
**Comments of the Institute for Market Transformation on the Dept. of Energy’s Energy Efficiency and Sustainable Design Standards for New Federal Buildings:
Notice of Proposed Rulemaking**

Docket No. EE-RM/STD-02-112

Sept. 1, 2010

The Institute for Market Transformation respectfully submits these comments on the Department of Energy’s notice of proposed rulemaking on Energy Efficiency and Sustainable Design Standards for New Federal Buildings.

Benchmarking the energy performance of new and existing buildings is an important tool that encourages energy efficiency in buildings. Benchmarking – the act of measuring building energy performance against comparable data points – yields contextualized energy data that building operators can use to identify opportunities for performance improvements, set energy improvement goals and track building performance over time. In existing buildings, benchmarking is a critical first step that often informs future decisions related to energy audits, performance assurance measures like retro commissioning, and retrofits. Benchmarking new buildings can help building designers, engineers and operators identify gaps between predicted and actual energy performance.

The Institute for Market Transformation recommends the following measures related to benchmarking federal buildings:

I. Use Energy Star Portfolio Manager for the continuous benchmarking of existing federal buildings

Portfolio Manager is a nonresidential building energy benchmarking tool for existing buildings administered by the ENERGY STAR division of the U.S. Environmental Protection Agency. It was introduced in 2000 and has since become the most widely used voluntary commercial benchmarking tool in the U.S. marketplace. Cumulatively, nearly 15 billion square feet of nonresidential floor space has been benchmarked by private building operators and state and local governments using Portfolio Manager since its introduction.¹ That figure accounts for roughly 20 percent of the total U.S. building stock of nonresidential government and privately owned buildings (excluding high-rise multifamily buildings).²

Portfolio Manager is free to use. It generates an operational rating that measures a building’s actual energy performance, scoring buildings on a numeric “1” to “100” scale relative to the energy efficiency of peer buildings nationwide. Peer building data is derived from the Commercial Building Energy Consumption Survey (CBECS) administered by the U.S. Department of Energy’s Energy Information Administration. A “50” on the scale represents median energy efficiency in the building stock, while a

¹ From the report ENERGY STAR Snapshot: Measuring Progress in the Commercial and Industrial Sectors, Spring 2010

² According to McKinsey & Co. report Unlocking Energy Efficiency in the U.S. Economy, U.S. nonresidential government and privately owned buildings total 78.2 billion square feet

“75” represents a building that performs better than 75 percent of peer buildings. Buildings that score a “75” or higher are eligible for recognition through the Energy Star program. Portfolio Manager requires several nontechnical data points to generate benchmark scores, including 12 consecutive months of utility bills, which are normalized for factors such as climate and occupancy.

II. Use Energy Star Target Finder to benchmark the predicted energy performance of new buildings

Target Finder is a nonresidential benchmarking tool for new buildings and large renovations administered by EPA ENERGY STAR. It was launched in 2004 and uses the same “1” to “100” scale and comparison methodologies as Portfolio Manager. The Target Finder benchmarking score represents estimated energy performance based on inputs from independent energy modeling rather than measured performance.

Benchmarking new federal buildings with Target Finder and monitoring the ongoing performance of federal buildings with Portfolio Manager has tremendous value. Since the rating scales of the tools are aligned, federal building operators can quickly and easily assess the performance potential of a building against its performance in operation, helping identify opportunities for improvement.

III. Require COMNET procedures for building energy modeling

The Commercial Energy Services Network (COMNET), an initiative of the Residential Energy Services Network (RESNET), is a new technical procedures manual that aligns the predicted energy performance of buildings generated by energy models more closely with the actual performance of buildings. Energy models predict the energy performance of buildings under ideal circumstances. They are used for compliance with building energy codes under several model codes and recognized by the federal government for compliance with incentives for building energy performance improvements. But in many cases, because our understanding of building operations is limited and because of deficiencies in the modeling process, the correlation between the modeled and actual energy performance of buildings is poor.

COMNET will help fix this gap and make model-based Target Finder benchmark scores more accurate by requiring energy modeling inputs to reflect actual building operating characteristics with more accuracy. COMNET establishes rigorous and standardized rules to account for “unregulated” building energy loads in the modeling process, such as commercial refrigeration, small appliances and elevators, which will make models more accurate. Currently, there is no standard process to evaluate unregulated loads in energy models. COMNET also helps modeling software automatically generate reference buildings – hypothetical buildings that must be constructed in the modeling process to establish a comparative baseline of the energy performance of a subject building – reducing the potential for modeling errors and lowering the cost of modeling for clients.

IV. Align federal government building energy benchmarking with other federal benchmarking guidance and benchmarking practices in the private sector

Benchmarking procedures used by the federal government should be consistent with current and previous federal guidance on benchmarking. The Energy Independence and Security Act of 2007 directs the U.S. General Services Administration to sign leases in buildings with superior Energy Star benchmark scores. Additionally, the *Guiding Principles of Federal Leadership in High Performance and Sustainable Buildings* directs the federal government to leverage the Energy Star Target Finder and Portfolio Manager tools in building energy benchmarking. Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, requires federal agencies to comply with the Guiding Principles.

Federal benchmarking procedures should also align with established practices in the private sector to avoid confusion. Building energy benchmarking regulations enacted in states and local jurisdictions require the use of Portfolio Manager and Target Finder, and these regulations are set to have a significant impact on U.S. property markets. In New York City alone, roughly 22,000 buildings totaling nearly 2.6 billion square feet of floor space must be benchmarked using Portfolio Manager by 2012. In the cities of Austin and Seattle, a combined 9,000 commercial buildings and more than 7,000 multifamily buildings will be affected by new benchmarking regulations requiring the use of Portfolio Manager. Many new commercial buildings in Washington, DC, will soon be required to generate Target Finder benchmarking scores. Similar policies have been enacted in the states of California and Washington, and legislation leveraging Portfolio Manager is pending in several other jurisdictions. Portfolio Manager scores are also required under existing building certification platforms of the U.S. Green Building Council's LEED program, the most popular green building certification program in the nation.

V. The federal government must lead the way on building energy benchmarking

The federal government is the nation's largest landlord and tenant. It owns nearly 450,000 buildings totaling more than 3 billion square feet of floor space, and it leases an additional 57,000 buildings comprising 374 million square feet of floor space.³ The federal government has taken many positive steps related to building energy benchmarking and must continue to show leadership on building energy measurement and transparency to the private sector. By making the right decisions related to benchmarking procedures, federal benchmarking efforts can leverage current benchmarking momentum in the private sector and motivate rapid market transformation. Choosing benchmarking procedures that are not aligned with private sector efforts and previous federal benchmarking guidance, or choosing not to benchmark at all, will send the wrong signals to the market and impede benchmarking progress.

Thank you for the opportunity to comment on this proposed rulemaking.

Sincerely,



Cliff Majersik
Executive Director, Institute for Market Transformation

³ Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding. Access at: http://www.energystar.gov/ia/business/Guiding_Principles.pdf