

**UNITED STATES OF AMERICA
ENERGY INFORMATION ADMINISTRATION,
U.S. DEPARTMENT OF ENERGY**

Proposed Agency Information Collection)
Extensions With Changes)

**COMMENTS OF THE CARNEGIE MELLON ELECTRICITY INDUSTRY CENTER
ON PROPOSED ENERGY INFORMATION ADMINISTRATION COLLECTION
EXTENSIONS WITH CHANGES**

David Luke Oates, Jay Apt, & Paulina Jaramillo
Department of Engineering & Public Policy and Tepper School of Business
Carnegie Mellon University
5000 Forbes Avenue
Pittsburgh, PA 15213

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The Carnegie Mellon Electricity Industry Center (CEIC) submits these comments in support of several changes in its subjects and format of data collection and publication proposed by the U.S. Department of Energy's Energy Information Administration (EIA). CEIC and its students rely heavily on information provided by EIA for their research and other endeavors.

Description of CEIC

CEIC is a joint endeavor between Carnegie Mellon University (CMU)'s College of Engineering and its Tepper School of Business. Faculty affiliated with CEIC are drawn from eight academic units across the campus: Tepper, Engineering and Public Policy, Social and Decision Sciences, Civil and Environmental Engineering, Mechanical Engineering, Materials Science & Engineering, Electrical and Computer Engineering, and the School of Computer Science.

CEIC was established in August 2001 after an extended competition sponsored by the Alfred P. Sloan Foundation among a number of research universities. CEIC's primary mission is to work with industry, labor, government and all other relevant stakeholders to address the strategic problems of the electricity industry. While we work directly on identifying, addressing and solving important problems for the industry, more important is that the fact that CEIC produces a cadre of well-trained graduate student researchers. Many of these students continue to address the industry's problems in subsequent professional careers. In addition to doctoral education, CEIC has a broad educational mission that includes the development of university courses, special topic short-courses, and curricular advice for training programs.

CEIC's work is recognized by legislators and government executives as some of the best non-partisan analysis in the field. CEIC faculty have testified several times before Congress in recent years, chaired and participated in numerous National Academies panels, have briefed and subsequently been cited by the Federal Energy Regulatory Commission in its rulings, and served on a variety of advisory committees including the DOE's Electricity Committee.

CEIC faculty and PhD students have an active publication record, with 300 publications that have appeared in archival journals (as of October, 2013). While this high productivity is important, even more important is that fact that 40 CEIC students have received Ph.D.s (8 of these in the past year) and have taken positions in industry, universities, government, NGOs, and consulting, where they will influence the electricity industry through thoughtful high quality analysis for years to come. Most CEIC Ph.D. dissertations are available on the CEIC website (www.cmu.edu/electricity).

Researchers at the Carnegie Mellon Electricity Industry Center investigate pressing questions facing the electricity industry, including environmental issues, reliability, and technological change. We make extensive use of data collected by the EIA, both directly and indirectly through products such as EPA's eGRID that uses EIA data as one of its three data sources, in support of our research efforts. EIA's proposed changes to its electricity and renewable data collection for 2014 would enhance the ability of university, government, and industry researchers to conduct industry-relevant research.

Support for Specific EIA Changes

The EIA's decision to "Collect data on generator minimum load and minimum time required to reach full load from standby and shutdown" would aid modeling efforts in industry, government, and universities. These parameters are important inputs to unit commitment models of the electricity system. Researchers use these models to assess the costs and environmental impacts of changes to the power system. As was pointed out in the Federal Register notice, these parameters become more important as increasing amounts of variable renewable energy resources are added to electric power systems.

EIA's decision to "Collect the name of each plant's balancing authority..." will allow researchers to better incorporate the transmission constraints to which power systems are subject. This would help develop models that more accurately reflect real-world conditions.

EIA's decision to "Collect whether a combined-cycle unit can operate in simple-cycle mode by bypassing the heat recovery steam generator" is also a welcome improvement in principle. However, we note that the right question is not whether the heat recovery steam generator can be bypassed, but whether the steam turbine and gas turbine(s) can be operated independently of one another. As the agency points out, this information is important for reliability assessments. Therefore, we recommend that the EIA rephrase its question to ask whether combined-cycle units are capable of operating in simple-cycle mode due to a multi-shaft configuration or due to the presence of a clutch in a single-shaft configuration.

We also support EIA's proposal to collect more detailed information on the characteristics of renewable energy resources, and the construction and financing costs of new renewable generating plants. The renewable energy data would allow researchers to gain

greater insights into regional variations in renewable energy output. While we understand that information on financing and construction costs would not be available on a plant level for confidentiality and trade secret reasons, even aggregated data could provide researchers with insights into the factors causing changes in construction costs over time.

We believe that the EIA's proposed changes to data collection practices would facilitate efforts to conduct relevant research without unduly burdening industry. We thus express our strong support of these changes.