end of the meetings. DOE provided an agenda for the two days of meetings. DOE expects no follow-up action by the reviewers.

The expert panel members assessed the importance of achieving the project's objectives in terms of actual or potential contribution to the broader BT program mission, goals, or strategy and to society (energy savings, net present value of consumer benefit, and reduced emissions of nitrogen oxides and carbon dioxide). Reviewers also evaluated the adequacy of the analytical tools (i.e., models, spreadsheets, etc.) being used. For these

analyses, reviewers considered the degree to which the project supports the proposed energy efficiency standards and/or how much critical information it adds to the knowledge base.

The Peer Review Panel reviewed DOE rulemaking analysis for three product types: commercial unitary air conditioners and heat pumps; distribution transformers (DTs); and residential furnaces and boilers. These analyses are documented in the Technical Support Documents (TSDs), which accompanied the Advance Notices of Proposed Rulemakings (ANOPRs) published in July of 2004.

DOE asked the panel to focus on the analyses described above in section 3, and to evaluate the analytical tools, assumptions and input data according to the above-described evaluation criteria (approach, accomplishments, productivity, relevance, and “Overall Assessment”).