Independent Statistics & Analysis
U.S. Energy Information Administration

Assistant Administrator for Energy Statistics | Office of Electricity, Renewables & Uranium Statistics

Supporting Statement for Survey Clearance: Electric Power & Renewable Electricity Surveys

Part A: Justification

OMB Number 1905-0129

FORM EIA-63B, Annual Photovoltaic Cell/Module Shipments Report

FORM EIA-411, Coordinated Bulk Power Supply Program Report

FORM EIA-826, Monthly Electric Utility Sales and Revenue Report with State Distributions

FORM EIA-860, Annual Electric Generator Report

FORM EIA-860M, Monthly Update to the Annual Electric Generator Report

FORM EIA-861, Annual Electric Power Industry Report

FORM EIA-861S, Annual Electric Power Industry Report (Short Form)

FORM EIA-923, Power Plant Operations Report

FORM EIA-930, Balancing Authority Operations Report

May 28, 2014

TABLE OF CONTENTS

INTRODUCTION

The U.S. Energy Information Administration (EIA) is the statistical and analytical agency within the U.S. Department of Energy (DOE). It collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding regarding energy and its interaction with the economy and the environment. The Electric Power and Renewable Electricity Program surveys discussed below are part of this comprehensive energy data program.

The information collection proposed in this supporting statement has been reviewed in light of applicable EIA information quality guidelines. EIA determined that the information would be collected, maintained, and used in a manner consistent with Office of Management and Budget (OMB), DOE, and EIA information quality guidelines.

On March 6, 2013, a Federal Register Notice (FRN) was published for EIA to receive comments regarding a three-year extension and/or proposed changes and additions to the following survey forms included in this information collection:

- Form EIA-63B, "Annual Photovoltaic Cell/Module Shipments Report"
- Form EIA-411, "Coordinated Bulk Power Supply Program Report"
- Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions"
- Form EIA-860, "Annual Electric Generator Report"
- Form EIA-860M, "Monthly Update to the Annual Electric Generator Report"
- Form EIA-861, "Annual Electric Power Industry Report"
- Form EIA-861S, "Annual Electric Power Industry Report (Short Form)"
- Form EIA-923, "Power Plant Operations Report"
- Form EIA-930, "Hourly and Daily Balancing Authority Operations Report." (New survey)

EIA also proposes to discontinue OMB Control Number 1905-0196 for the Solar Information Collection. This collection includes the Form EIA-63A (Annual Solar Thermal Collector/Reflector Shipments Report), Form EIA-63B (Annual Photovoltaic Module/Cell Shipments Report), and Form EIA-902 (Annual Geothermal Heat Pump Shipments Report). The current approval will expire on December 31, 2013. EIA does not plan to collect data on the Forms EIA-63A and EIA-902 and proposes to transfer the Form EIA-63B to the Electric Power Information Collection (OMB Control Number 1905-0129).

The electricity surveys collect data from entities involved in the production, transmission, delivery, and sale of electricity, and in maintaining the reliable operation of the power system. The data collected are the primary source of information on the nation's electric power industry. The Form EIA-63B renewable survey collects information on the manufacture, shipment, imports and exports of photovoltaic cells and modules, and is the primary national source of information on these topics.

This data collection request includes a three-year extension of the Electric Power and Renewable Electricity Program surveys (OMB Number 1905-0129) and also proposes to modify the electric power surveys to meet the following objectives:

- **Greater Coverage of Renewable Energy**: The proposed changes collect more information on the characteristics of wind and solar power plants and expand EIA's coverage of small scale ("distributed") renewable power.
- **Improved Coverage of Demand Response and Energy Efficiency**: The proposed changes are aimed at improving the quality and consistency of the data EIA collects on demand response and energy efficiency.
- **Modernized Collection and Presentation of Power System Operating Data:** EIA collects and publishes electric power operating data by month and by state with a lag of almost two months. While still useful, this approach produces data that cannot be applied to many modern business and public policy purposes: the data are reported too late, in too little detail, and for state boundaries that are irrelevant to the operation of the power grid. The proposed changes to the surveys and creation of the new EIA-930 survey will allow EIA to organize data by "Balancing Authority" (the basic unit of power system operation) and collect and immediately publish hourly generation and demand data.
- **Greater Coverage of Power System Reliability**: The proposed changes will add generating unit and distribution system reliability data to EIA's existing collection of transmission system data. These changes will allow EIA to present a more complete picture of power system reliability than in the past.

These proposed changes are linked. For example, renewable electricity, energy efficiency, and demand response programs are changing system operations in ways that require hourly data to analyze. These programs will also have impacts on power system reliability that must be measured.

In addition to these major items EIA is proposing other survey changes, including improvements to the collection of environmental control system data, additional coverage of smart grid technology, elimination of data elements no longer needed, and improvements to the clarity of the forms and instructions.

Changes are also proposed to the confidentiality terms of most of the surveys. One change will make sensitive the information on the individuals who respond to the surveys, such as their personal (business) email address and phone number, so that these data will not be released to the public. The second change is a notification that, with the exception of power plant construction costs reported on Form EIA-860, and all data reported on the Form EIA-63B, EIA will no longer apply disclosure limitation procedures to the aggregate statistical data published from electric power survey forms. Some statistics may be based on data from fewer than three respondents, or that are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to closely estimate the information reported by a specific respondent. This change will make the data protection procedures applied to the electricity and photovoltaic data consistent with that of other EIA surveys.

The Form EIA-63B survey proposed for inclusion in this clearance package under OMB Number 1905-0129 had previously been cleared under OMB Number 1905-0196. To better align its surveys and programs, EIA has included the Form EIA-63B survey under OMB Number 1905-0129.

A JUSTIFICATION

A.1 Legal Justification

The authority for this data collection is derived from the following provision:

Section 13(b), 15 U.S.C. §772(b), of the Federal Energy Administration Act (FEA Act), Public Law 93-275, outlines the types of individuals subject to the data collection authority delegated to the Administrator and the general parameters of the type of data which can be required. Section 13(b) states:

> "All persons owning or operating facilities or business premises who are engaged in any phase of energy supply or major energy consumption shall make available to the [Secretary] such information and periodic reports, records, documents, and other data relating to the purposes of this Act, including full identification of all data and projections as to source, time, and methodology of development, as the [Secretary] may prescribe by regulation or order as necessary or appropriate for the proper exercise of functions under this Act."

The objectives of the FEA Act are set forth in Section 5(b), 15 U.S.C. §764(b), of the FEA Act, which states that the Secretary shall, to the extent (s)he is authorized by Section 5(a) of the FEA Act,

> "(2) assess the adequacy of energy resources to meet demands in the immediate and longer range future for all sectors of the economy and for the general public;...
>
> (9) Collect, evaluate, assemble, and analyze energy information on reserves, production, demand, and related economic data;
>
> (12) Perform such other functions as may be prescribed by law."

As the authority for invoking Section 5(b) above, Section 5(a), and 15 U.S.C. §764(a), of the FEA Act in turn states:

> "Subject to the provisions and procedures set forth in this Act, the [Secretary] shall be responsible for such actions as are taken to assure that adequate provision is made to meet the energy needs of the Nation. To that end, he shall make such plans and direct and conduct such programs related to the production, conservation, use, control, distribution, rationing, and allocation of all forms of energy as are appropriate in connection with only those authorities or functions:
>
> (1) Specifically transferred to or vested in him by or pursuant to this Act;
>
> (3) Otherwise specifically vested in the [Secretary] by the Congress."

Authority for invoking Section 5(a) of the FEA Act is provided by Section 52, 15 U.S.C. §790(a) and (b), of the FEA Act, which states that the Administrator of the EIA:

> "(a) . . . [Shall] establish a National Energy Information System... [which] shall contain such information as is required to provide a description of and facilitate analysis of energy supply and consumption...
>
> (b) . . . the System shall contain such energy information as is necessary to carry out the Administration's statistical and forecasting activities..., and such energy information as is required to define and permit analysis of . . .

> (1) the institutional structure of the energy supply system, including patterns of ownership and control of mineral fuel and non-mineral energy resources and the production, distribution, and marketing of mineral fuels and electricity;
>
> (2) the consumption of mineral fuels, non-mineral energy resources, and electricity by such classes, sectors, and regions as may be appropriate for the purposes of this Act;
>
> (3) the sensitivity of energy resource reserves, exploration, development, production, transportation, and consumption to economic factors, environmental constraints, technological improvements, and substitutability of alternate energy sources; . . .
>
> (5) . . . industrial, labor, and regional impacts of changes and patterns of energy supply and consumption . . .”

The DOE Organization Act (US Code, Title 42, Chapter 84, Subchapter II, Section 7135) states:

> The Administrator shall be responsible for carrying out a central, comprehensive, and unified energy data and information program which will collect, evaluate, assemble, analyze, and disseminate data and information which is relevant to energy resource reserves, energy production, demand, and technology, and related economic and statistical information, or which is relevant to the adequacy of energy resources to meet demands in the near and longer term future for the Nation’s economic and social needs.
>
> Information collected by the Energy Information Administration shall be cataloged and, upon request, any such information shall be promptly made available to the public in a form and manner easily adaptable for public use, except that this subsection shall not require disclosure of matters exempted from mandatory disclosure…

A.2 Needs and Uses of Data

A.2.1 Overview of Needs and Uses of Data

EIA uses the data collected on the electric power and renewable electricity surveys to answer queries from the U.S. Congress, other federal and state agencies, the electric power industry, and the general public; and as input to the National Energy Modeling System (NEMS) and to EIA’s other forecasting and analytical activities. Other users of the data include policy makers, regulators, energy market analysts, and the energy industries.

In some cases, states have reduced their own data collection efforts with the intention of relying on EIA for many of their information needs. In the absence of the centralized and public data collection by EIA, each state will have to undertake its own data collection effort, in many cases requesting duplicative information from firms with operations that cross state lines. The EIA data collection ensures consistent data at minimum cost to the public and respondents.

The data collected on these surveys are reported in Internet-based data files and are reported or used in many EIA reports, including:

- Annual Energy Outlook: http://www.eia.gov/forecasts/aeo/er/
- Short-Term Energy Outlook: http://www.eia.gov/forecasts/steo/

- Electricity Monthly Update: http://www.eia.gov/electricity/monthly/update/
- Electric Power Monthly: http://www.eia.gov/electricity/monthly/
- Electric Power Annual: http://www.eia.gov/electricity/annual/
- Trends in Renewable Energy Consumption and Electricity: http://www.eia.gov/renewable/annual/trends/
- Solar Photovoltaic Cell/Module Shipments Report: http://www.eia.gov/renewable/annual/solar_photo/
- Monthly Energy Review: http://www.eia.gov/totalenergy/data/monthly/
- Annual Energy Review: http://www.eia.gov/totalenergy/data/annual/

Specific applications of the data collected by the surveys are discussed below in Section A.2.3.

A.2.2 Overview of Data Collections

The EIA Electric Power and Renewable Electricity data forms collect a wide range of information about the industry while seeking to minimize respondent burden and avoid duplicative data collection. Data are collected using annual, monthly, and daily/hourly forms. Each form has a different set (or subset) of respondents in order to focus on each sector of the electric power industry. The monthly forms collect information only from a sample of the overall universe in order to minimize the burden on the industry.

A.2.3 Individual Form Data Uses and Modifications

Note that all of the forms in this clearance package are mandatory. Copies of the proposed forms and their instructions accompany this supporting statement.

Form EIA-63B, "Annual Photovoltaic Cell/Module Shipments Report"

The mandatory Form EIA-63B tracks photovoltaic cell/module manufacture, shipments, technology types, imports and exports, revenue and related information. The data collected on this form appear in various EIA publications. The data are used by the U.S. Department of Energy, Congress, other government and non-government entities, and the public to monitor the current status and trends of the photovoltaic industry and to evaluate the future of the industry. All data on this form are protected from public release in identifiable form.

Beginning with this survey clearance, EIA intends to classify the following information as business sensitive: all information associated with the "Survey Contact," the "Supervisor of Contact Person for Survey," and "Parent Company Contact" on SCHEDULE 1, such as name, email address, and phone number. This information will be protected and not disclosed to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. EIA is concerned that the release of respondent contact information to outside parties may create additional demands on these individuals' time and attention, such as in the form of sales calls. Note that institutional contact information, such as the name and address of a reporting company, will remain public information.

EIA intends to add the following paragraph to the section on data confidentiality: "Disclosure limitation procedures are not applied to the aggregate statistical data published from this survey. Some statistics

may be based on data from fewer than three respondents, or that are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to closely estimate the information reported by a specific respondent."

Form EIA-411, "Coordinated Bulk Power Supply Program Report"

The mandatory Form EIA-411 collects a) information relating to the reliability of the electric power system in the lower 48 states, including regional electricity supply and demand projections for a 10-year advance period, b) the characteristics and frequency of outages occurring on the Bulk Electric System, and c) other information on the transmission system and supporting facilities. The data are collected from the regional reliability entities by the North American Electric Reliability Corp. (NERC)[1], which then organizes and edits the information and submits the data to EIA.

The proposed changes to Form EIA-411 include:

(1) Throughout the form new voltage categories have been added to be consistent with the expansion of the Bulk Electric System (BES) definition ordered by the Federal Energy Regulatory Commission (FERC) and published on December 20, 2012. This definition is scheduled to be implemented in July, 2014. Accordingly the form and instructions for relevant questions specify that data reported in 2014 and 2015 will be limited, as in the past, to AC lines of 200 kV and greater. When data are reported in 2016 and forward the information should encompass the entire BES including elements below 200 kV.

(2) Also throughout the form and instructions terminology has been changed to ensure consistency between the survey and the terminology currently used by NERC in its Long Term Reliability Assessments.

(3) Schedule 3, *Historical and Projected Demand and Capacity*: The terms and definitions in this schedule have been changed to be consistent with the terminology used by NERC in its data collection for its annual Long-Term Reliability Assessment (LTRA) and Transmission Availability Data System (TADS).

(4) Schedule 6, Part B, *Characteristics of Projected Transmission Lines*: EIA proposes to remove several questions on conductor size and material, bundling arrangements, and type of pole or tower. This information has been determined to have limited value.

(5) Schedule 7, *Annual Data on Transmission Line Outages for Extra-High Voltage Lines*: EIA is ending the collection of data on non-automatic planned outages. The underlying data collection is voluminous and appears to be of limited value for reliability evaluations. The form will continue to collect data on non-automatic, operational outages and automatic sustained outages.

(6) Current Schedule 8, *Bulk Transmission Facility Power Flow Cases*, has been moved to Schedule 4 (currently labeled as "Reserved").

(7) New Schedule 8, *Annual Data on Generating Unit Outages, Deratings and Performance Indexes*: This new Schedule will present information on generating unit reliability, supplementing the reliability information on the transmission grid and the power supply/demand balance

[1] NERC is the official national Electric Reliability Organization as designated by FERC pursuant to the Energy Policy Act of 2005. EIA has had a long-standing relationship with NERC and its predecessor for the collection of the Form EIA-411 data.

historically collected by this survey. The information will be extracted by NERC directly from its existing Generating Availability Data System (GADS) and therefore will have no impact on respondent reporting burden.

(8) New Schedule 9, *Smart Grid Transmission System Devices and Applications*, will collect information on smart grid technologies now being deployed to improve the reliability of the transmission system. This includes phasor measurement units (PMUs) used for real-time monitoring of the condition of the grid and for forensic review of grid performance and events. Information will also be collected on dynamic capability rating systems on transmission circuits. These systems provide operators with information on the true operational limits of transmission lines.

(9) Beginning with this survey clearance, EIA intends to classify the following information as business sensitive: all information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on SCHEDULE 1, such as name, email address, and phone number. This information will be protected and not disclosed to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. EIA is concerned that the release of respondent contact information to outside parties may create additional demands on these individuals' time and attention, such as in the form of sales calls. Note that institutional contact information, such as the name and address of a utility company, will remain public information.

(10) EIA intends to add the following paragraph to the section on data confidentiality: "Disclosure limitation procedures are not applied to the aggregate statistical data published from this survey. Some statistics may be based on data from fewer than three respondents, or that are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to closely estimate the information reported by a specific respondent."

Form EIA-826, "Monthly Electric Sales and Revenue with State Distributions Report"

The mandatory Form EIA-826 collects monthly information from a sample of electric utilities, energy service providers, and distribution companies that sell or deliver electric power to end users. Data collected on this form includes sales and revenue for all end-use sectors (residential, commercial, industrial, and transportation). This survey is the monthly complement to the annual data collection from the universe of respondents made by the short and long form versions of the Form EIA-861 survey (see below).

(1) EIA proposes to make the following changes to Form EIA-826: At the request of the Instituto de Estadísticas de Puerto Rico, a Commonwealth government agency, utilities within the Commonwealth of Puerto Rico will be added to the survey frame.[2]

(2) Schedule 3, Part A, *Green Pricing*: Remove the green pricing schedule. EIA has concluded that green pricing programs currently have a minimal presence in the retail power market and that this situation is not expected to change. The value of the data collection is therefore outweighed by the burden on respondents. EIA plans to continue to monitor this market and, if necessary, will propose reintroduction of this data collection in the future.

[2] Letter from Dr. Mario Marazzi Santiago, Executive Director, Instituto de Estadísticas de Puerto Rico, to Adam Sieminski, Administrator, U.S. Energy Information Administration, June 6, 2013.

(3) Schedule 3, Part B, *Net Metering:* Eliminate the 2 MW capacity limit for reporting net metering installations. This change will help identify the amount of net metering capacity by technology type and, combined with other changes to generation capacity data collection, help EIA to indentify all the installed renewable capacity.

(4) Schedule 3, Part C, *Advanced Meters:* EIA intends to collect data on non AMR/AMI meters to have a complete set of data for meters.

(5) Beginning with this survey clearance, EIA intends to classify the following information as business sensitive: all information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on Schedule 1 and Schedule 4, such as name, email address, and phone number. This information will be protected and not disclosed to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. EIA is concerned that the release of respondent contact information to outside parties may create additional demands on these individuals' time and attention, such as in the form of sales calls. Note that institutional contact information, such as the name and address of a utility company, will remain public information.

(6) EIA intends to add the following paragraph to the section on data confidentiality: "Disclosure limitation procedures are not applied to the aggregate statistical data published from this survey. Some statistics may be based on data from fewer than three respondents, or that are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to closely estimate the information reported by a specific respondent."

Form EIA-860, "Annual Electric Generator Report"

The mandatory Form EIA-860 collects data on existing and planned electric generation plants and associated equipment including generators, boilers, cooling systems, and environmental control systems. Data are collected from all existing units and from planned units scheduled for initial commercial operation within five or 10 years of the specified reporting period (depending on the type of plant).

EIA proposes the following changes to Form EIA-860:

(1) The Response Due Date instructions are changed so that EIA will be able to maintain an up-to-date inventory of the nation's existing and planned generating units. This is required by the rapid evolution of the power plant fleet, including the retirement of coal and nuclear units, and the addition of solar plants that can move from planning to operation much faster than traditional technologies. The proposed instructions state that if subsequent to the submission date for the annual filing a respondent either (a) takes an action, not previously reported to EIA, to add, retire, or uprate/derate generating units or environmental control equipment; or (b) makes a decision, not previously reported to EIA, to add, retire, or uprate/derate generating units or environmental control equipment; then the respondent should notify EIA as soon as practical by an email to EIA-860@eia.gov. EIA staff will then assist the respondent in amending its filing or making a first-time filing.

(2) Schedule 1, *Identification*: Collect the ownership type of the reporting entity (e.g., investor owned utility, electric power cooperative, etc.). This information is frequently requested within EIA, DOE and by outside analysts.

(3) Schedule 2, *Power Plant Data*, and Schedule 3, Part C, *Generator Information – Proposed Generators*: These schedules currently collect data from plants and generators expected to begin commercial operation within 10 years of the survey year. EIA proposes to reduce this time horizon to 5 years for all types of plants other than coal and nuclear plants. This change reflects the relatively short planning and construction horizon for the predominant types of power plants now being proposed in the United States, such as combined cycle, wind, and solar generators. Coal and nuclear plants, in contrast, have long planning and construction periods.

(4) Schedule 2, *Power Plant Data*

- Collect the name of each plant's Balancing Authority instead of its regional transmission organization (RTO) or independent system operator (ISO). This change reflects an effort by EIA to align its data collections with the actual operation of the electric power system in the contiguous 48 states, which is based on 77 "Balancing Authorities" that manage the grid. No information will be lost because EIA can use Balancing Authority designations to assign plants to RTOs and ISOs.
- Collect information on ash impoundments. The condition of ash impoundments has been an area of increasing environmental concern at the federal and state levels. The data to be collected include whether any impoundments exist at a plant, the operating status of each impoundment, and whether an impoundment is lined.
- Add space on the schedule to collect up to three grid voltages at the power plant's point of interconnection with the grid. In the current form, plants with multiple interconnection voltages must enter information into the comments section of the form, a cumbersome procedure. The revised question will simply provide space on the survey form to directly enter three voltages.
- Stop collection of the datum associated with a plant's geographic coordinates. EIA has found that many and probably most respondents are unable to provide a correct answer to this question.
- Stop collection of plant geographic coordinates in minutes and seconds. The form will ask for coordinates only in a modern decimal format.
- Collect information on whether a plant that has a primary purpose other than electricity generation for sale is net metered. This information is needed to improve the accuracy with which EIA can determine small renewable capacity, particularly solar capacity.
- Add the collection of the names of the pipeline systems connected to natural gas burning power plants. This information is needed to help reconcile natural gas sales information collected on other surveys with the data collected on the Form EIA-923. This information also helps ensure that EIA has a complete picture of the disposition of natural gas.

- In its original proposal EIA also proposed the collection of data on whether a plant or any of the individual generating units at the plant is a blackstart unit.[3] However, upon further review EIA is unsure of the utility of the data given confidentiality issues. We will remove the collection of these data from the EIA-860 survey and study the matter further.

(5) Schedule 3, Part A, *Generator Information – Generators*:

- Collect information as to whether a combined-cycle unit is capable of operating in simple-cycle mode by bypassing the heat recovery steam generator. These questions relate to the reliability and operational flexibility of combined cycle generators, which account for a growing share of generation capacity and actual generation. Operational flexibility is an issue of growing importance due to the introduction of variable renewable technology (solar and wind) and wider use of demand response programs. The combination of more renewable power and demand response puts a premium on the ability of generating units to rapidly start, stop, and change output to meet variations in load.
- Delete three questions: 1) whether the generator is an electric utility, 2) the date of a unit's sale and, 3) whether the unit can deliver power to the transmission grid. EIA has determined that these questions are either duplicative or provide information of limited value.

(6) Schedule 3, Part B, *Generator Information – Existing Generators*:

- Collect information on whether a power uprate or derate was completed during the reporting period. This information is needed in particular to confirm when an uprate became operational at nuclear units, a subject of great interest to power market analysts and modelers.
- Collect data on the nameplate power factor. This information, which is an indicator of the maximum potential output from a generator, will be used in verifying the reported nameplate and net capacity of the unit. Note that data on power factors is not meaningful and will not be collected for PV systems, wind turbines, batteries, fuel cells, and flywheels.
- Collect data on generator minimum load and minimum time required to reach full load from standby and shutdown. The questions address the operating flexibility of the power system, a topic of increased interest due to the introduction of renewable power with variable output and demand response programs. These questions are limited to units burning combustible fuels.
- Delete the questions relating to reactive power. EIA has been unable to collect consistent or clearly correct data on reactive power. NERC, which originally requested these data, has informed EIA that the need for these data no longer exists.
- Reduce the number of questions relating to fuel switching and multi-fuel operation from 13 to six. The remaining questions relate to oil and gas units, only. This change is made to reduce respondent burden by focusing on the fuel switching questions of greatest interest, which request information on the use of backup fuel for gas and oil fired units.

[3] A blackstart unit is a generating unit that can be started without relying on offsite power. Blackstart units are crucial to the recovery of the power grid following a blackout.

- Add new questions on the characteristics of wind turbines such as turbine manufacturer, designed average annual wind speed, wind quality class, and average hub height; and add new questions on the characteristics of solar energy systems such as identification of tracking, concentrating and collector technology, and photovoltaic panel material. These questions will provide important information on the renewable technologies that increasingly account for the additions to the nation's generating fleet.
- EIA originally proposed to collect data on the number of hours an energy storage system can operate when discharging at full capacity. Upon further review we have concluded that additional research is needed to ensure that the survey requests useful information on storage that is commensurate with burden. EIA will delete the proposed question, perform the necessary research, and propose revised questions for the next clearance or earlier.

(7) Schedule 3, Part C, *Generator Information – Proposed Generators*: Consistent with changes discussed above to Part B (existing generators), EIA proposes to delete questions relating to reactive power, and reduce the number of questions relating to fuel switching and multi-fuel operations at planned units.

(8) Schedule 5, *Generator Cost Information*:

- Delete all questions relating to interconnection costs.

- Add new questions on generator construction and financing costs. There is no public source of information on the actual cost of building new power plants. Nonetheless, cost estimates are critical elements to projections of, for example, power industry capital requirements and forecasts of new builds. The proposed questions will collect construction and financing costs as of the time of completion for most generating units. Long-lead coal and nuclear units will be required to provide annual estimates of the total cost to completion. All of the data will be treated as sensitive and protected to the extent that it satisfies the criteria for exemption under the Freedom of Information Act.

(9) Schedule 6, *Boiler Information*:

- Part A, *Plant Configuration*: Reorganize the manner in which data on environmental equipment are collected to reflect the fact that a single control technology can reduce emissions of more than one pollutant. The information collected will be expanded to include the operating status, in-service date, and installed cost of nitrogen oxide and mercury control systems.

- Part C, *Boiler Information*: Delete the question that collects boiler manufacturer. EIA cannot identify a need for this information.

- Part D, *Cooling System Information – Design Parameters*: Add a question that collects the name of the cooling water discharge body if it is different from the name of the intake body. This information is requested as part of EIA's joint review with the U.S. Geological Survey of data relating to the energy/water nexus (an initiative recommended by the Government Accountability Office).

- Part F, *Flue Gas Desulfurization Unit Information*: Delete the question that collects the flue gas desulfurization unit manufacturer. This information had value when scrubber technology was still in the developmental stage, which is no longer the case.

- Part G, *Stack and Flue Information – Design Parameters*: Delete the questions that collect the geographic coordinate datum of stacks. As noted, above, EIA's experience is that many and probably most respondents cannot provide a correct answer to this question.

(10) *Confidentiality*:

- Beginning with this survey clearance proposal, EIA intends to classify the following information as business sensitive: all information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on SCHEDULE 1, such as name, email address, and phone number. This information will be protected and not disclosed to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. EIA is concerned that the release of respondent contact information to outside parties may create additional demands on these individuals' time and attention, such as in the form of sales calls. Note that institutional contact information, such as the name and address of a utility company, will remain public information.
- EIA proposes to add the following paragraph to the section on data confidentiality: "With the exception of data on the costs of constructing power plants, disclosure limitation procedures are not applied to the aggregate statistical data published from this survey. Some statistics may be based on data from fewer than three respondents, or that are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to closely estimate the information reported by a specific respondent."

Form EIA-860M, "Monthly Update to the Annual Electric Generator Report"

The mandatory Form EIA-860M collects data on the status of proposed new generators scheduled to begin commercial operation within the forward 12-month period, existing generators scheduled to retire from service within the forward 12-month period, and existing generators that have proposed modifications that are scheduled for completion within one month. The information is needed to ensure an up-to-date and complete inventory of the nation's generating fleet for such purposes as reliability and environmental analyses.

Beginning with this survey clearance proposal, EIA intends to classify the following information as business sensitive: All information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on SCHEDULE 1, such as name, email address, and phone number. This information will be protected and not disclosed to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. EIA is concerned that the release of respondent contact information to outside parties may create additional demands on these individuals' time and attention, such as in the form of sales calls. Note that institutional contact information, such as the name and address of a utility company, will remain public information.

Form EIA-861, "Annual Electric Power Industry Report"

The mandatory Form EIA-861 collects annual information on the retail sale, distribution, transmission and generation of electric energy in the United States, its territories, and Puerto Rico. The data include related activities such as energy efficiency and demand response programs. In combination with the Form EIA-861S short form (see below) and the monthly Form EIA-826, this annual survey provides coverage of retail sales of electric power and related activities.

The Form EIA-861 requests a full array of data from approximately 2,200 larger power companies. EIA proposes the following:

(1) For most schedules that request information by state, add a requirement to report by state and Balancing Authority combination. This reflects an effort by EIA to align data collection with the actual operation of the power system, which is managed in the contiguous 48 states by 106 Balancing Authorities. As a consequence of this proposal, the respondent may have more than one schedule reported per state in the limited number of cases where a respondent operates in more than one Balancing Authority in a state.

(2) The former Schedule 2, Part C, *Green Pricing*: Remove the green pricing schedule. As discussed, above in relation to the Form EIA-826 monthly survey, the limited presence of green pricing in the retail power market does not appear to justify the reporting burden of this schedule on respondents.

(3) Schedule 4, Part A, *Sales to Ultimate Customers*, *Full Service*: Add questions about "rate decoupling," a form of ratemaking intended to keep utilities revenue-neutral in a situation in which sales are dropping due to distributed renewable energy, energy efficiency and demand response programs. These programs have been common for retail sales of natural gas and are now being implemented for electricity sales.

(4) Schedule 6, Parts A and B, *Energy Efficiency Programs* and *Demand Response*: Beginning in 2010, EIA consulted with government, academic, and other experts on steps to improve the collection of energy efficiency data. The primary objective of the changes is to focus on the data that respondents are best able to provide and to improve the consistency of responses. The specific changes to Part A, Energy Efficiency Programs, are as follows:

- Change the collection of Net Energy Savings to Adjusted Gross Energy Savings (MWh).
- Change the collection of Annualized Incremental Effects and Actual Annual Effects to Incremental Annual Savings and Incremental Life Cycle Savings.
- Replace Annual Costs with Reporting Year Incremental Costs and Incremental Life Cycle Costs; also reduce the number of cost components collected.
- Add the collection of the Weighted Average Life of a portfolio of energy efficiency programs and provide an automated spreadsheet to calculate this number based on program data entered into the spreadsheet.
- Remove questions about verification and reporting on another company's form.
- Add question about website address for energy efficiency reports.

(5) Part B, *Demand Response Programs*: Add the numbers of customers enrolled and reduce the number of cost components collected. Add, at the request of DOE's Office of Energy Efficiency and Renewable Energy, a question concerning grid-connected interactive water heaters.

(6) Schedule 7, Part A, *Net Metering:* Eliminate the 2 MW capacity limit for reporting net metering installations. This change will help identify the amount of net metering capacity by technology type and, combined with other changes to generation capacity data collection, help EIA to indentify all the installed renewable capacity.

(7) Schedule 7 Part B, *Distributed and Dispersed Generation*: Add instructions to clarify that generator data collected under this schedule should exclude net metered generators and generators reporting on the Form EIA-860. Add instructions to include the reporting of generators for the residential sector, an area of increased solar installations. These changes combined with other changes to generation capacity data collection, help EIA to indentify installed renewable and other distributed and dispersed capacity.

(8) Schedule 6, Part C, *Dynamic Pricing Programs*: Dynamic pricing is a form of ratemaking that exposes retail customers to short-term changes in power prices. These rate structures, particularly in combination with smart meters, are of increasing interest as an integrated part of overall Demand Side Management Programs and as a means to improve the operation of restructured power markets. Consistent with the increased importance of this topic, EIA proposes to enhance the demand response questions. Examples of the enhanced questions include asking respondents to identify how many customers they have signed up in the Demand Side Management Programs and also whether they have customers signed up for any of five major time-based rate programs (Time-of-Use Pricing, Real Time Pricing, Variable Peak Pricing, Critical Peak Pricing, and Critical Peak Rebate).

(9) Schedule 6, Part C, *Advanced Metering*: The definitions of advanced metering infrastructure (AMI, or "smart meters") and automated meter reading technologies have been adjusted to provide better estimates of total AMI meter installations. This statistic is of interest because of federal and state programs intended to encourage the use of smart meters and the possible value of smart meters in energy efficiency and demand response programs. EIA also proposes adding questions on non AMR/AMI meters to have a complete set of data for meters, the number of customers participating in direct load control programs, the number of AMI Meters with Home Area Network (HAN) gateway enabled, and the number of customers that can access their daily usage through a web portal or other electronic means.

(10) Schedule 3, Parts A, B and C, *Distribution System Information and Reliability Information*: EIA proposes to add new questions dealing with distribution system characteristics and the reliability of electric power distribution systems. This information expands EIA's coverage of power system reliability, which has historically been limited to the transmission grid (see discussion of Form EIA-411, above), to the distribution level at which most customer interruptions actually occur. The initial recommendation to add these questions came from Lawrence Berkeley National Laboratory, which had identified the lack of a central repository of distribution system reliability statistics as a significant data gap. The need for this collection is further indicated by requests EIA has received for these data from Congress and state energy offices. The impact on respondent burden is expected to be minimal because respondents can respond with statistics that are typically computed in the normal course of business. Utilities

that do not collect information on distribution system reliability are not required to complete Parts B and C.[4]

(11) Beginning with this survey clearance, EIA intends to classify the following information as business sensitive: all information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on SCHEDULE 1, and contacts related to mergers and acquisitions on Schedule 5, such as name, email address, and phone number. This information will be protected and not disclosed to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. EIA is concerned that the release of respondent contact information to outside parties may create additional demands on these individuals' time and attention, such as in the form of sales calls. Note that institutional contact information, such as the name and address of a utility company, will remain public information.

Form EIA-861S, "Annual Electric Power Plant Report (Short Form)"

The mandatory Form EIA-861S collects a limited set of information annually from approximately 1,100 small companies involved in the retail sale of electricity. A complete set of annual data is collected from approximately 2,200 larger companies on the Form EIA-861, and monthly data are collected on the Form EIA-826 (see above).

EIA proposes changes to the Form EIA-861S to comport with those planned for the EIA-861 long form, specifically:

(1) For most schedules that request information by state, add a requirement to report by state and Balancing Authority combination. As noted earlier, this reflects an effort by EIA to align data collection with the actual operation of the power system, which is managed by about 77 Balancing Authorities. As a consequence of this proposal, the respondent may have more than one schedule reported per state in the limited number of cases where a respondent operates in more than one Balancing Authority in a state.

(2) Schedule 2, Part C, Remove the green pricing schedule. As discussed above, the limited presence of green pricing in the retail power market does not appear to justify the burden of this schedule on respondents.

(3) Schedule 6, Parts A & B, *Demand Side Management*: Add a question concerning grid interactive water heaters.

---

[4] Researchers from the Lawrence Berkeley National Laboratory concluded in a 2006 study that the annual cost to the consumers of power interruptions is between $22 billion and $135 billion annually, with a base case estimate of $79 billion. The study recommended the collection of additional data on system reliability "[i]n view of the large range of plausible estimates and the enormous costs associated with the private and public decisions that may be based on them…" Kristina LaCommare and Joseph Eto, "Cost Of Power Interruptions To Electricity Consumers in the United States," *Energy* 31 (pp. 1845-1855). A 2013 report puts the average annual cost of weather-related outages at $18 billion to $33 billion. Executive Office of the President, *Economic Benefits of Increasing Grid Resilience to Weather Outages*, August 2013, http://energy.gov/sites/prod/files/2013/08/f2/Grid%20Resiliency%20Report_FINAL.pdf

(4) Schedule 6, Part D, *Advanced Metering and Customer Communications*: The definitions of AMI and AMR technologies have been adjusted to provide better estimates of total AMI meter operations. This statistic is of interest because federal and state programs to encourage the use of smart meters and to promote the possible value of smart meters in energy efficiency and demand response programs are growing in number and size.

(5) Beginning with this survey clearance, EIA intends to classify the following information as business sensitive: all information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on SCHEDULE 1, such as name, email address, and phone number. This information will be protected and not disclosed to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. EIA is concerned that the release of respondent contact information to outside parties may create additional demands on these individuals' time and attention, such as in the form of sales calls. Note that institutional contact information, such as the name and address of a utility company, will remain public information.

Form EIA-923, "Power Plant Operations Report"

The mandatory Form EIA-923 collects monthly and annual information from electric power plants in the United States. Data collected include electric power generation, energy source consumption, end of reporting period fossil fuel stocks, the quality and cost of selected fossil fuel receipts, water use, and data on the performance of environmental control and related equipment.

EIA proposes to make the following changes to Form EIA-923:

(1) Schedule 2, *Cost and Quality of Fuel Purchases*: Add to the collection of coal quality characteristics two additional elements: coal moisture and chlorine content. These factors relate to the propensity of the coal to produce acid gases and assist in assessment of the quality of the various coal ranks.

(2) Schedule 4, *Fossil Fuel Stocks at the End of the Reporting Period*: Add questions to clarify the relationship between stocks held off-site at coal terminals with the plants the terminals serve. EIA collects coal stocks held for power plant use to measure the adequacy of short-term coal supply for power generation.

(3) Schedule 3, *Boiler and Generator Information for Steam-Electric Combustible-Fueled Plants*: Simplify the form by combining two schedules dealing with generation and fuel consumption (Schedules 3 and 5) into a single schedule.

(4) Schedule 6, *Nonutility Annual Source and Disposition of Electricity*: Add "Energy Provided under Tolling Arrangements" to the Disposition of Electric Energy and request identification of the nature of "other incoming" and "other out-going" electric energy. These changes are needed to distinguish power delivered under tolling agreements from the more generic category of "other out-going power." Plants selling power under tolling agreements have increased from about 12 in 2007 to over 200 in 2012.

(5) Schedule 7, *Annual Revenues from Retail Sales and/or Sales for Resale*: Collect data on retail sales by power plants that typically sell power at wholesale rates. These data are needed to complete the disposition of electricity by capturing retail sales by nonutility plants. (This is not a new data collection. This information was previously collected on the EIA-861 survey. EIA has

concluded it would be more efficient to collect the information on the EIA-923. Utilities report retail sales on the Form EIA-861, but independent power producers are not required to complete the Form EIA-861.)

(6) Schedules 8, *Annual Environmental Information*, *Parts C, E and F*: Reconfigure these schedules to be equipment-oriented, rather than pollutant type-oriented, because installed environmental controls can reduce more than one type of air emission.

(7) Beginning with this survey clearance, classify the following information as business sensitive: all information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on SCHEDULE 1, such as name, email address, and phone number. This information will be protected and not disclosed to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. EIA is concerned that the release of respondent contact information to outside parties may create additional demands on these individuals' time and attention, such as in the form of sales calls. Note that institutional contact information, such as the name and address of a utility company, will remain public information.

(8) Add the following paragraph to the section on data confidentiality: "Disclosure limitation procedures are not applied to the aggregate statistical data published based on this survey. Some statistics may be based on data from fewer than three respondents, or that are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to closely estimate the information reported by a specific respondent."

Form EIA-930, "Balancing Authority Operations Report"

The proposed mandatory Form EIA-930 is a new survey of hourly electric power operating data from the 77 Balancing Authorities in the contiguous United States. The survey is intended to modernize EIA's collection of electric power operating data for the current environment.

Due to the lack of sufficient cost-effective electricity storage, electricity must be produced at the moment it is used. This presents the electric industry with significant challenges in delivering its primary product: electricity on-demand. The industry meets the challenge by always having more capacity available than needed and relying on certain entities to ensure the moment-to-moment balancing of supply and demand. Electric utilities that perform the balancing function are called Balancing Authorities.

Balancing Authority operators schedule, on an hourly basis, supply resources to meet projected demand, as well as the interchange of electricity between Balancing Authorities. Given the Balancing Authority operators reliance on the hourly interval, the proposed survey uses the operating hour as its data measurement interval. The data to be collected include:

- Hourly demand
- Hourly next-day demand forecast
- Hourly net generation
- Hourly total net actual interchange
- Hourly net actual interchange with each interconnected Balancing Authority

The survey will use a purely electronic data collection method. Each Balancing Authority will post the data on a website. At the Balancing Authorities (BA's) discretion this can be a public website or a website to which only EIA will have access. In either case EIA will scan the websites to download the data postings. There will be no survey data form in a traditional sense, only the EIA-specified XML or CSV schema that defines the format for the data posting.

EIA will also consider alternative data transfer methods proposed by respondents, such as direct business to business data transfers. Acceptance of alternatives will be at the discretion of EIA, as it would be impractical for EIA to collect data using dozens of different data transfer methods.

There will be two types of required data postings each day:

- Respondents will post hourly demand data within 59 minutes of the end of the reported hour.
- Respondents will also post separately the prior day's hourly demand, demand forecast, net generation and total net actual interchange, and net actual interchange data with each interconnected Balancing Authority from two days prior, by 7:00 a.m. Eastern Time.

For a representation of the data to be collected see Figures 1 and 2 below.

Figure 1: Representation of the Contents of the EIA-930 File to be Posted Each Hour of Each Day

Notes: Stylized example of posting on August 1, 2014. All Values in Megawatts. Certain identification and time stamp information, such as the Universal Time adjustment, not shown.

Data for August 1		
Hour Ending	Integrated Demand	*The file is updated hourly with a replacement file that adds the latest demand data. The demand for the most recent hour must be posted within 59 minutes of the end of the hour. The posted file starting the next day would only have the value for the hour ending 1 am (previous day values are dropped).*
0100		
0200		
.	.	
.	.	
.	.	
2300		
2400		

Figure 2: Representation of the Contents of the EIA-930 File to be Posted Daily by 0700 Eastern Time

Notes: Stylized example of posting on August 1, 2014. All Values in Megawatts. Certain identification and time stamp information, such as the Universal Time adjustment, not shown.

	Data for July 31			Hourly Demand Forecast	Data for July 30: Validated Actual Interchange with Interconnected Balancing Authorities (BA)		
Hour Ending	Integrated Demand	Net Generation	Total Net Actual Interchange	Demand Forecast for August 1	BA 1	BA 2	BA 3
0100							
0200							
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.
2300							
2400							

The key aspects of this proposed data collection are discussed below, and are also reviewed in EIA's response to comments (Appendix A-1).

Purpose: As discussed earlier, EIA currently collects and publishes electric power data by month and by state with a lag of almost two months. While still useful, this approach produces data that cannot be applied to many modern business and public policy purposes: The data are reported too late, in too little detail, and for state boundaries that are irrelevant to the operation of the power grid. Particular issues include:

- To evaluate the impact of demand response programs and increased use of intermittent renewable energy technology. As these resources are introduced, the pattern of hourly demand will change. The Form EIA-930 will allow EIA and others to track these changes. These changes will impact wholesale power prices, retail electricity rates, the revenues and profitability of utilities and generators, and the demand for technologies (transmission, generation, smart grid, and others). Hourly information is needed to evaluate these developments.
- To provide near real-time information on the recovery of the power system in the wake of system upsets (e.g., hurricane damage, wide-area blackouts).
- To provide state and local officials experimenting with or implementing demand response and dynamic pricing programs information on the impact of these programs.
- To provide a near real-time indicator of electricity-using economic activity.[5]
- To provide information relevant to decisions by policy makers, researchers, market participants and entrepreneurs. These decisions may regard research, development, production and implementation of technologies and programs with the potential to leverage the time varying nature of electric systems operations. Possible opportunities lay in the areas of energy efficiency

[5] The increasing interest in real-time indicators of economic activity is discussed in "Real-Time Economic Data Could Be a Game Changer," *The Wall Street Journal*, October 15, 2013.

and demand response, distributed generation (ranging from rooftop solar to industrial cogeneration), electricity storage, and the supply of quick response generators.

In summary, the purpose of this survey is to provide basic operating statistics for the nation's electric power system on a current basis. While regional transmission organizations and electric utilities individually and as an industry have primary responsibility for system operations, many other entities, such as other industry participants, policymakers, legislators, regulators, emergency and disaster response officials, entrepreneurs, economic analysts, industry researchers, and the public, have a direct interest in electric systems operations and the associated data. There is currently no central or comprehensive source for hourly electric industry operating statistics, a problem EIA first noted in 2004[6]. The EIA-930 is intended to help solve this problem.

Feasibility: As confirmed by comments EIA received in response to the 60-day Federal Register Notice, the data the EIA-930 would collect are currently produced, stored, and transmitted electronically by BAs in the normal course of business. In several cases BAs currently post portions of the data the EIA-930 would collect on their websites, and EIA scrapes and stores this information. Under Federal Energy Regulatory Commission (FERC) Order 890, Transmitting Utilities (most Balancing Authorities are also Transmitting Utilities) are required to post on their Open Access Same-time Information System (OASIS) websites their prior-day's peak hour demand and the associated demand forecast value. This practice further demonstrates the current ability of BAs to post operating data. There are no technological barriers to the proposed method of posting or collecting the data.

Burden: The proposed survey is specifically designed to minimize burden on electric system operators. The surveyed data are typically produced in the normal course of business by Balancing Authority energy management systems. Hourly demand and demand forecast data are currently posted on public websites in the proposed posting timeframes by a number of Balancing Authorities, including most Regional Transmission Organizations. These Balancing Authorities supply over half of end-use electricity consumption in the United States. A few Balancing Authorities publicly post more detailed operating data.

The only industry estimate of respondent burden EIA received in reply to the Federal Register Notice is about the same as EIA's own estimate.[7] EIA's estimate of total annual burden hours is 2,342 hours, compared to 141,145 hours for the entire Electric Power and Renewable Electricity Program (see Table 5); the difference is due to the use of fully automated data collection for the EIA-930. The burden of providing these data is extremely low relative to their value, particularly since the information requested is produced by the proposed respondents in the normal course of operations, and a number of proposed respondents are already posting much of these data.

Market Sensitivity: The EIA-930 will not release unique business sensitive information. As noted above, Regional Transmission Organizations that serve as Balancing Authorities and some other Balancing Authorities currently publicly post hourly operating data. A potential commercial issue is whether these data will reveal whether a specific utility is short on available generating capacity and may be willing to

[6] DOE/EIA-0639, *Electricity Transmission in a Restructured Industry: Data Needs for Public Policy Analysis*, 2004, pp. 14, 26 (Table 7), 53, and 108. The report is available at http://www.eia.gov/electricity/archive/0639.pdf.

[7] The estimate was provided by Chugach Electric Association and is discussed further in the review of comments (Appendix A-1). TVA also noted that supplying the data would not be burdensome as long as EIA was willing to accept "as-is" data, which is EIA's intent.

pay premium prices for electricity to meet load. However, the proposed survey data, including same-day posting of hourly demand, does not provide information about the availability of generating units. The next-day posting of operating data is after the relevant short-term wholesale power markets have closed.

Wholesale market participants can pay private services for much more detailed and timelier information about the operating status of generators and transmission lines than anything the EIA-930 will collect and publish:

- IIR Energy provides daily updates of the operating status of most major generating units in the country (http://www.industrialinfo.com/iirenergy/index.jsp?pagerequest=powercast&sidebarrequest=none).
- Genscape (http://www.genscape.com/north-american-power-market-services) uses a proprietary sensor network to provide in real-time an estimate of the output of most of the market-relevant generating units in the U.S. For example, when the Nuclear Regulatory Commission was shut in early October 2013 and unable to post the daily status of nuclear generating plants in the United States, Genscape posted its own report based on the data collected by its sensor network.[8] Genscape also monitors and reports to subscribers the loading of key transmission lines.
- Pattern Recognition Technologies (http://www.prt-inc.com/forecast/) provides hourly forecasts of RTO load, generation, and prices.
- Yes Energy 's service (http://www.yesenergy.com/) is described as combining RTO nodal prices with information on transmission and generation outages and transmission constraints, integrated with maps of the transmission system.

Wholesale sellers do not need to infer a utility's supply position from hours or day-old operating data. They can know for sure with these services. Note that this is not intended to be a comprehensive list of private firms that provide system operations data, just those that EIA is aware of.

The EIA-930 data cannot be used to predict prices or bidding behavior, or estimate dispatch costs. To be able to predict prices and bidding behavior a market participant would need to know the supply positions of all participants in a market and their generation dispatch costs. The EIA-930 data do not include any price or cost data. In any case, estimates of generation dispatch costs are readily available from industry information vendors (e.g., Ventyx's Energy Velocity Suite; see http://www.ventyx.com/en/enterprise/business-operations/business-products/velocity-suite).

FERC addressed similar concerns about next-day posting of daily peak demand and demand forecast data by Transmitting Utilities (most of which are also BAs) in its Order 890. In its Order FERC stated that: "The Commission is not convinced by the views of some commenters that load data has competitive implications. The Commission notes, as PJM pointed out in its comments, that many RTOs have an

[8] According to its press release, "Genscape physically monitors and captures hard data at 82% of the nation's nuclear power generation facilities, meaning that output data does not rely on surveys, estimates or third-party sources." See: http://www.genscape.com/featured-news-releases/government-shutdown-threatens-wholesale-energy-markets-disruption-fundamental

established practice of posting significant amounts of load data for participants' use, and this data posting has not raised competitive concerns."[9]

Power System Security Implications: Since the late 1990s voluminous real-time operating data has been made available by the Balancing Authorities covering most of the United States. EIA has been unable to identify any studies or other analyses suggesting that this real-time operating data creates a grid security threat. As discussed below the EIA-930 data will be less detailed and timely than much of the data currently made available by the Balancing Authorities and should therefore pose no security issue.

The current public reporting of real-time data by Balancing Authorities covers over half the nation, including the largest and most congested networks in the northeast and California. The EIA-930 will provide uniform, mandatory reporting of operating data for the entire lower 48 states. However, the EIA-930 data will be less detailed and timely than data currently released by Balancing Authorities. For example:

- The Bonneville Power Authority (BPA) Balancing Authority publishes real-time load data at five minute intervals and real-time data on net generation at the same interval with detail for hydroelectric, wind, and thermal generator output. In comparison, the EIA-930 will collect real-time load at one hour intervals and will publish net generation the next day (that is, not in real-time) and without any breakdown by energy source.
- The California ISO Balancing Authority publishes load at 10 minute intervals and also provides a continuous comparison of real-time load with resources available to meet load. The EIA-930 will provide no comparison between load and resources (and will collect no data on resources).
- The ERCOT Balancing Authority, covering most of Texas, provides real-time information on loading of the transmission ties between ERCOT and the rest of the national electric power grid. The EIA-930 collects no comparable data.

In addition to operating data, several Balancing Authorities (PJM Interconnection, Mid-Continent ISO, ERCOT, and California ISO) operate real-time markets for electricity that establish publicly available prices at hundreds or thousands of "nodes" throughout the RTO. These nodal prices directly reflect demand, transmission system loading, and generating unit availability, and as such provide an indicator of the stress points within the transmission system. [10] The EIA-930 will collect no nodal-level data of any kind, price or otherwise.

Information on the real-time status of individual power plants is available in the public domain. DOE's Office of Electricity Delivery and Energy Reliability (DOE/OE) posts on the afternoon of each business day information gathered from public sources on the operating status of generating units and transmission lines.[11] The Nuclear Regulatory Commission posts daily the status of every nuclear generating unit in the

---

[9] Federal Energy Regulatory Commission, Order 890, *Preventing Undue Discrimination and Preference in Transmission Service*, February 16, 2007, p. 234, https://www.ferc.gov/whats-new/comm-meet/2009/111909/E-9.pdf .

[10] Congressional Research Service, *Electric Utility Infrastructure Vulnerabilities: Transformers, Towers, and Terrorism*, April 2004, http://www.fas.org/sgp/crs/homesec/R42795.pdf, p. 8.

United States.[12] The California ISO publishes each afternoon a list of "Curtailed and Non-Operational Generating Units."[13] EIA has been unable to identify any assessment that has concluded that the release of this data, which is much more detailed than the EIA-930 data, creates a security risk.

Information on the physical characteristics of the grid is available in the public planning studies for transmission line projects. This information is also available from studies of power system disruptions. For example, the joint report of the U.S. and Canadian governments on the 2003 blackout provided a detailed guide to the configuration, operation, and vulnerabilities of the Midwestern power grid.[14] These studies provide much more detail on the transmission system than the EIA-930 data; but again, we have been unable to identify any studies that suggest that this information poses a security threat.

In summary, Balancing Authorities have released voluminous public, real-time information on grid operations since the late 1990s, covering most of the United States. To the best EIA can determine this information, and other public operating data on grid conditions such as information on power plant outages, has never been identified as a security threat.[15] The information to be collected by the EIA-930 will provide wider geographic coverage in a uniform format compared to current data, but will provide less detail and will be less timely than much of the data currently available.

For further discussion of security issues, see the response to comments on the EIA-930 in Appendix A-1.

Duplication: The proposed survey does not duplicate existing data collections. EIA currently collects monthly and annual production from electric generators and demand from load-serving entities. The

---

[11] DOE/OE, *Energy Assurance Daily*, available at http://www.oe.netl.doe.gov/ead.aspx. The *Energy Assurance Daily* is based on press reports and other public sources, not on a government data collection.

[12] See the *Power Reactor Status Reports* posted at http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/.

[13] http://www.caiso.com/market/Pages/OutageManagement/UnitStatus.aspx

[14] http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/BlackoutFinal-Web.pdf.

[15] One question is why the detailed and real-time public information made available since the late 1990s by Balancing Authorities and other entities does not create a security threat. There are two considerations. First, this detailed information is not needed to identify grid vulnerabilities. System stress is largely a function of the weather (very hot or very cold). Unusual stress – generally created by a combination of extreme weather and power plant or transmission line outages – is publicly announced by utilities and governments in requests for consumers to reduce power demand. Many important transmission lines can be identified as the high voltage lines that radiate from power plants. One study notes that "high-value choke points" on the grid can be determined through a review of maps, public aerial imagery, and on-the-ground observation (National Research Council, *Terrorism and the Electric Power Delivery System*, 2012, http://www.nap.edu/download.php?record_id=12050, pp. 32-33).

The second consideration is that even if a high value point can be identified this is in itself not enough information to plan an attack. The power grid is designed with redundancy; in the jargon of the industry, the grid is built to withstand multiple "contingencies" before it fails. A miscreant would need to understand the redundancies built into the system and then target the correct combination of facilities to trigger a system failure, keeping in mind that this combination of facilities is not static but changes with system conditions.

data are published about 52 days after the end of a month for major generators and systems, and about eight months after the end of the year for smaller entities.

FERC currently collects demand, net generation and actual interchange from Balancing Authorities on an annual survey, the FERC Form 714. Data for this survey are reported on a monthly and annual basis. In addition, Balancing Authorities report actual interchange received and delivered with each directly interconnected Balancing Authority on an annual basis. The FERC Form 714 monthly and annual values for demand, net generation, and actual interchange do not provide relevant information about the time-varying nature of these operating values as proposed in the Form EIA-930 survey.

The FERC Form 714 also collects historical hourly demand by Planning Area.[16] Most Balancing Authorities are also Planning Areas. The hourly demand data are collected annually and posted with the rest of the form data in August of the year following the reporting year. The FERC Form 714 data are both less complete and far less timely than the data that would be collected by the proposed survey and do not offer current information on the status of the nation's electric system that the proposed survey would provide.

Presentation by EIA: The survey will be activated six months after approval by OMB. As an accommodation to industry concerns (see Appendix A-1), for a period of time (perhaps one or two months) the data files and summary reports will not be publicly posted, but will be shared with industry and others (such as analysts at the national laboratories) for review and comment. EIA will incorporate these comments, as appropriate, into the format of its public data releases. This interval will also provide a shake-down period for the data posting and collection systems, and will be especially useful if some respondents have proposed non-standard means of data transmittal. Once this data review period is over, data will be reported by EIA to the public in near real time, essentially as rapidly as the data is captured by EIA. Summary statistics will be posted at longer intervals, such as weekly. Table shells for the data presentation are in Appendix A-2.

Data will generally be available immediately to the public at the level of individual Balancing Authorities. An exception will be made for the approximately 9 Balancing Authorities with only one or two interconnections with other BAs; the hourly demand data for these entities will be aggregated when first published and not made available to the public at the Balancing Authority level until two days after the reporting day. This aggregation will be made as an accommodation to industry concerns (see Appendix A-1) that Balancing Authorities with a limited market presence could suffer commercial harm from the public release of real-time hourly demand data. EIA is making this accommodation although, as discussed above, the agency does not believe there is any risk of commercial harm, and EIA will revisit the need for data aggregation when the EIA-930 is re-cleared.

To accommodate industry concerns that the real-time data could be misinterpreted by the public, EIA will attach a disclaimer to all data products. The disclaimer will have language similar to the following: "EIA acknowledges that the information submitted by reporting entities is preliminary data. This preliminary data is made available "as-is" by EIA and neither EIA nor reporting entities are responsible for reliance on the data for any specific use."

[16] A planning area is the electric system wherein an electric utility is responsible for the forecasting of system demands and has the obligation to provide the resources to serve those demands.

A.3 Use of Technology

A.3.1 General Use of Technology

All EIA Electric Power and Renewable Electricity Program surveys use Internet-based data collection systems as the primary means of data collection. Approximately 95 percent of these surveys are currently filed with EIA using the Internet systems. The majority of routine contact with respondents (e.g., notification that a survey has opened for a collection cycle) is performed using email.

Internet data collection will continue to be the primary collection mode for the Electric Power and Renewable Electricity surveys. The Internet-based system allows respondents to enter their data directly into the EIA survey database, which reduces the time needed for data collection and processing. The system also identifies data that fail edits prior to submission, which allows respondents to make necessary corrections or explain unusual events impacting the reported data prior to submission. This data editing process reduces respondent burden by reducing the number of times a respondent must resubmit forms prior to acceptance by EIA. It also improves the timeliness of reporting the information to the public. The only equipment and software the respondent requires is a connection to the Internet and a standard industry web browser.

EIA will continue to make all survey forms and instructions available for printing or downloading from the EIA website for respondents who cannot or will not use the Internet-based systems.

A.3.2 Use of Pick-Lists (Including Dynamic Lists)

Pick-lists[17] are a means of limiting a respondent's answers to a question to a finite set of acceptable choices. The objectives are to reduce respondent burden and to improve data quality, while reducing the time and effort needed by EIA to edit a response.

Pick-lists are used in software-enabled surveys to:

- Avoid typographical errors, such as mistyping the abbreviation for a state or month
- Assure consistent responses to questions asking standard information, such as entering a state as text or a number
- Assure consistent responses to questions asking for technical information when the same concept has multiple monikers (e.g., "short-term" and "spot" fuel supply contracts)

When the pick-list requests a choice of technical information, the list typically includes an "Other" choice. In some cases, the "Other" choice is accompanied by a request for the respondent to provide additional information in a comment area in the survey. The "Other" choice acts as a mechanism to ensure that the form is capable of collecting all possible categories when a pick-list is variable.

Three types of pick-lists may be used in software-enabled EIA surveys:

- Static pick-lists include information that does not change, such as a list of the 12 months.
- Variable pick-lists include choices that may be changed by EIA depending on circumstances, e.g. on the Form EIA-923 Schedule 2, there is a pick-list of all known fuel suppliers. However, new

[17] Pick-lists are sometimes referred to as "drop-down" lists because of the typical appearance of the list in a software application. "Selection lists" is another term for pick lists.

list entries crop up frequently and the survey manager has the capability to add them to the pick-list.

- Dynamic pick-lists include a list of choices that varies depending on the respondent's answer to another question. For example, on the Form EIA-923, a respondent selects the type of fuel purchased from a static pick-list. When the respondent proceeds to the question that requests the name of the fuel supplier, only suppliers of that type of fuel are on the pick-list.

A.3.3 Data Upload Project

Large companies may spend significant resources to manually key the Form EIA-923 each month for up to 50 plants per company. These data may be generated by the company's accounting systems, put in spreadsheet or other intermediate format, and then manually read and keyed into EIA's Internet Data Collection system. As a pilot program EIA is working with Southern Company (a large utility) to create a means of directly uploading data into EIA's data systems, eliminating the keying step. Testing of the pilot began in 2013. EIA's goal is to make data upload available for most surveys.

A.4 Efforts to Reduce Duplication

In addition to EIA, several other government and private entities conduct electric power and renewable data collection, estimation, and/or publication programs. These entities include:

- American Public Power Association (APPA)
- Edison Electric Institute (EEI or Edison)
- Rural Utilities Service (RUS), U.S. Department of Agriculture
- Federal Energy Regulatory Commission (FERC)
- North American Electric Reliability Corporation (NERC)
- Nuclear Regulatory Commission (NRC)
- DOE Office of Electricity Delivery and Energy Reliability (DOE/OE)

EIA evaluated other sources of data relating to the electric power and renewables industries and has found no other source that can replace the surveys in this package (see Table 1). This is because of differences in classification, inconsistency, incompleteness, unavailability, or lack of universal coverage.

Table 1. Non-EIA Electric Power Data Collection Programs and Forms

Responsible Group	Form or Collection No.	Title	Notes
American Public Power Association	N/A	Facilities Performance Indicators Report (FPI)	The FPI is a report on the costs and practices of facilities operations at educational institutions. The frame for this survey is based on the frame and data reported from the EIA-861 survey. Data from this survey are used to calculate performance indicators published in summary form in the APPA report "Selected Financial and Operating Ratios of Public Power Systems." The report is available for a fee of $895 - $1000 to non-members of APPA. http://www.appa.org/Research/FPI/index.cfm
Edison Electric Institute	N/A	Property & Plant Capital Investment Survey	Annual. Collects actual transmission and distribution capital expenditures for all major investor-owned electric utilities. National totals available, individual company data are considered confidential. http://www.eei.org/resourcesandmedia/newsroom/Pages/Press%20Releases/EEI%20Survey%20Shows%20Transmission%20and%20Distribution%20Investment.aspx
	N/A	Typical Electric Bills	Semi-Annual. Collects typical monthly electric bills and average kilowatt-hour cost to the customer as charged by investor-owned utilities. Available for a fee to EEI members. http://www.eei.org/resourcesandmedia/products/Pages/default.aspx
	N/A	Transmission Capital Budget & Forecast Survey	Annual. Collects five year forecast of transmission capital expenditures for all major investor-owned electric utilities. National totals available, individual company data are considered confidential. http://www.eei.org/resourcesandmedia/newsroom/Pages/Press%20Releases/EEI%20Survey%20Shows%20Transmission%20and%20Distribution%20Investment.aspx
	N/A	Distribution Capital Budget & Forecast Survey	Annual. Collects five year forecast of distribution capital expenditures for all major investor-owned electric utilities. Survey to be combined with Transmission Capital Budget & Forecast Survey in 2014. National totals available, individual company data are considered confidential. http://www.eei.org/resourcesandmedia/newsroom/Pages/Press%20Releases/EEI%20Survey%20Shows%20Transmission%20and%20Distribution%20Investment.aspx
	N/A	Weekly Electric Output	Weekly. Reports electricity generation made available for consumption for nine geographic areas and the total United States; cost is $500/year. http://www.eei.org/resourcesandmedia/products/Pages/default.aspx

Responsible Group	Form or Collection No.	Title	Notes
Office of Electricity Delivery and Energy Reliability (U.S. Department of Energy)	OE-417	Electric Incident and Disturbance Report	Mandatory filing by electric utilities to report major power system disturbances. http://www.oe.netl.doe.gov/oe417.aspx
Federal Energy Regulatory Commission	No. 1	Annual Report of Major Electric Utilities, Licensees, and Others	Annual. The Form No. 1 is a comprehensive financial and operating report submitted for Electric Rate regulation and financial audits. Major is defined as having (1) one million Megawatt hours or more; (2) 100 megawatt hours of annual sales for resale; (3) 500 megawatt hours of annual power exchange delivered; or (4) 500 megawatt hours of annual wheeling for others (deliveries plus losses). There is also a quarterly form, the Form No. 3-Q. http://www.ferc.gov/docs-filing/forms.asp
	No. 1-F	Annual Report of Non-major Public Utilities and Licensees	Annual. The Form No. 1-F is a comprehensive financial and operating Report submitted by Non-major Electric Utilities and Licensees. Non-major is defined as having total annual sales of 10,000 megawatt-hours or more in the previous calendar year and not classified as Major. http://www.ferc.gov/docs-filing/forms.asp
	No. 3-Q	Quarterly Financial Report of Electric Utilities, Licensees, and Natural Gas Companies	The Form No. 3-Q is a comprehensive quarterly financial and operating report which supplements Form 1 and is submitted for all Major and Non-Major Electric Utilities; Licensees; and Natural Gas Companies who engage in Generation, Transmission, Distribution, or Sale of electric energy. http://www.ferc.gov/docs-filing/forms.asp
	FERC- 519	Corporate Applications	Authorizes FERC to collect information on proposed mergers, acquisitions, and dispositions. There is no survey form. See the supporting statement at: http://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201109-1902-005

Responsible Group	Form or Collection No.	Title	Notes
	Nos. 520 and 561	Interlocking Directorates	FERC-520 is an application and information collection requesting FERC authorization for board members of regulated electric utilities that plan to simultaneously hold positions on the corporate boards of related or similar businesses. See the supporting statement: http://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201105-1902-001 The Form 561 is an annual report of information detailing electric public utility officer and board of director positions that officers and directors held within and outside their affiliated public utility at any point during the preceding year. The reports on last year's information are filed on April 30th. http://www.ferc.gov/docs-filing/forms.asp
	No. 556	Certification of QF Status for Small Power Production and Cogeneration Facilities	In February 1995, the Commission instituted the FERC Form No. 556 filing requirement, which should be included with any application for Commission certification/recertification or notice of self-certification/self-recertification. On June 1, 2010, the Commission instituted the electronic fillable Form No. 556. Electronic filing of this form is mandatory. http://www.ferc.gov/docs-filing/forms.asp
	No. 566	Twenty Largest Purchasers	Annual. Lists customers and their business addresses if they were one of the top twenty largest purchasers of electric energy, measured in kilowatt hours sold, for purposes other than resale, during any of three preceding calendar years. http://www.ferc.gov/docs-filing/forms.asp
	No. 580	Interrogatory on Fuel and Energy Purchase Practices	This biennial data collection gathers information (under Docket IN79-6) on utility fuel supply contracts and other costs recovered through wholesale automatic adjustment clauses. http://www.ferc.gov/docs-filing/forms.asp
	FERC- 585	Reports on Electric Energy Shortages and Contingency Plans under PURPA 206	Used to establish procedures for reporting shortages of Electric Energy and Capacity and Contingency Plans for such Shortages. Due immediately upon any anticipated shortage. There is no survey form; the Commission provides a list of the required information. Filing is electronic. http://www.gpo.gov/fdsys/pkg/CFR-2010-title18-vol1/xml/CFR-2010-title18-vol1-sec294-101.xml * OMB Control No. 1902-0138*

Responsible Group	Form or Collection No.	Title	Notes
	No. 714	Annual Electric Balancing Authority Area and Planning Area Report	Electric transmitting utilities operating Balancing Authority areas and planning areas (with annual peak demand over 200MW) are required to electronically file Form 714, reporting among other things, Balancing Authority area generation, actual and scheduled inter-Balancing Authority area power transfers, and net energy for load, summer-winter generation peaks and system lambda. http://www.ferc.gov/docs-filing/forms.asp
	No. 715	Annual Transmission Planning and Evaluation Report.	Annual report by transmitting utilities on transmission planning, constraints and available transmission capacity. (Not accessible to the public.) http://www.ferc.gov/docs-filing/forms.asp
	FERC- 717	Open Access Same-Time Information System	This is not a survey form but a system used by utilities to facilitate the procurement of transmission services. http://www.ferc.gov/legal/maj-ord-reg/land-docs/order889.asp *OMB Control No. 1902-0173*
	No. 730	Report of Transmission Investment Activity	This annual report includes projections, information that details the level and status of transmission investment, and the reason for delay, if any. Public utilities that have been granted incentive based rate treatment for specific transmission projects under provisions of 18 CFR 35.35 must file FERC-730. http://www.ferc.gov/docs-filing/forms.asp
	No. 731	Survey on Demand Response/Time-Based Rate Programs and Advanced Metering	Annual voluntary survey required by the Energy Policy Act of 2005. The questions overlap in part with the Form EIA-861 but coverage is limited due to the survey being voluntary (recent response rate of 52%). The frame for this survey is based on the Form EIA-861 frame. FERC's annual demand response and advanced metering reports (also required by EPACT 2005) rely on Form EIA-861 data. http://www.ferc.gov/industries/electric/indus-act/demand-response/2012/survey.asp
	FERC-920	Electric Quarterly Report	Quarterly. All public utilities are required to electronically file Electric Quarterly Reports summarizing the contractual terms and conditions in their agreements for all jurisdictional services (including market-based power sales, cost-based power sales, and transmission service) and transaction information for short-term and long-term market-based power sales and cost-based power sales during the most recent calendar quarter. http://www.ferc.gov/docs-filing/eqr.asp

Responsible Group	Form or Collection No.	Title	Notes
North American Electric Reliability Corporation	N/A	Generating Availability Data System (GADS)	GADS data (concerning the reliability of generating units) are collected from all generator owners on the NERC Compliance Registry under NERC's Rules of Procedure Section 1600, Requests for Data or Information. Generating units less than 20 MW nameplate are invited to report to GADS on a voluntary basis. http://www.nerc.com/pa/RAPA/gads/Pages/default.aspx
	N/A	Transmission Availability Data System (TADS)	TADS collects transmission outage data which is used to quantify certain performance aspects. It collects detailed information about individual outage events that, when analyzed at the regional and NERC levels, will provide data that may be used to improve reliability. http://www.nerc.com/pa/RAPA/tads/Pages/default.aspx
	N/A	Electricity Supply & Demand	NERC collects, maintains, and annually publishes the Electricity Supply and Demand Database (ES&D), which includes 10-year projections for the interconnected North American bulk power system. The information is collected from the eight NERC Regional Entities on an assessment area basis and validated through the Reliability Assessment Subcommittee during NERC's annual development of the long-term reliability assessment. http://www.nerc.com/pa/RAPA/ESD/Pages/default.aspx
	EOP-004-2	Event Reporting	Requires the reporting to NERC of certain events relating to the reliability of the transmission system. Reporting is due within 24 hours of recognition of the event or the next business day if the event occurs on a weekend. http://www.nerc.com/files/EOP-004-2.pdf
Nuclear Regulatory Commission	N/A	Current Power Reactor Status Report	Daily report on percentage of available capacity from commercial nuclear generating units. http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/
Rural Electric Utilities Service (Department of Agriculture)	N/A	Financial and Operating Report Electric Distribution	Collects financial data on electricity distribution by rural utilities, which are analyzed and used to determine the submitter's financial situation and feasibility for loans and guarantees. http://www.rurdev.usda.gov/UEP_Support_DCS.html
	N/A	Financial and Operating Report Electric Power Supply	Collects financial data on electric power supply by rural utilities which are analyzed and used to determine the submitter's financial situation and feasibility for loans and guarantees. http://www.rurdev.usda.gov/UEP_Support_DCS.html

A.5 Provisions for Reducing Burden on Small Businesses

The burden on smaller entities is reduced through a number of means including the use of cutoff sampling for monthly surveys, the employment of the Form EIA-861S (short-form) annual survey, and the use of EIA's Internet data collection system. Cutoff sampling on the monthly Forms EIA-923 and EIA-826 obviates the need for many small entities to fill out monthly surveys; they need only submit one annual form.

Additionally, the annual Form EIA-861S (short form) was developed for the use of smaller respondents that represent approximately one-third of the original frame of the Form EIA-861 but only 1% of national retail sales. The Form EIA-861S is a much shorter form than the Form EIA-861 and provides a significant reduction in burden on smaller respondents.

Through its Internet data collection system, EIA pre-populates many data elements for items that do not frequently change. This allows respondents (both large and small) to simply verify that the information has not changed, as opposed to entering the same information for each survey cycle. In addition, the Internet data collection system with its built-in edits has reduced the burden on businesses by reducing the call-backs to verify or correct questionable data.

A.6 Consequences of Less-Frequent Reporting

The hourly, daily, monthly, and annual data collected on the Electric Power and Renewable Electricity forms are used to provide critical electric power industry statistics on items such as net generation; sales and revenues of electric power; fuel receipts, costs, consumption, and stocks; photovoltaic cells and modules; regional electricity supply and demand projections; transmission system characteristics and outages; existing and planned generating equipment; and energy efficiency and demand response programs.

Because there is currently no central or comprehensive source for hourly electric industry operating statistics, EIA is proposing the new Form EIA-930. The same-day, soon-after-the-reporting-hour posting of demand will provide a basic measure of the current status of electric systems and the accuracy of the forecasting used to commit resources. All of these data are used to monitor the state of the electric power industry.

Eliminating EIA's ability to provide hourly, daily, and monthly status reports on the electric power industry will deprive the U.S. Congress, federal and state agencies, and the public of up-to-date information on an industry that is central to the economy. In addition, less frequent EIA reporting might place a larger burden on state governments to collect and process replacement data and on the industry to provide its information to more than one data collection agency.

A.7 Compliance with 5 CFR 1320.5

The data for the collection instruments in this proposal are being collected consistent with the guidelines in 5 C.F.R. 1320.5 (Controlling Paperwork Burdens On the Public – General Requirements).

A.8 Summary of Consultations Outside of the Agency

Prior to the first Federal Register Notice (FRN) published on March 6, 2013, EIA consulted with many stakeholder groups, organizations, and individuals regarding the changes that are being considered.

Research on changes to the energy efficiency questions on the EIA-861 survey began in 2010, through discussions with industry experts. These initial consultations are listed below in Table 2.

Table 2. Initial Consultations Regarding Collection of Energy Efficiency Data

Meeting Date	Organization
11/23/2010	Institute for Electric Efficiency
12/17/2010	DOE/National Renewable Energy Laboratory
01/11/2011	Demand Research LLC
02/08/2011	Southern Company
03/01/2011	DOE/Lawrence Berkeley National Laboratory (video conference link)
04/13/2011	American Council for an Energy Efficient Economy

The broader set of consultations for all surveys and proposed survey changes took place in the spring and summer of 2012. EIA established a schedule of topic-oriented meetings that interested parties could attend either in person or through Internet conferencing. Information on these meetings and associated background materials were posted on EIA's website and also announced via email. In May 2012, emails about the meetings were sent to all of the survey primary contacts (5,143 emails), the Balancing Authorities that will report on the Form EIA-930 (75 emails), and to a list of 226 industry stakeholders including, for example, academics and trade associations. The emails provided links to the schedules and background materials. A second reminder email was also sent.

Meetings and topic areas were as follows:

- June 7, 2012 and July 26, 2012: Balancing Authorities and EIA-930 data collection
- June 12, 2012: Power Plant Characteristics, Operations, and Environmental Equipment
- June 14, 2012: Renewable Energy Data
- June 21, 2012: Energy Efficiency, Demand Response, Smart Grid, and Distribution System Reliability
- June 26, 2012: Power Plant Construction Costs
- June 28, 2012: Bulk Power and Reliability

Representatives from the organizations listed in Table 3 attended one or more meetings in person or via web conferencing.

Table 3. Organizations Represented at Briefings on Proposed Survey Changes

Organization
American Council for an Energy-Efficient Economy
American Public Power Association
American Wind Energy Association
Balch & Bingham LLP
CMS Energy
Edison Electric Institute
Environmental Protection Agency
Federal Energy Regulatory Corporation
FirstEnergy
National Hydropower Association
North American Electric Reliability Corporation
Nuclear Energy Institute
Platts
SERC Reliability Corporation
Solar Energy Industries Association
Southern Company
Teco Energy
TranSystems Corporation
U.S. DOE/Energy Efficiency and Renewable Energy
U.S. DOE/Fossil Energy/Office of Clean Coal
U.S. DOE/Lawrence Berkeley Laboratory
U.S. DOE/National Energy Technology Laboratory
U.S. DOE/National Renewable Energy Laboratory
U.S. DOE/Office of Policy and International Affairs
UC Berkeley Haas School of Business
United States Geological Survey

Additional meetings were held when requested by an organization. These included:

- Edison Electric Institute (EEI or Edison): Overview of all survey changes (May 24, 2012).
- North American Electric Reliability Corp (NERC): Proposed EIA-930 survey (July 19, 2012).
- American Public Power Association (APPA), Edison Electric Institute, Electric Power Supply Association (EPSA), National Rural Electric Cooperative Association (NRECA), and Xcel Energy: Proposed EIA-930 survey (September 11, 2012).
- Alaska utilities: [18] Teleconference on the proposed EIA-930 survey (May 7, 2013).

[18] Including the following entities: Alaska Power Association, City of Seward, Chugach Electric Association, Alaska Electric Light & Power, Matanuska Electric Association, Municipality of Anchorage d/b/a Municipal Light & Power, Homer Electric Association, and Golden Valley Electric Association.

At EIA's initiative, EIA briefed FERC staff on the proposed EIA-930 data collection on (August 14, 2012).

After each meeting, attendees were urged to contact EIA if they had questions or comments.

On March 6, 2013, the first Federal Register Notice (FRN) was published announcing the 60-day comment period. Simultaneously, EIA published a webpage (http://www.eia.gov/survey/changes/electricity/) devoted to the triennial clearance of the electric and photovoltaic equipment surveys, with links to the FRN and to the forms and their instructions. All primary survey contacts and the individuals on the stakeholders list were notified via email that the FRN had been published and were given the link to the webpage (about 5,400 emails).

EIA received comments from 44 organizations and individuals in response to the 60-day FRN. The comments and EIA's response are summarized in Appendices A-1 and A-2. The comments were posted to EIA's clearance webpage, and another email was sent to the survey respondents and stakeholders providing a link to the comments.

Following the receipt of comments EIA had additional discussions with representatives of APPA, EEI, and NRECA concerning the proposed EIA-930 survey. In addition, on September 10, 2013, EIA briefed the members of NERC's Operating Reliability Subcommittee on the EIA-930 survey (via teleconference).

When the 30-day FRN is released EIA will notify all stakeholders and respondents via email. The email will provide a link to the FRN, the updated versions of the proposed forms and instructions, and this supporting statement.

A.9 Payments or Gifts to Respondents

Respondents to this proposed information collection will not receive any payments or gifts from EIA to participate in this information collection.

A.10 Provisions for Protection of Information

Several data elements are protected from public disclosure in identifiable form on EIA's electric power and renewable electricity surveys. Table 4, below, lists those data elements by form that are protected.

Each element in Table 4 will be protected and not disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the Department of Energy (DOE) regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. Only one survey, Form EIA-63B, protects all reported information from public release in identifiable form. Additionally, the information reported in Schedule 2, PARTS B and D, and Schedule 3 for power marketers on Form EIA-826 will be protected and not disclosed for 9 months after the end of the reporting year. After 9 months, this information will be considered non-sensitive and may be publicly released in identifiable form.

Table 4. Data Elements Protected from Public Release in Identifiable Form

EIA Form Number	Data Element
63B	• **CHANGE**: All information associated with the "Survey Contact," the "Supervisor of Contact Person for Survey," and the "Parent Company Contact" on Schedule 1. • All other collected data elements are protected.
411	• **CHANGE**: All information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on Schedule 1. • Schedule 4, Bulk Transmission Facility Power Flow Cases. • Schedule 5, Bulk Electric Transmission System Maps.
826	• **CHANGE:** All information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on Schedule 1. • The information reported on Schedule 2, PARTS B and D, and Schedule 3 for power marketers (This information will be protected and not disclosed for 9 months after the end of the of the reporting year. After 9 months from the end of the reporting year this information is considered non-sensitive and may be publicly released in identifiable form.)
860	• **CHANGE:** All information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on Schedule 1. • Information reported for the data element "Tested Heat Rate" on Schedule 3, PART B, GENERATOR INFORMATION – EXISTING GENERATORS. • • **NEW DATA ELEMENT:** All data reported on Parts A and B of Schedule 5, GENERATOR COST INFORMATION.
860M	**CHANGE:** All information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on Schedule 1.
861 and 861S	**CHANGE:** All information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on Schedule 1.
923	• **CHANGE:** All information associated with the "Survey Contact" and the "Supervisor of Contact Person for Survey" on Schedule 1. • The "Total Delivered Cost" of fuel received at nonutility power plants and "Commodity Cost" information for all plants in Schedule 2. • "Previous Month's Ending Stocks" and "Stocks at End of Reporting Period" information reported on Schedule 4.
930	**NEW SURVEY:** All information associated with the "Survey Contact," the "Supervisor of Contact Person for Survey," and access instructions shown in Schedule 1 for EIA to automate downloading these data.

The Federal Energy Administration Act also requires EIA to provide company-specific data to other Federal agencies when requested for official use. The information reported on these forms may also be made available, upon request, to another component of DOE; to any Committee of Congress; the Government Accountability Office; or other federal agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order. The information may be used for non-statistical purposes such as administrative, regulatory, law enforcement, or adjudicatory purposes.

With the exception of power plant construction costs reported on Form EIA-860, and all data reported on the Form EIA-63B, disclosure limitation procedures are not applied to the aggregate statistical data published from this information collection. Thus, some statistics may be based on data from fewer than three respondents, or may be dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to estimate the information reported by a respondent.

A.11 Justification for Sensitive Questions

This proposed information collection does not include any questions of a sensitive nature.

A.12 Estimate of Respondent Burden Hours and Cost

The overall annual burden for this package is estimated to be 141,145 burden hours (see Table 5). The burden estimate includes time for follow-up on survey responses to clarify any questions and correct or edit information reported by respondents.

The burden has increased from the previous clearance (December 2012) from 122,667 total burden hours to 141,145 hours. This increase is due to the transfer of a survey to this OMB Control Number, the development of a new form, frame growth due to industry expansion, and other program changes.

The cost to the respondents is estimated to be $9,643,026 (141,145 burden hours times $68.32 per hour). An average cost per hour of $68.32 is used because that is the estimated average loaded (salary plus benefits) cost for an EIA employee in 2013. EIA assumes that the survey respondent workforce completing surveys for the EIA is comparable with the EIA workforce.

[Continued on Next Page]

Table 5. Estimated Burden

EIA Form Number	Title	Number of Respondents per Year	Number of Reports Annually	Total Number of Responses	Burden Hours Per Response	Annual Burden Hours
EIA-63B	Annual Photovoltaic Cell/Module Shipments Report	177	1	177	5.00	885
EIA-411	Coordinated Bulk Power Supply Program Report	9	1	9	122.00	1,098
EIA-826	Monthly Electric Utility Sales and Revenue Report with State Distributions	533	12	6,396	1.37	8,763
EIA-860	Annual Electric Generator Report	3,347	1	3,347	9.29*	31,094
	Filers with Environmental Information	*1,042*	*1*	*1,042*	*13.25*	*13,806.5*
	All Other Filers	*2,305*	*1*	*2,305*	*7.50*	*17,287.5*
EIA-860M	Monthly Update to the Annual Electric Generator Report	412	5.6	2,307	0.30	692
EIA-861	Annual Electric Power Industry Report	2,199	1	2,199	10.97	24,123
EIA-861S	Annual Electric Power Industry Report (Short Form)	1,115	1	1,115	.75**	836
EIA-923	Power Plant Operations Report	6,459	N/A	31,279	2.28*	71,313
	Monthly	*2,108*	*12*	*25,296*	*1.99*	*50,339*
	Annual	*4,351*	*1*	*4,351*	*3.17*	*13,793*
	Supplemental	*1,632****	*1*	*1,632*	*4.40*	*7,181*
EIA-930	Hourly and Daily Balancing Authority Operations Report	77	365	28,105	0.08	2,342
Total		**14,328**		**74,934**		**141,145**

*Weighted Average Burden Per Form
**The 861S respondents will not be required to fill out the full Form EIA-861 until 2017 and every fifth year, thereafter.
***Of the 2,108 monthly respondents to the Form EIA-923, 1,632 file a monthly supplement with information on the performance of environmental control equipment. This requirement does not increase the number of total respondents, but it does increase the number of responses to the survey.
Totals may not equal sum of components due to independent rounding.

A.13 Annual Reporting and Record Keeping Cost

The only additional capital and start-up costs will be for the proposed Form EIA-930. EIA estimates that the cost to the respondents will be $228,729. This calculation is based on an estimate of the start-up

cost involving eight person days for each of the 77 respondents to modify their information technology systems to produce data for the survey. This cost is amortized over five years at five percent interest annually over the life of the data clearance cycle. For the existing surveys in this data collection effort, EIA anticipates no additional respondent costs for generating, maintaining, and providing the information.

A.14 Annual Cost to the Federal Government

The annual cost of operating these surveys is estimated at $5.4 million, including contractor costs and federal staff time. This cost estimate includes personnel, maintenance, collection, and processing by EIA. The proposed Form EIA-930 will have minimal start-up costs for EIA. The data requested will be captured from a website and EIA already has technology in place to accomplish this.

A.15 Changes in Burden

The currently approved burden for the surveys under OMB approval No. 1905-0129 is 122,667 hours. The new proposed burden is 141,145 hours, representing an increase of 18,479 hours (15%). Most of the total change is driven by corrections to the burden estimates for the EIA-860/860M generating capacity survey and the EIA-411 bulk power system survey, and an increase to the EIA-923 power plant operations survey caused by an increase in the number of power plants in the United States. Other factors are the transfer of Form EIA-63B from OMB approval No. 1905-0196 to No. 1905-0129 and the creation of the new Form EIA-930. For additional information see Table 6, below.

[Continued on Next Page]

Table 6. Change in Annual Burden Hours

EIA Form Number	Old Burden (hours)	New Burden (hours)	Change (hours)	Reason for Change
EIA-63B	N/A	885	+885	**Program Changes**: Reflects the move of this survey to the OMB 1905-0129 control number.
EIA-411	13,760	1,098	-12,662	**Adjustments**: Prior estimates attributed to EIA the time members spent meeting data obligations to NERC. Prior estimates also overstated the number of relevant members by about 300 entities. **Program Changes**: increase in burden due to changes to form.
EIA-826	9,216	8,763	-453	**Adjustments**: Growth in number of respondents due to industry developments. **Program Changes**: reduction in burden due to changes to the form.
EIA-860	18,404	31,094	+12,690	**Adjustments**: Reflects a correction of an error that resulted in substantial understatement of number of respondents in 2011 and 2013 clearance estimates. Also reflects growth in number of power plants.
EIA-860M	205	692	+488	**Adjustments**: Reflects correction of an error in the prior calculation of total burden, and a change in the estimated number of months per year a respondent will file.
EIA-861	19,800	24,123	+4,323	**Program Changes**: increase in burden due to additional questions.
EIA-861S	825	836	+11	**Program Changes**: increase in burden due to additional questions.
EIA-923	60,457	71,313	+10,856	**Adjustments**: growth in number of respondents due to industry developments.
EIA-930	**0**	2,342	+2,342	**Program Change**: new proposed survey.
Total net change	**122,667**	**141,145**	**+18,479**	
Note: "Adjustments" includes both re-estimates and factors outside the control of the government (such as growth in the number of respondents). Totals may not equal sum of components due to independent rounding.				

The burden hours for the electric power and renewable electricity surveys are less for those who file electronically due to ease and accuracy of data entry compared to paper forms and the integrated data editing process. Recent Internet submission rates are shown below in Table 7.

[Continued on Next Page]

Table 7. Recent Experience with Submissions Using Internet Data Collection (IDC) Systems

Frequency of Survey	Survey	Number of Responses	Number of Responses Using IDC	IDC Percentage	Responses Not Using IDC (See Note 3.)	Non-IDC Percentage
Annual Surveys: Collection of 2011 Data	EIA-63B	171	165	96.5%	6	3.5%
	EIA-411	9	See Note 2.			
	EIA-860	3154	3001	95.1%	153	4.9%
	EIA-861	3287	3142	95.6%	145	4.4%
	EIA-861S	See Note 1.				
	EIA-923	5593	5468	97.8%	125	2.2%
Monthly Surveys: Collection for June 2013 (April Data)	EIA-826	533	519	97.4%	14	2.6%
	EIA-860M	188	177	94.1%	11	5.9%
	EIA-923	2108	2032	96.4%	75	3.6%

Notes: (1) The EIA-861S did not exist in 2012 when 2011 data were collected. The survey was introduced in 2013 for the collection of 2012 data. At the end of June 2013, with data collection still underway, the EIA-861S had received data from 1108 respondents of whom 1055 had submitted data using the IDC (95%).

(2) The EIA-411 data are consolidated and edited by NERC headquarters and provided to EIA as a data file.

(3) Non-IDC responses are received by fax, mail, email, and phone calls.

A.16 Collection, Tabulation, and Publication Plans

The data collected on the surveys in this package are released in EIA reports and are available on the EIA website. Detailed information on the data elements collected on each form and their associated collection, tabulation, and publication time schedules are contained in Tables 8 and 9, respectively. Table shells for the new data to be collected on the proposed EIA-930 survey are presented in Appendix A-2.

[Continued on Next Page]

Table 8. Proposed Data Collection

Form	Elements Collected	Level of Detail
EIA-63B	Photovoltaic cells/modules manufacture, inventories, revenues, imports, exports, and shipments.	Manufacturing, revenues, and inventories by company; Imports and exports by country; domestic shipments by state, market sector, and end use.
EIA-411	Data related to the reliability of the electric power system, such as actual and projected peak demand; existing and future generating capacity; transmission line outage statistics.	NERC Region and Subregion
EIA-826	Revenue, electricity sales, and related data (e.g., number of customers, number of advanced meters) by sector.	Company/State
EIA-860	Existing and planned capacity and retirements and related data, such as characteristics of environmental control equipment.	Boiler/Generator/Plant/Company
EIA-860M	Generator plant additions, retirements, or other capacity changes in next 12 months	Generator/Plant/Company
EIA-861 and EIA-861S	Energy sources, disposition, peak load, sales, revenue, number of customers, demand-side management information, net metering, advanced metering, and distribution system reliability.	Company/State/Balancing Authority
EIA-923 Monthly	Electric power generation, fuel consumption, fossil fuel stocks, delivered fossil fuel cost, combustion byproducts, operational cooling water data, and operational data for environmental control equipment.	Boiler/Generator/Prime Mover/Plant
EIA-923 Annual	Electric power generation, fuel consumption, fossil fuel stocks, delivered fossil fuel cost, combustion byproducts, operational cooling water data, and operational data for NO_x, SO_2, and particulate matter control equipment.	Boiler/Generator/Prime Mover/Plant
EIA-923 Supple-mental	Operational environmental information (The other data elements on the EIA-923 mentioned above will have already been submitted on the monthly survey.)	Boiler/Generator/Prime Mover/Plant
EIA-930	Hourly net generation, day-ahead demand forecast, demand (net energy for load) and actual interchange with each directly connected Balancing Authority.	Balancing Authority

[Continued on Next Page]

Table 9. Collection, Tabulation, and Publication Plans

Survey Form	Data Collection Frequency	Survey Opening Date	Response Due Date	Date Final Data are Ready	Publications*	Publication and Data File Release Date
EIA-63B	Annual	First business day in January	February 28	July 31	Solar Photovoltaic Cell/Module Shipments Report	September
EIA-411	Annual	First business day in January	July 15	November	EPA	November
					AER	December
EIA-826	Monthly	1st of each month	30 calendar days after the close of the reporting month	August 31	EPM and EMU	Approx. the 22nd of each month
					MER	Approx. the 26th of each month
					AER	December
EIA-860	Annual	First business day in January	Last business day of February	August 31	EPM	Approx. the 22nd of each month
					EPA	November
					AER	December
EIA-860M	Monthly	27th of each month	15 calendar days after the close of the reporting month	August 31	EPM	Approx. the 22nd of each month
					EPA	November
					AER	December
EIA-861 and EIA-861S	Annual	First business day in January	April 30	August 31	EPA	November
					ESR	November
					AER	December
					SEP	December
EIA-923	Monthly and Annual	1st of each month; First business day in January for Annual Respondents	30 days after end of reporting month; March 30 for Annual Respondents	August 31 (monthly and annual data)	EPM	Approx. the 26th of each month
					EPA	November
					MER	Approx. the 26th of each month
					AER	December
					EMU	Approx. the 26th of each month
EIA-930	Daily/ Hourly	N/A	N/A	N/A	EIA Website	Daily

*EPM (Electric Power Monthly); EPA (Electric Power Annual); EMU (Electricity Monthly Update), MER (Monthly Energy Review), AER (Annual Energy Review), QCR (Quarterly Coal Report), ACR (Annual Coal Report), NGM (Natural Gas Monthly), NGA (Natural Gas Annual), ESR (Electric Sales and Revenue Report), SEP (State Electricity Profiles). Note: All EIA publications can be accessed at http://www.eia.gov/reports/.

Non-sensitive data are provided to the public at the reporting level of detail in the form of downloadable electronic files. The files are on the EIA website at the following location: http://www.eia.gov/electricity/data/detail-data.html.

In addition, EIA recently created for its website an Electricity Data Browser (EDB) to show generation, consumption, fossil fuel receipts, stockpiles, retail sales, and electricity prices. The data appear on an interactive web page and are updated each month. This EDB includes all the datasets collected and published in EIA's Electric Power Monthly and allows users to perform dynamic charting of data sets as well as map the data by state. The EDB includes a series of reports that appear in the Electric Power Monthly and allows readers to drill down to plant level statistics, where available. All images and datasets are available for download. The EDB is available at: http://www.eia.gov/electricity/data/browser/.

Users can also link to the data series in EIA's Application Programming Interface (API). An API makes EIA data machine-readable and more accessible to users. Links to analytic reports such as the Electricity Monthly Update, projections such as the Short-Term Energy Outlook and Annual Energy Outlook, and pertinent Today in Energy articles are also available from the page. For more information see the EIA website at: http://www.eia.gov/beta/api/.

A.17 OMB Number and Expiration Date

The OMB number (1905-0129) and expiration date are displayed on each form.

A.18 Certification Statement

This submission meets all certification requirements of the "Certification for Paperwork Reduction Act Submissions," for OMB Form 83-I.

Appendix A-1: Comments Received in Response to the Open Federal Register Notice (Federal Register/Vol. 78, No. 44) Published March 6, 2013

On March 6, 2013, a request for comments from interested persons was solicited in the Federal Register, proposing a three year extension and/or changes to the following existing forms:

- Form EIA-63B, "Annual Photovoltaic Cell/Module Shipments Report"
- Form EIA-411, "Coordinated Bulk Power Supply Program Report"
- Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions"
- Form EIA-860, "Annual Electric Generator Report"
- Form EIA-860M, "Monthly Update to the Annual Electric Generator Report"
- Form EIA-861, "Annual Electric Power Industry Report"
- Form EIA-861S, "Annual Electric Power Industry Report (Short Form)"
- Form EIA-923, "Power Plant Operations Report"

The FRN also solicited comments on the creation of a new data collection instrument, Form EIA-930, "Hourly and Daily Balancing Authority Operations Report."

Comments were received from the 44 entities and individuals listed below. The comments and EIA's response are summarized in this appendix.

Commenter	Abbreviation Used in Text (if any)
Alaska Electric Light and Power	AEL&P
American Public Power Association	APPA
Balancing Authority of Northern California	BANC
Big Sky Dairy Digester	
Bonneville Power Administration	BPA
Bureau of Economic Analysis	BEA
Center for Resource Solutions	
Chugach Electric Assn Inc	Chugach
Commonwealth Edison Company in Illinois	
Consortium for Energy Efficiency	CEE
DOE Office of Electricity Delivery and Energy Reliability	DOE/OE
DOE Wind and Water Power Technologies Office	DOE/WWPT

Commenter	Abbreviation Used in Text (if any)
Edison Electric Institute	EEI or Edison
Electricity Consumers Resource Council	
FERC Commissioner Cheryl A. LaFleur	
FirstEnergy Corp	
FirstEnergy Utilities Business Services	
Golden Valley Electric Association	GVEA
Homer Electric Association, Inc	HEA
Industry trade groups' letter submitted by the National Rural Electric Cooperative Association	NRECA/Trade Groups
Integrys Business Support LLC	
ISO/RTO Council	IRC
Large Public Power Council Energy Efficiency Working Group	
Lawrence Berkeley National Laboratory	LBNL
Louisville Gas & Electric Co and Kentucky Utilities	LG&E/KU
Midcontinent Independent System Operator, Inc.	MISO
Municipality of Anchorage d/b/a Municipal Light and Power	ML&P
National Mining Association	NMA
National Renewable Energy Laboratory	NREL
National Rural Electric Cooperative Association	NRECA
North American Electric Reliability Corp.	NERC
Northwest Balancing Authorities	NW BAs
Omaha Public Power District	OPPD
PowerSouth Energy Cooperative	PowerSouth
Renewable Energy Markets Association	

Commenter	Abbreviation Used in Text (if any)
Ronald L. Capone & Associates, LLC	Capone
Sean Meyn, Ph.D., of the University of Florida	Meyn
Southwest Power Pool Members	SPP Members
Tennessee Valley Authority	TVA
Robert E. Burns, Center for Energy, Sustainability, & the Environment, The Ohio State University	Burns/OSU
Ventyx	
Western Area Power Administration	WAPA
Wood Mackenzie	
Working Group on Distribution Reliability	

In addition to the commenters listed immediately above, this section of the supporting statement often refers to the Regional Transmission Organizations that operate the power grid in about half of the continental United States (RTOs, also referred to as Independent System Operators or ISOs). There are seven of these entities, listed below:

- ISO New England (ISONE)
- New York ISO (NYISO)
- PJM Interconnection (PJM)
- Midcontinent ISO (MISO)
- Southwest Power Pool (SPP)
- Electric Reliability Council of Texas (ERCOT)
- California ISO (CAISO)

A map showing the boundaries of the RTOs is available at: http://www.ferc.gov/industries/electric/indus-act/rto.asp.

A. Form EIA-411, Coordinated Bulk Power Supply Program Report

1. The Bureau of Economic Analysis supports the new Schedule 9 (Smart Grid data) and may use the smart grid technology and outage data collection to develop improved industry statistics.

Comment From: Bureau of Economic Analysis, U.S. Department of Commerce

EIA Response: No response necessary.

2. Align data collection voltage categories with the definition of the Bulk Electric System (BES).

Comment From: Edison Electric Institute (EEI), National Rural Electric Cooperative Association (NRECA), North American Electric Reliability Corporation (NERC)

EIA Response: EIA agrees with the comment. The form and instructions have been modified to clearly state that reporting is required only for the BES transmission elements, in all voltage categories, once the BES definition is finalized by NERC.

3. The transmission voltage categories of 100-120 KV, 121-150 KV, and 151-199 kV should be combined to a single 100-199 kV category.

Comment From: NERC

EIA Response: EIA agrees with the comment and has incorporated the change in the survey form.

4. Collecting sub-200 kV data will add substantial burden.

Comment From: Edison Electric Institute

EIA Response: This issue was discussed extensively by EIA with NERC and the NERC Transmission Availability Data System working group. The key point, with which NERC agrees, is that the sub-200 kV data are needed to provide a full picture of forced outages for the Bulk Electric System, which is the system under federal reliability jurisdiction per the Energy Policy Act of 2005. While there is increased burden, the increase is compensated for by removing from the data collection non-automatic (i.e., manually engaged) planned transmission outages. Also, as noted above, language has been added in Schedules 6 and 7 to inform respondents that reporting is required only for elements that are covered by the BES definition.

5. Keep the Schedule 8 data on generating unit reliability, to be extracted from the Generating Availability Data System, confidential.

Comment From: Edison Electric Institute

EIA Response: Data will only be collected in aggregate form that protects data confidentiality. EIA is not requesting any confidential, individually identifiable unit or plant data.

6. NERC made a number of comments intended to ensure that the terms and definitions in the Form EIA-411 and the terminology used by NERC in its data collection for its annual Long-Term Reliability Assessment (LTRA) and Transmission Availability Data System (TADS) are consistent.

Comment From: NERC

EIA Response: After consultations with NERC all the necessary changes have been made to ensure consistency between EIA's form and instructions and the LTRA and TADS data collections.

7. The EIA-411 data collection should not duplicate the data utilities already provide to NERC.

Comment From: Edison Electric Institute

EIA Response: There is no duplication of effort or content because NERC collects the data for EIA and itself.

8. DOE's Office of Electricity and Energy Reliability suggests reorganization of Schedule 9, Part A (dealing with Smart Grid technology), and dropping of some data elements.

Comment From: DOE/OE

EIA Response: These suggestions, which will improve the flow of the schedule and reduce reporting burden while retaining key information, have been incorporated into the form.

B. Form EIA-826, Monthly Electric Utility Sales and Revenue Report with State Distributions

1. Several organizations disagreed with the proposed elimination of Schedule 3, Part A, Green Pricing from the form.

Comment From: Center for Resource Solutions, National Renewable Energy Laboratory, Renewable Energy Markets Association, and Ventyx.

EIA Response: EIA has to carefully weigh the costs and benefits of the data elements on the form in assessing respondent burden and the use of the agency's resources. Currently, only about 1% of end-use customers are involved in Green Pricing programs. EIA believes that there are other more important issues in the industry for which EIA should collect data. To accomplish this EIA from time to time must shed lower priority items in order to collect the most important data elements without a significant increase in respondent burden.

2. Commonwealth Edison stated that it cannot report net metering data for Schedule 3, Part B by customer class or by technology.

Comment From: Commonwealth Edison

EIA Response: When information is unavailable the respondent should note this in the comments section of the survey.

3. Establish MWh and dollar materiality thresholds for reporting net metering data on Schedule 3, Part B.

Comment From: EEI

EIA Response: There is already a frame-based materiality threshold on Form EIA-826 in that small utilities generally do not report on the survey. While the entire frame of utilities and other sellers of retail power are about 3300 entities, fewer than 600 larger companies must report on the EIA-826 monthly survey.

C. Form EIA-860, Annual Electric Generator Report

1. Ventyx "support[s] EIA's decision to add detailed items like but not limited to Ownership Type, Balancing Authority, Generator Financing and Construction Costs, Operational Flexibility, Black Start Capability, Uprates and De-rates, Nameplate power factor, minimum load and minimum time to reach full load and Ash impoundment….[W]e appreciate the fact that the EIA plans to add details like wind turbine manufacturer, designed wind speed, hub height and photovoltaic panel material etc.

Comment From: Ventyx

EIA Response: No response necessary

2. The American Public Power Association "supports most of the proposed changes to form EIA-860. These changes help to consolidate the form, dropping questions that are either not germane or provide little value in assessing the electric industry."

Comment From: APPA

EIA Response: No response necessary

3. Ventyx disagrees with EIA's proposal to reduce the time horizon for collecting information on most types of planned power plants from 10 years to five years.

Comment From: Ventyx

EIA Response: The power industry has increasingly shifted toward generating technologies with short planning, permitting, and construction time frames, including wind, solar, and natural gas

systems. By limiting the time horizon for collecting planned units to five years EIA expects to capture most of the planned units that are likely to actually be built while excluding many speculative projects. It will also allow EIA to free resources to help identify the many small renewable projects, especially solar, that are being planned and built. EIA will continue to collect data for a 10 year horizon for coal and nuclear plants because these technologies have long planning and construction time frames.

4. New questions on ash impoundments in Schedule 2 are duplicative of data collected by EPA in 2010.

Comment From: EEI

EIA Response: The data collection by EPA in 2010 was a one-time collection and does not provide updated, current data, as will be accomplished by the annual collection on the EIA-860.

5. A member of the Federal Energy Regulatory Commission supports the collection of power plant construction costs and additional information on environmental controls.

Comment From: FERC Commissioner Cheryl A. LaFleur

EIA Response: No response necessary.

6. Do not collect nitrogen oxides (NOx) data on Schedule 6, Part D as this will create additional burden.

Comment From: EEI

EIA Response: The information requested for NOx controls is limited and should be readily available from company records (e.g., the actual or planned in-service date for a control unit; the operating status of a control unit). EIA has historically collected as public information the same data for other pollution controls such as flue gas desulfurization and particulate collectors. This is valuable information for analysts and policy makers evaluating the costs and effectiveness of environmental control rules.

7. New questions on NOx and mercury control systems cost information in Schedule 6, Parts D and E, contain proprietary data and should also be protected to the extent that it satisfies the criteria for exemption from public disclosure under the Freedom of Information Act.

Comment From: Electricity Consumers Resource Council

EIA Response: EIA has historically collected and treated as public information the cost of flue gas desulfurization and particulate pollution control technologies, as well as cooling system costs. EIA

proposes to treat nitrogen oxide and mercury control system costs in the same way since this is valuable information for analysts and policy makers evaluating the costs and effectiveness of environmental control rules.

8. Ask more detailed questions on Schedule 3, Part B (Generator Information – Existing Generators), Part C (Generator Information – Proposed Generators) and Schedule 2, Power Plant data.

Comment From: NERC

EIA Response:

- **i)** EIA agrees with NERC's suggestion to add a question to Schedule 3, Part B regarding "Maximum Net Winter Output Achievable (MW) When Running on Fuel Oil" to go along with a similar question regarding Maximum Summer Output.
- **ii)** EIA agrees with NERC's suggestion to add a "0" hour category to questions 42a and 42b regarding the time required to switch from natural gas to oil and oil to natural gas.
- **iii)** NERC suggested adding in Schedule 3, Part C, a question on oil inventory denominated in hours of burn, date of last fuel testing, and time (hours) it takes for unit to switch from one fuel. EIA does not accept this suggestion. EIA already captures data on oil inventory and contracts on the Form EIA-923. EIA also already collects fuel-switching data on the form EIA-860.
- **iv)** NERC suggested collecting the number of interstate natural gas pipelines that connect to a power plant. EIA agrees that this information would be useful from a reliability evaluation standpoint. In addition, data are needed within EIA on pipeline connections for the purpose of analyzing the disposition of natural gas supplies in the United States. EIA has accordingly added a question to collect the number of all natural gas pipelines that connect to a power plant on Schedule 3, Part B.
- **v)** NERC suggested adding in Schedule 2 a question requesting the NERC Assessment Area for each power plant. EIA believes that plant owners and operators are often not aware of what NERC Assessment Area they belong to. Moreover, EIA is proposing to collect Balancing Authority data as part of this clearance (the data would be pre-populated by EIA and validated by respondents) that could be used to determine NERC Assessment Areas.

9. EEI had several comments regarding the generator performance and characteristics including materiality thresholds for solar units, uprates and derates, and startup times.

Comment From: Edison Electric Institute

EIA Response:

i) EEI suggested that a materiality threshold should be added for solar units. EIA did not adopt this suggestion as there is already a materiality threshold of 1 MW for all plant types. Since many solar units are relatively small, higher size thresholds would exclude many of the new solar units from being included in the data collection.

ii) EEI suggested that collecting information on derates and uprates in Schedule 3, Part B, should be restricted to nuclear units. EIA did not accept this comment. Hydroelectric units also implement significant uprates and wind farm owners may begin to uprate installations with new turbines.

iii) EEI suggested that EIA should not ask for the time to bring a generator to full load because the question is difficult to answer and because many utilities do not track the information for all units. EIA did not accept this comment. This information should be available to plant operators in the normal course of business. EIA will clarify that these data should not be reported by solar and wind generators.

10. The Department of Energy's Office of Wind and Water Power Technologies (DOE/WWPT) had a number of comments regarding the collection of data from hydroelectric generating plants.

Comment From: DOE/WWPT

EIA Response:

i) DOE/WWPT suggested that EIA add questions on specific hydropower turbine type, turbine manufacturer, generator manufacturer, hydraulic head and flow parameters (design, maximum and minimum), whether units are equipped with Automatic Generation Control, and detail on aerating equipment. DOE/WWPT also commented that EIA add questions on the number of starts in a year, the amount of generation during hours in which the plant is synchronized to the grid, the number of forced and unforced outages at hydroelectric facilities, the storage characteristics of hydropower facilities, and the environmental mitigation measures at hydropower generators (e.g. fish passage strategies, water quality issues, water release rule curves, and others.). EIA has not accepted these suggestions, which in effect would constitute a new survey of hydroelectric plants and entail a significant increase in burden on the agency and respondents. EIA is aiming to focus its resources on the increased collection of solar and wind data, sectors that are currently experiencing much greater growth than hydroelectric power. EIA can further evaluate these questions for the next (2017) clearance.

ii) DOE/WWPT suggested that that EIA collect the construction cost information for hydroelectric projects in the same manner proposed for nuclear and coal stations; i.e., collect annually the estimated cost to completion. EIA did not accept this suggestion because the vast majority of new hydroelectric projects are small units (often retrofits to existing dams).

iii) DOE/WWPT suggested modifying the new questions on the time it takes a generating unit to reach full load to include the following categories: "0 - 20 minutes" to "0 - 1 minute," "1 min. - 5 minutes," and "5 min. - 20 minutes." In response EIA changed the time intervals to "0 to 10 minutes" and "10 minutes to one hour" to be consistent with operating practices.

11. Add enhancements to the EIA's EIA-860 Internet Data Collection (IDC) system to make uploading of data possible and improve workflow navigation.

Comment From: Edison Electric Institute

EIA Response: EIA is currently running a pilot program with Southern Company for direct data upload using XML files. It is EIA's intention to make this option widely available as soon as possible. EIA is also looking at ways to improve IDC workflow navigation.

12. EIA should expand the "municipal" entity type to "municipal including political subdivision" since some political subdivisions would be uncertain which box to check.

Comment From: American Public Power Association

EIA Response: EIA will address this comment by reconciling the entity type categories requested on the EIA-861 and EIA-860 surveys. This will bring into the EIA-860 survey a "political subdivision" type.

13. Why does EIA need to know whether a plant whose primary purpose is other than electricity generation for sale is net metered?

Comment From: Edison Electric Institute

EIA Response: Net metering, when it is applied to 1 MW and larger facilities, is normally used by industrial or commercial facilities whose primary purpose is something other than the production of electricity for sale in the open market. A net metering data collection that failed to address this part of the power industry would miss an important segment of the market.

14. Several organizations commented that EIA should not add new questions on projected construction costs in Schedule 5 as these questions will increase burden.

Comment From: National Rural Electric Cooperative Association, Edison Electric Institute, and American Public Power Association

EIA Response: Public and private projections of future generation largely pivot on the estimated costs of building power plants. Nonetheless, there is currently no source of data on the actual costs of building power plants. The burden associated with these questions should be limited. With the

exception of coal and nuclear units the data are requested only after a project is completed; the data should therefore be available from routine business records. In the case of large coal and nuclear units -- which will be required to file an annual estimate of the cost to completion – the developers of these expensive and complex projects keep continuously updated cost estimates from which the summary data requested by EIA can be easily extracted.

D. Form EIA-861, Annual Electric Power Industry Report

1. National Rural Electric Cooperative Association (NRECA) supported the proposal to collect data by Balancing Authority.

Comment From: NRECA

EIA Response: No response necessary.

2. A member of the Federal Energy Regulatory Commission supports EIA's plan to collect additional information on grid reliability.

Comment From: FERC Commissioner Cheryl A. LaFleur

EIA Response: No response necessary.

3. Lawrence Berkeley National Laboratory "strongly support[s] EIA's proposal to collect data on distribution reliability…for several reasons: 1. It is in the public interest; 2. EIA is uniquely situated to collect this information in a meaningful way on a national basis; 3. LBNL past research supports the need for and importance of this data collection." Burns/OSU also supports this data collection, stating that "This information is currently not collected in any consistent manner that allows comparative analysis."

Comment From: Lawrence Berkeley National Laboratory and Burns/OSU

EIA Response: No response necessary.

4. DOE's Office of Electricity Delivery and Energy Reliability (DOE/OE) stated that "We greatly support the efforts of the Energy Information Administration (EIA) to gather this additional information, as data on the extent of deployment of advanced metering infrastructure, dynamic pricing programs, automation within distribution systems, and synchrophasor technology is not readily available from primary sources. In addition, this office is responsible for submitting a biennial report to Congress, the Smart Grid Systems Report, which is meant to provide the status of smart grid deployment nationwide. The information you are proposing to collect will significantly aid our efforts in this

endeavor and help us better determine the appropriate investments and policies concerning modernization of the electric grid."

Comment From: DOE/OE

EIA Response: No response necessary.

5. EIA received several comments on its proposal, in Schedule 6, Part D, to separate AMI (Advance Metering Infrastructure) meters into two subgroups—AMI meters operated as AMR (Advance Meter Reading) meters and AMI meters operated as AMI meters.

Comment From: Commonwealth Edison, Edison Electric Institute, and DOE/OE

EIA Response: To clarify this question EIA has modified it to specifically request the number of AMI Meters with Home Area Network (HAN) gateway enabled, and the number of customers that can access their daily usage through a web portal or other electronic means.

6. The reporting threshold for Net Metered customers on Schedule 2, Part D should remain 2 MW.

Comment From: Edison Electric Institute

EIA Response: The object of the schedule is to capture the information in the respondent's routine business records on all distributed and dispersed generation. Distributed generation is a growing part of the power industry (especially residential solar) and is expected to drive significant changes in the traditional utility model. EIA decided to remove the 2 MW limit based on increasing interest in net metered installations and growth in that area. Note that many states have limits on the size of net metered installations as well as the overall capacity allowed for all net metering relative to system demand. EIA believes that this change will only affect burden in the few states that allow larger net metering installations, while providing a comprehensive view of growth in net metering.

7. Define the terms distributed and dispersed generation.

Comment From: EEI

EIA Response: Definitions of these terms are provided in the instructions. EIA added a page number reference in the form.

8. The new Schedule 6, Parts E and F on distribution system reliability are confusing, burdensome, and costly to fill out.

Comment From: National Rural Electric Cooperative Association and American Public Power Association

EIA Response: EIA has responded to these comments by substantially reducing the amount of information requested, improving the clarity of the questions, and has modified the survey to make it clear that utilities that do not compute the requested statistics do not have to respond to the questions. The remaining questions will fill an important need. Distribution system reliability is the aspect of reliability that has the most impact on power consumers, but there is no central repository of distribution system reliability statistics. It is scattered in state public utility commission records if it exists at all. This data collection will for the first time provide power consumers and market analysts the ability to efficiently access distribution system reliability data, and to make assessments of how reliability varies by geography, by company, and over time.

9. The new Schedule 6, Parts E and F data on distribution system reliability data cannot be readily broken down by end-use sector.

Comment From: First Energy Corporation

EIA Response: EIA revised the schedules to remove the requirement of end-use sector breakdown for these schedules.

10. The information requested on dynamic pricing programs in Schedule 6, Part C, needs to be modified.

Comment From: National Rural Electric Cooperative Association and DOE/OE

EIA Response: NRECA commented that EIA should only ask if dynamic pricing programs exist, without asking for information on types of dynamic pricing programs in place, while DOE/OE suggested that EIA ask for additional information on dynamic pricing programs. EIA believes that if a respondent has a dynamic pricing program in place with an associated tariff, asking the respondent to check which types of programs are offered is not excessively burdensome. However, DOE/OE's request for additional, more detailed information on each program type would result in an excessive increase in burden. EIA believes it has found the correct balance in value of information collected versus burden on this issue; therefore EIA is not changing the form or instructions for this area of data collection.

11. Schedule 6, Part B, Demand Response Programs needs to be revised and the term "grid-interactive water heater" needs to be defined.

Comment From: Large Public Power Council

EIA Response: EIA revised the form and instructions to incorporate some but not all of the requested changes. EIA has also received from DOE's Office of Energy Efficiency and Renewable Energy (DOE/EERE) a definition for "grid-interactive water heaters" that will be incorporated in the instructions: "A grid interactive water heater is an electric storage water heater that is capable of being controlled remotely by a third party (usually an electricity service provider) that provides the third party the ability to control the operation of the unit by storing thermal energy during off-peak times." However, we have been informed by DOE/EERE that this definition will not be finalized until January 2014. EIA will modify the instructions to comport to the final definition once it is available assuming the change does not increase burden.

12. Estimates of future performance should not be included in Schedule 6, Part A, Energy Efficiency Programs.

Comment From: National Rural Electric Cooperative Association

EIA Response: EIA's revised method for this Part should require less work, not more, for respondents than the previous method. The changes that EIA has designed for this section (on incremental life-cycle savings and costs) is the direct result of input from many professionals in this area and these changes also are in conformity with the Northeast Energy Efficiency Partnerships (NEEP) proposed standards.

13. The questions on Schedule 6, Part A, Energy Efficiency Programs are in need of clarification and revision.

Comment From: American Public Power Association and Large Public Power Council.

EIA Response: EIA reviewed these recommendations and corrections or changes were made where appropriate.

14. It is not always possible for Commonwealth Energy to separate its energy efficiency data into the end-use sectors requested from EIA.

Comment From: Commonwealth Edison

EIA Response: When information is unavailable the respondent should note this in the comments section of the survey.

15. The data reported on Schedule 6, Part A would not be comparable across utilities because of varying methodologies to determine life cycle savings and costs.

Comment From: American Public Power Association

EIA Response: The changes proposed by EIA are intended to eliminate inconsistencies in reporting that have historically been an issue with the energy efficiency data reported on the EIA-861. EIA agrees that precisely consistent data cannot be collected, in part because industry has not settled on standard methodologies or definitions. However, energy efficiency is an important initiative by many states and the federal government, and has had a substantial impact on energy growth in the United States. This is therefore very important data to collect and the proposed changes should reduce the problem of inconsistent reporting.

16. EIA should provide more clarification on certain definitions of terms in Schedule 6, Part A.

Comment From: American Public Power Association and Commonwealth Edison

EIA Response: As discussed above, in consultation with industry and academic experts EIA has incorporated into the survey the terms and definitions that it believes are the closest current approximation of an industry consensus. Should the industry standardize the definition of cost components EIA can propose revisions to the survey.

17. The treatment of "start-up costs" is unclear and additional guidance is needed on the reporting responsibilities of wholesale utilities and joint action agencies, etc., that conduct demand-side management activities on behalf of distribution utilities in Schedule 6, Part A.

Comment From: Large Public Power Council

EIA Response: EIA added an example to the instructions. EIA also clarified instructions to recommend that the respondent report these data on their form so they can receive credit for their programs.

18. Explain new concepts, such as "net" versus "gross" energy savings, and how these concepts will improve data quality for Schedule 6, Part A; additionally the accompanying spreadsheet will require respondents to collect historical data to estimate a reliable lifespan for efficiency programs.

Comment From: Edison Electric Institute

EIA Response: EIA began in 2010 a series of consultations with experts and stakeholders on how the collection of energy efficiency and demand response data could be improved. This effort began because EIA was not satisfied with quality and consistency of the data. The consultation process continued as part of the preparation for the current clearance, and the proposed revisions to the data collection reflects this research. For example, EIA has collected in the past "net" energy savings, but we have determined that there is no consistent definition of this term in the energy efficiency community. For this reason we are proposing to collect "adjusted gross savings," a term

that is more commonly understood and consistently defined. EIA is proposing to collect "incremental" which means "new for this year" and therefore does not require historical data. In addition, EIA research has found that most professionals prefer this approach and use "deemed" savings in their estimates which also do not require the tracking of historical data. Also, most previous comments on the older version of the form (which required the tracking of historical data), stated that the historical information was unavailable. This was a main consideration for changes to the form.

19. Do not eliminate the Schedule on Green Pricing.

Comment From: Center for Resource Solutions, NREL, REMA, and Ventyx

EIA Response: EIA has to carefully weigh the costs and benefits of the data elements on the form in assessing respondent burden and the use of the agency's resources. Currently, only about 1% of end-use customers are involved in Green Pricing programs. EIA must from time to time shed lower priority items in order to collect the most important data elements without a significant increase in respondent burden.

20. APPA states that it "supports EIA's decision to eliminate the Green Pricing Schedule as, at this time, not enough entities are engaged in green pricing to justify the burden of collecting this information. EIA should revisit this question when this form is being considered for re-approval in three years' time."

Comment From: APPA

EIA Response: EIA agrees with this comment.

21. Allow filers to update the pre-populated Sch. 8 Distribution Information by County field when necessary.

Comment From: Edison Electric Institute

EIA Response: Respondents currently have this ability.

22. EIA should clarify the definition of transportation "customer" in its forms, particularly form EIA-861. Most utilities use billable meters as their baseline, but it would be helpful if EIA provided further guidance on how to report transportation customers and whether or not to use the number of meters or the number of customers when reporting this figure.

Comment From: American Public Power Association

EIA Response: EIA added more detail to the customer descriptions and instructions.

23. EIA needs to dedicate sufficient resources to ensure effective quality assurance, data verification, and more timely access to the results.

Comment From: Consortium for Energy Efficiency

EIA Response: The proposed data collection is intended to be within the scope of EIA's capabilities for editing/validating the data, ensuring high data quality, and producing data in a timely manner.

24. Make separate Utility IDs for utilities that operate in multiple states under the same name.

Comment From: Consortium for Energy Efficiency

EIA Response: The EIA databases, including those available to the public, have unique Utility ID/state combinations that can be easily sorted and searched. This is much more efficient than creating a unique ID number for every utility/state combination.

E. Form EIA-861S, Annual Electric Power Industry Report (Short Form)

1. National Rural Electric Cooperative Association supported the proposal to collect data by Balancing Authority.

Comment From: NRECA

EIA Response: No response necessary.

1. NRECA suggested that EIA collect additional information on power sales, revenues, and customer counts on the Form EIA-861S.

Comment From: NRECA

EIA Response: The EIA-861S is intended to collect a minimum set of data from the smallest utility companies. This reduces the burden on small entities and also EIA's workload. (There are 1100 small utilities covered by the EIA-861S, accounting for only about one percent of national power sales. These small entities also tend to have the most difficulty completing survey forms and consume a disproportionate amount of EIA quality assurance resources.) Adding more questions to the survey form would tend to defeat the purpose of having this short form.

2. The questions on Schedules 6C (Dynamic Pricing) and 6D (Advanced Metering) should not be similar in scope/detail as the comparable Schedules on the longer form EIA-861. These include questions about the number of customers by end-use sector served by dynamic pricing and advanced metering and other detailed questions about dynamic pricing programs.

Comment From: American Public Power Association

EIA Response: EIA has simplified or eliminated some of the detailed questions on dynamic pricing and advanced metering but still requests that respondents provide the number of dynamic-pricing customers and advanced meters by end-use sector.

3. EIA could further achieve reductions in its data collection burden by eliminating Green Pricing, Net Metering, Demand-Side Management, Advanced Metering, Distributed and Dispersed Generation questions on the form.

Comment From: National Rural Electric Cooperative Association

EIA Response: Green Pricing and Distributed and Dispersed Generation have never been included on this survey. The Schedules for Demand-Side Management, Advanced Metering, and Net Metering request minimal information.

F. Form EIA-923, Power Plant Operations Report

1. The American Public Power Association was generally supportive of the proposed changes to the survey, stating that "Most of the changes to form EIA-923 are fairly minor, yet these changes are generally helpful and eliminate information that is no longer relevant, while also consolidating the form and simplifying it for respondents. The question about electricity provided under tolling agreements provides a useful layer of information that more fully accounts for how entities procure electricity. The modified Schedule 8C streamlines elements that had previously been captured in Schedules 8C, 8E, and 8F. This appears to be a much more user-friendly format that should moderately reduce the reporting burden."

Comment From: APPA

EIA Response: No response necessary

2. Specify that environmental information collected on Schedule 8 and fuel quality data on Schedule 2 will only be reported if available.

Comment From: Edison Electric Institute

EIA Response: When information is unavailable the respondent should note this in the comments section of the survey.

3. If a respondent uses the Blended Coal Products (CBL) code and an estimate for the percent Bituminous (BIT) and percent Sub-bituminous (SUB), is the respondent still required to accurately report the inventory values for BIT and SUB separately or should they report on inventory level by using the CBL code on Schedule 4?

Comment From: First Energy Corp.

EIA Response: The preferred reporting for coal inventory data (as well as coal consumption data) is by individual coal rank (BIT, SUB, LIG [Lignite]). However, in the event that inventories and/or consumption are tracked only as blended coal, CBL will be an optional choice on Schedules 3 and 4.

4. EIA should enhance the use of validity checks in the case of form EIA-923 (Schedule 2, Cost and Quality) to more accurately match the supplying mine to the fuel supplier name.

Comment From: National Mining Association

EIA Response: EIA agrees with this suggestion and EIA will develop a validation check between fuel suppliers and associated supplying coal mines as part of EIA's quality assurance process.

5. Do not add the question on the coal terminal-plant link in Schedule 6 because the information is not accurately available.

Comment From: Edison Electric Institute

EIA Response: Currently most utilities utilizing fuel distribution terminals are providing to the Form EIA-923 staff a list of plants served and the fuel volumes distributed to plants. Adding this information to the Form EIA-923 will standardize the collection.

6. Allow a Form 923 data upload via XML or other easily up-loadable format.

Comment From: Edison Electric Institute

EIA Response: EIA is currently beginning a pilot program with Southern Company for direct data upload. It is EIA's intention to make this option widely available as soon as possible.

7. EIA should ask for the gross generation number before the net generation number in Schedule 3A.

Comment From: First Energy Corp.

EIA Response: EIA agrees and has placed gross generation before net generation.

8. There were several questions regarding Schedule 7, Annual Retail Sales, Revenue and Number of Customers. First Energy Corporation questioned the availability of these data; NRECA expressed their support for the collection of retail sales made by power plants; and EEI stated that EIA should clarify that retail sales by power plants that normally sell power at wholesale prices applies only to non-utilities.

Comment From: First Energy Corp., National Rural Electric Cooperative Association, and EEI

EIA Response: Retail sales data will be collected only from nonutility power plants having direct retail sales to an end use customer(s). This data has been collected on the Form EIA-861 for many years and is being moved to the Form EIA-923 to improve efficiency. No new questions are asked, nor have the required respondents changed. The data on this schedule is required ONLY from plants that report a positive value for retail sales on Schedule 6, Item 8 (Sales to End Use Customers, Retail Sales).

9. Data on tolling agreements requested in Schedule 6, Nonutility Electricity, is already available in the FERC Electric Quarterly Reports (EQR).

Comment From: Edison Electric Institute

EIA Comment: Collection of the volume of power delivered under tolling agreements by each individual nonutility power plant provides a more complete understanding of the energy balance data (source and disposition by nonutility power plants). FERC EQR data are not reported at the plant level and may not be reported by all non-utilities with tolling agreement arrangements.

10. Explain the need for the tolling agreement data in Schedule 6, Nonutility Electricity.

Comment From: Edison Electric Institute

EIA Response: The growth in tolling agreements (from less than a dozen in 2007 to over 200 in 2012) merits breaking out the power delivered under tolling agreements from all "other outgoing electricity" reported on Schedule 6 by the nonutility industry.

11. EIA should clarify several questions in Schedule 8, Part D, Monthly Cooling System Information.

Comment From: Integrys Business Support LLC

EIA Response: Schedule 8D has been modified to use units of gallons per minute.

G. Form EIA-930, Balancing Authority Operations Report

1. The Need and Business Case for the EIA-930 Data

Comments:

LBNL said that the planned data collection is in the public interest and will provide insights into power system operations and planning. DOE/OE supported collection and public dissemination of hourly interchange data.[19] BPA agreed that the EIA-930 data are germane to EIA's mission. Wood Mackenzie states that hourly demand data are essential for meaningful power system analyses.

Other commenters questioned the need for the data and whether collection of hourly data was consistent with EIA's mission. These comments are summarized below:

- *Need for the Data*: Commenters said that EIA did not adequately explain how the near real-time collection of these data is consistent with EIA's core mission or function, what problem EIA is trying to solve, or how the collection is necessary to public understanding (APPA, SPP members, BPA, IRC, BANC, NW BAs, KG&E/KU, and NRECA/Trade Groups).
    - For example, BPA stated that "sound policymaking, efficient markets, and public understanding of energy" do not require near real-time data. AEL&P and ML&P said that the collection has no practical utility.
    - NRECA/Trade Groups note that no one has asked for the data.
    - Other commenters stated that EIA had failed to articulate a business case for the proposed collection and needed to better define the intended use for the data and the resulting benefits (IRC, NW BAs, NRECA/Trade Groups, HEA, GVEA, and Chugach).
- *Need for Immediate Reporting of Data*: Commenters said EIA had failed to explain why the public needs to have access to the data in such a short timeframe (APPA, IRC, LG&E/KU, WAPA, and Edison); in contrast, commenters noted that NERC and the Federal Energy Regulatory Commission (FERC) have valid reasons for access to real-time data (APPA, SPP members, NRECA, and NRECA/Trade Groups).
- *Burden*: The IRC said that EIA should not impose reporting requirements on top of current requirements by NERC, FERC and the Public Utility Commission of Texas. Chugach said that information about the actual historical operation of the system in Alaska is available to utilities on the Railbelt system. They do not see the value gained from Form EIA-930 reports.

---

[19] DOE/OE's comments, provided by Assistant Secretary Patricia Hoffman, stated that "We strongly support EIA's proposal to collect hourly information on actual transmission system utilization. We further encourage EIA to make the majority of these data publicly available, possibly on a different schedule than is proposed in the current EIA-930 instructions. Public reporting of these data would improve the effectiveness of our work in several areas, including the triennial National Electric Transmission Congestion Studies, Interconnection-wide Transmission Planning, and DOE-funded smart grid technology grants. We believe public reporting of these data can be accomplished without exposure of Critical Energy Infrastructure Information (CEII)."

- *Balancing Authority (BA) System Control*: SPP Members say that requesting near real-time data intrudes on control of the electric power system. The IRC is concerned that the collection might be intended to circumvent BA control and undermine their authority. IRC said "… market participants in each region already have access to the data necessary for their activities in each market and for their interactions with the relevant Balancing Authorities."
- *Misinterpretation*: NRECA/Trade Groups are concerned that real-time information could be misconstrued in public policy debates if data from a single point in time are mistakenly represented as a trend. TVA said that the preliminary nature of the data prevents real comparisons between BAs.
- *Clearinghouse Function*: LBNL said there is value in EIA serving as a public clearinghouse for the collection of data. The IRC said there is not.

EIA Response

The Need for and Value of Hourly Balancing Authority Operating Data. Recent developments in the power industry have heightened the importance of near real-time system operations.

- Utility operations have been complicated in recent years with the addition of significant variable energy resource (VER) capacity, primarily wind and solar. The output of wind turbines and solar facilities varies significantly throughout the day. This situation puts additional stress on power systems which were designed to rely primarily on fossil and nuclear generating units with easily controllable output. This situation puts a premium on granular data on the operation of the power system.
- There is growing use of distributed generation and storage. For example, while much of the new solar capacity is being installed in large "utility scale" central power stations, many megawatts of solar capacity are being installed as distributed rooftop systems. The positive outlook for natural gas supply and price may lead to increased use of industrial and commercial cogeneration. Electric vehicles will create new demand and storage points across the power grid, and developers are beginning to combine large-scale battery storage with solar and wind plants. While these developments have many positive implications they also complicate system operations.
- A wide variety of programs and devices, collectively known as demand response, have the potential to enhance electric system efficiency and help maintain balance by influencing consumer demand. The major participants in these programs are currently large industrial and commercial customers but there is public policy interest in expanding the reach of these programs to residential consumers.[20]

  The implementation of these demand response programs is closely related to federal and state policies that have encouraged the installation of "smart meters." A primary aim of smart meter programs is to communicate to residential customers the current state of electricity prices and

[20] For example, see the studies and other background material at http://www.ferc.gov/industries/electric/indus-act/demand-response/dr-potential.asp.

the supply/demand balance, in the hope that consumers will then adjust their individual behavior by making consumption decisions that are also good for the system as a whole.

Important public policies and business opportunities rely on a better understanding of the nature of electric system operations, specifically the balancing of demand, supply and interchange (flow of electricity). This understanding is grounded in readily available, near real-time operating data. The RTOs and BPA apparently agree since they are currently posting much of the required data on their public websites voluntarily.

These data will assist consumers, policymakers, market participants and entrepreneurs to develop and adopt innovative demand response and variable renewable generation policies, applications and devices. EIA believes that innovation and the development of public policies enabling demand response and variable renewable generation will be enhanced by greater understanding of electric industry real-time operations. We believe that this understanding will also prove valuable with the advent of electric vehicles, distributed generation and various forms of electricity storage.

The need for the EIA-930 data collection is rooted in the physical nature and institutional organization of the electric power system. Due to the lack of sufficient cost-effective electricity storage, electricity must be produced at the moment it is demanded. The industry relies on certain entities to ensure the moment-to-moment balancing of supply and demand. Electric utilities that perform the balancing function are called Balancing Authorities. Balancing authorities are the basic operating unit in the electric industry. They are responsible for managing a system that by design reacts immediately to changes in demand.[21]

The least common denominator operating time interval in the industry is one hour. Balancing Authority operating procedures, such as scheduling supply, demand and interchange (the flow of electricity between Balancing Authorities) use the hour as the primary planning, operating, and reporting period. Operational planning by BAs, Regional Reliability Coordinators,[22] and other entities rely on this hourly data, as do models and analyses performed by third party analysts. As noted above, Wood Mackenzie states that hourly demand data are essential for power system analyses. Consequently, the Form EIA-930 uses the operating hour as its data measurement interval.

EIA believes that immediacy of experience contributes significantly to understanding and developing intuition. Where practical, experience is the preferred approach to learning. Next-day posting of these data allows interested parties to assess yesterday's hourly operating data with yesterday's weather and systems conditions fresh in their minds. IRC, NW BAs and BPA indicate that daily posting of the collection data is acceptable.

Same-day, next-hour posting of demand data significantly enhances understanding of system operations. The almost immediate availability allows the data to be assessed in the context of current weather and system events which drive changes in demand.

[21] A small number of BAs consist of single power plants. This type of BA is discussed further below.

[22] Reliability Coordinators oversee the reliability of the grid in broad regions. They coordinate emergency operations among the operating entities within their region and across the regional boundaries. Reliability Coordinators have the authority, plans, and agreements in place to immediately direct entities (including Balancing Authorities) within their zone of responsibility to re-dispatch generation, reconfigure transmission, or reduce load to mitigate critical conditions to return the system to a reliable state.

Despite their comments to the contrary, the fact that all the RTOs and BPA post near real-time demand on their websites indicates that they believe there is value in making this information immediately available to the public. Five of the seven RTOs highlight the most recent hour's system demand value on their home page.

As further discussed below, commenters argued the "as-is" data that the EIA-930 will collect is subject to revision. While this is true, the EIA-930 data are high quality information. The EIA-930 data are part of the real time information used by system operators to manage their systems and preserve the reliability of the grid. Data that is of sufficient quality for system operations and reliability decision-making is also adequate for informational purposes.

Role of EIA: EIA's statutory role is to help inform and educate policymakers and the public about energy. The EIA-930 is intended to provide data from across the industry to raise awareness of electric real-time operations and the variability of demand. The reporting requirement is consistent with EIA's statutory authority to collect energy information. The DOE Organization Act reads:

> The Administrator shall be responsible for carrying out a central, comprehensive, and unified energy data and information program which will collect, evaluate, assemble, analyze, and disseminate data and information which is relevant to energy resource reserves, energy production, demand, and technology, and related economic and statistical information, or which is relevant to the adequacy of energy resources to meet demands in the near and longer term future for the Nation's economic and social needs.
>
> Information collected by the Energy Information Administration shall be cataloged and, upon request, any such information shall be promptly made available to the public in a form and manner easily adaptable for public use, except that this subsection shall not require disclosure of matters exempted from mandatory disclosure… (US Code, Title 42, Chapter 84, Subchapter II, Section 7135)

Form EIA-930 is a part of an energy information program and is itself a central, comprehensive, and unified information collection of electricity demand and related information. It is relevant to the adequacy of energy resources to meet demand in the near term. Form EIA-930 will provide a means for prompt public availability in a form and manner easily adaptable to public use. This data collection is subject to restrictions relating to trade secrets and commercial, privileged or confidential information. Comments about public release of this data are addressed below.

Edison said that "the volume and frequency of information EIA was proposing to collect is unprecedented in the EIA survey forms." While aspects of the proposed EIA-930 data collection are unique the near real time collection of data is not new to EIA. EIA operates two surveys – the EIA-878, "Motor Gasoline Price Survey" and EIA-888, "On-Highway Diesel Fuel Price Survey" – that collect data each Monday morning and publish the data the same afternoon. It is true that the EIA-930 is new for electricity surveys, but this is not relevant to whether the data should be collected and published by EIA.

EIA adjusts its data collections to match changing industry conditions and policy issues. This is essential to carrying out an on-going energy data and information program. Data items are often added and dropped. For example, EIA began an "unprecedented" collection of data on smart meters in 2007, because changes in the power industry made these data of interest. On the other hand, in this clearance we are proposing to stop collecting data on green pricing programs because these programs have not gained significant market share.

EIA does not agree with BPA that "sound policymaking, efficient markets, and public understanding of energy" do not require near real-time data. If this were so, BPA would not be publicly posting 5-minute demand, net generation and actual interchange in near real-time.

Response to the Other Comments on the Need for Form EIA-930

- NRECA/Trade Groups claim that no one is asking for this data. EIA takes a broader view of its statutory responsibilities than to collect only data that is asked for. EIA first identified a need for hourly operating data in 2004.[23]

- The IRC and LBNL disagree about EIA serving as a clearinghouse for the collection data. Since we are leaving the decision to make the postings available to the public to the respondent's discretion, EIA will likely need to post the data for all of it to be publicly available. EIA posting also makes the data available in one place.[24]
- Several commenters noted valid reasons for NERC and FERC to have access to real-time data. NERC and FERC's reasons for access to this data are irrelevant to EIA's appropriate use of its statutory authority as long as there is no duplicative data collection by federal agencies.
- We do not understand the concern of SPP members and IRC that informational postings would undermine their member BA's operational control and undermine their authority. Electricity customers "participate" in the market because they contribute to system-wide demand. Most customers are beyond the control of system operators and do not have ready access to data necessary to make informed consumption decisions that support the system. We believe that consumers should be able to know the cumulative results of their individual consumption decisions.
- EIA does not agree with NRECA/Trade Groups position that data should not be collected if it might be misconstrued. On this basis, EIA should not be collecting any energy data.
- Alaskan utilities question the value of the reporting requirement as applied to them. Unlike the lower 48 states, Alaska and Hawaii lack a wide-spread, interconnected power grid. Due to the lack of integration and the small size of their electric utilities, they may use less formal and automated means of operating their systems. We agree that utilities in Alaska and Hawaii should be excluded from the EIA-930 survey.

---

[23] DOE/EIA-0639, *Electricity Transmission in a Restructured Industry, Data Needs for Public Policy Analysis*, 2004, pp. 14, 26 (Table 7), 53, and 108. The report is available at http://www.eia.gov/electricity/archive/0639.pdf.

[24] See Ibid, p. 14, where EIA observed "ISOs [i.e., RTOs] collect and release a variety of performance data as part of their normal operations. ISO high-frequency (hourly) data generally refer to markets—prices, generation, imports, and exports. Although each ISO generates vast amounts of virtually real-time operating, scheduling, planning, and bidding data, the ways in which the data are defined, collected, formatted, and made available to the public are not consistent among the reporting organizations. The data do not necessarily cover matching time frames, nor are the data of the same scope in most cases. ISOs also produce a variety of reports on their market oversight, planning processes, and planned investments. Similar information exists outside of the ISOs but is rarely made public. The data available to describe transmission and related markets in most of the United States are limited to the information collected by the Federal Government."

2. The Burden Estimate for the EIA-930 Survey

Comments

Several BAs and trade associations argue that EIA's burden estimate is grossly understated and unrealistic, and that responding to the EIA-930 survey would be extremely burdensome. They specifically note as an unrecognized cost the need to have operating personnel manually verify the data (PowerSouth, APPA, SPP members, BANC, NRECA, and NRECA/Trade Groups). In contrast, TVA said that if EIA wants raw or as-is data, the workload after start-up would not be significant.

Other comments included:

- *The Burden Estimate is Understated*
  - EIA's burden estimate understated the cost of start-up, including automation and cyber-security (TVA, IRC, LG&E/KU, NW BAs, and Edison).
  - APPA and BPA questioned the estimated number of responses and the burden hours.
  - Northwest BAs said that because neither the web address nor the standard format proposed is specified, they cannot assess EIA's burden estimate.
  - BPA said that EIA's burden estimate was incorrect because it assumed automation which is not possible using web forms.
- *Alaskan Utilities*: Four Alaskan utilities described the burden of the proposed collection on their small utilities as excessive (AEL&P, ML&P, HEA, and GVEA).
- *Alternatives with Lower Burden*: Several commenters suggested EIA could reduce burden by working with Regional Reliability Coordinators and NERC to get the data in lieu of collecting the information from the BAs (SPP members, BPA, IRC, and LG&E/KU).

EIA Response

EIA's burden estimate is predicated on the following facts:

1) Balancing Authorities currently generate the requested data as a necessary business function, and

2) These data are currently generated, stored, and transmitted electronically and automatically.

No commenter indicated otherwise, except for one small Alaskan utility. We also note that other comments from industry (see duplicative data collection, below) state that BA data are currently being generated, stored, and transmitted electronically to NERC, FERC, Regional Reliability Coordinators, and the public. We agree that this is the case, and this existing situation is the basis for EIA's burden estimates.

Several commenters confirmed that the requested data are produced by their energy management or SCADA (supervisory control and data acquisition) systems (GVEA, ML&P, and Chugach). These types of systems are standard in the electric power industry and are necessary for the operation of a BA.

In respect to moving information from internal data systems to the Internet, under FERC Order 890, Transmitting Utilities are required to post on their Open Access Same-time Information System (OASIS) websites the prior-day's peak hour demand and the associated demand forecast values. Most Balancing Authorities are also Transmitting Utilities. Therefore, the Balancing Authorities subject to Order 890 have in place the means for posting operating data from their SCADA system to the Internet.

One commenter that is not subject to Order 890 is Chugach. Nonetheless, Chugach, a Balancing Authority, was the only commenter that provided a quantified estimate of burden. It "estimates that setting up a system for automatic disclosures for Chugach's system would require 5 to 10 days of initial work, several hours of follow-up monitoring/system revisions during each of the initial months and then approximately 40 hours per year of monitoring, maintenance and reporting." The burden estimate we provided in the Federal Register Notice on an average per respondent basis comes to about 9 days for the initial year and 30 hours on an on-going basis. Recognizing that the Chugach estimate is a sample size of one and that burden will vary by respondent, the Chugach and EIA burden estimates are comparable.

Given the purpose of the information and its availability, we believe that our collection approach minimizes the burden on respondents. Collecting this information on a monthly or quarterly basis would require back-office staff to verify it and a process to store the data until release. The volume of the data posted under this collection is relatively small by today's business standards.

In respect to the other comments on burden:

- *EIA's burden estimate is understated because it assumed automation which is not possible using web forms*. EIA is not (and has never suggested) relying on web forms for the hourly and daily postings. This comment appears to reflect a misunderstanding of the survey instructions.
- *EIA's burden estimate cannot be evaluated because neither the web address nor the standard format proposed is specified*. Since respondents are required to post on their own website, we cannot provide a web address as part of the proposal. In respect to the standard format, it has been available for review for months and during the comment period. We posted the standard reporting format on the EIA website as part of the survey instructions in March 2013 (see page 3 of the form instructions).
- *The burden estimate does not take into account the time required to manually verify the data*. As discussed in detail elsewhere in this section, the survey is predicated on receiving "as-is" data generated in the normal course of business. No additional verification steps are necessary. As noted above, TVA stated that after startup the workload required to supply as-is data would not be burdensome.
- *It would be more efficient for EIA to collect the data from NERC or the Regional Reliability Coordinators. As discussed below in the section on* Duplicative Data Collection, *neither NERC nor the Reliability Coordinators have the data.*

- *EIA miscounted the number of responses and therefore underestimated the burden hours*. APPA is correct that we count both the 24 hourly postings and the daily posting for one day as one response. However, since our estimate of burden hours considered both the hourly and daily postings, the total burden estimate would be unaffected by counting the hourly and daily postings as separate responses.
- *The Alaskan utilities argue that their size and nature make them ill suited for providing the collection data and requiring them to do so would involve significant burden*. We agree with this comment. As discussed elsewhere in this section, we have removed the Alaskan and Hawaiian utilities from the frame for this survey.

In conclusion, we will retain the burden estimate for the Form EIA-930, except to adjust the estimate for the most recent count of Balancing Authorities. This most current information is included in Table 5, above.

3. Market Sensitive Data

Comments

A number of commenters said that the collection data contains market sensitive information and raises serious confidentiality concerns (SPP members, APPA, BANC, NW BAs, NRECA, and NRECA/Trade Groups). Specific comments include:

- *Vulnerability of Small Balancing Authorities*: Several commenters said that the public data requirements could harm small load-serving BAs (PowerSouth, APPA, BANC, and NRECA). Edison said that the data will reveal commercial details and harm the competitive footing of single and double load-serving utility BAs.
- *Exposure of Bidding Strategy*: BANC said that wholesale suppliers will use demand and supply data to predict prices and possible bidding behavior. NW BAs and Edison said that historical load and generation data would provide seasonal and annual historical trends that could be used in a commercially inappropriate manner.
- *Exposure of Competitive Position*: NW BAs said that the data could impact market prices. Edison and NW BAs said that any party could use the data to get a picture of a BA's proprietary short or long position. Edison, NW BAs and NRECA/Trade Groups said that parties may be able to discern when plants are not operating and may be able to derive generation dispatch costs. Edison said that interchange data may reveal the loss of supply and competitive suppliers could potentially exert market power in their pricing to the BA. Similarly, PowerSouth said that market participants will use deviations between actual and forecast demand to charge more.
- *Impact on Bilateral Trades*: NW BAs said that BAs within an RTO/ISO market engage in trading in a more anonymous manner than in non-RTO regions, such as the Pacific Northwest in which trades are typically bilateral.[25] Information considered sensitive for individual Balancing

[25] In brief, in RTOs the hourly price of power is determined by an optimization model in which supply and demand bids are evaluated together. The prices are further differentiated by zones or, in most RTOs, prices are determined at hundreds or thousands of nodes within the RTO. Participants in RTOs also have the option to make financial

Authorities operating in a bilateral market would not necessarily be considered sensitive for BAs operating in an RTO or ISO market. Unlike RTO clearing markets, revealing highly sensitive commercially advantageous information in a bilateral market allows the seller/buyer to benefit at the expense of another party. Further, NW BAs said requirements for certain RTO and/or ISOs to post near real-time data in many cases is based on regulatory or regional legislative requirements that may not reflect, or even have considered the commercial sensitivity of the data.

- *Other Data are Sufficient*: NW BAs said that the public daily posting of yesterday's peak-hour system demand and the associated demand forecast required under FERC Order 890 is sufficient to illustrate a Balancing Authority's demand variability and that additional reporting to EIA is unnecessary.

EIA Response:

- *Availability of Information*: Arguments that the EIA-930 will release uniquely business sensitive information do not take into account existing data sources available to market participants. Wholesale market participants can pay private services for much more detailed and timelier information about the operating status of generators and transmission lines than anything the EIA-930 will collect and publish. The firm IIR Energy provides daily updates of the operating status of most major generating units in the country (http://www.industrialinfo.com/iirenergy/index.jsp?pagerequest=powercast&sidebarrequest=none). Genscape (http://www.genscape.com/north-american-power-market-services) provides in real-time an estimate of the output of most of the market-relevant generating units in the United States. Genscape also monitors and reports to subscribers the loading of key transmission lines. Wholesale sellers do not need to infer a utility's supply position from hours or day-old operating data. They can know for sure with these two services. In addition, the firm Pattern Recognition Technologies (http://www.prt-inc.com/forecast/) provides hourly forecasts of RTO load, generation, and prices. Note that this is not intended to be a comprehensive list of private firms that provide system operations data, just those that EIA is aware of.

  NW BAs and Edison say that seasonal and annual historical trend data might be commercially sensitive. The FERC Form 714 has made this type of information publicly available at the Balancing Authority level for decades.

- *Competitive position of small BAs*: Some comments singled out small load-serving entity BAs as being competitively harmed by release of these data. These utilities are primarily wholesale buyers who presumably are not active market participants and have limited resources devoted to trading. For example PowerSouth, a small BA, suggests that wholesale sellers will recognize PowerSouth's need to purchase power by observing when their actual demand exceeds their

"bilateral" transactions directly with sellers or buyers. In non-RTO markets, almost all transactions are bilateral.

forecasted demand. PowerSouth says that wholesale sellers will raise their prices when PowerSouth has a short-term need for power.

EIA disagrees with these contentions. Actual demand in excess of day-ahead forecast is a poor indicator of a utility's need to purchase power. The day-ahead demand forecast is used by BAs to line up supply resources for the next day. However, expected weather conditions, an important driver of electric demand, often change. On the operating day, BAs rely on more up-to-date weather and demand forecasts to bring on-line or purchase additional supply, as needed. This will happen before the EIA-930 posting of actual demand occurs and the mismatch with the day-ahead forecast is apparent.

At a more fundamental level, for sellers to be able to raise market prices to small BAs (or any BA) there would have to be an insufficiently competitive wholesale market or suppliers would have to be colluding. Under federal law and regulation, when wholesale sellers cannot demonstrate the existence of a competitive market, FERC requires sellers to sell at cost-based rates.[26] Anti-competitive behavior including collusion is prohibited and is a matter for FERC enforcement.

As discussed above EIA does not believe there is a material risk of commercial harm from immediate release of data at the Balancing Authority level. Nonetheless, as an accommodation to industry, an exception will be made for the approximately 9 Balancing Authorities with only one or two interconnections with other BAs. The hourly demand data for these entities will be aggregated when first published and not made available to the public at the Balancing Authority level until two days after the reporting day. EIA will revisit the need for data aggregation when the EIA-930 is proposed for renewal.

- *BA Supply Position*: Some comments also suggest competitive harm from the next-day posting of operating data. NW BAs, Edison and the NRECA/Trade Groups say sellers could get a picture of a BA's proprietary short or long position and may be able to discern when plants are not operating.

  Short or long position refers to whether the utility needs to purchase power or has power to sell. One reason for being short is the unexpected loss of a generating unit. The EIA-930 data does not provide any direct indication of a utility's supply position. The reported net generation is the amount of power produced within the BA not how much could be produced. The fact that the BA is importing power does not mean that it does not have additional generating capacity; utilities often choose to not run a generating unit because it is more economical to buy the power from another source.

  FERC addressed similar concerns about next-day posting of daily peak demand and demand forecast data by Transmitting Utilities in its Order 890. In its Order FERC stated that: "The Commission is not convinced by the views of some commenters that load data has competitive implications. The Commission notes, as PJM pointed out in its comments, that many RTOs have

[26] 16 USC Chapter 12, Subchapter II and 18 CFR Part 35

an established practice of posting significant amounts of load data for participants' use, and this data posting has not raised competitive concerns."[27]

- *Price and Bidding Prediction*: BANC says that suppliers will be able to predict prices and possible bidding behavior, and NW BAs suggest sellers may be able to derive generation dispatch costs. To be able to predict prices and bidding behavior a market participant would need to know the supply positions of all participants in a market and their generation dispatch costs. The collection data does not include any price or cost data. In any case, estimates of generation dispatch costs are readily available from industry information vendors (e.g., Ventyx's Energy Velocity Suite; see http://www.ventyx.com/en/enterprise/business-operations/business-products/velocity-suite).
- *Bilateral versus RTO Markets*: Acknowledging that RTOs are already posting much of the collection data publicly, NW BAs distinguishes RTO markets from the bilateral markets the NW BAs operate in. As NW BAs notes, RTO market participants do not trade directly with each other; they bid into a central market and the resulting utility or generator/load bus level prices are publicly posted the day before the operating day. Adverse operating conditions are quickly reflected in real-time prices.

  In bilateral markets, parties contract directly or on web-based trading platforms, such as the InterContinental Exchange (ICE). As with RTO markets, participants in bilateral markets stand ready to assist utilities when adverse system conditions occur. Were utilities able to withhold basic operating data from market participants, it would reduce the market's ability to efficiently respond.

- *Other Issues*:
  - NW BAs indicate that RTOs post near real-time data on public websites because of legal mandates. However, we are not aware of and cannot identify regulatory or legislative requirements on RTOs to post in near real-time 5, 15 or 60 minute demand data on their public websites. RTOs post this information voluntarily.
  - NW BAs suggest that the daily peak-hour posting of actual and forecast demand under FERC Order 890 is sufficient to illustrate the variability of demand. This is incorrect. In addition to daily demand variability, demand varies significantly over a day. Because the current industry standard operating period is one hour and industry operations are driven by demand, understanding of industry operations requires data for each hour.

4. Security Issues/Critical Energy Infrastructure Information (CEII)

Comments:

[27] Order 890, *Preventing Undue Discrimination and Preference in Transmission Service*, February 16, 2007, p. 234, https://www.ferc.gov/whats-new/comm-meet/2009/111909/E-9.pdf.

Several parties expressed concerns that the public release of EIA-930 data would expose Critical Energy Infrastructure Information (CEII). The concern apparently relates to the combination of the content of the data and the timing of its release.

- APPA said that the form increases the likelihood of release of CEII information in certain situations or regions. BANC is greatly concerned about the public availability of CEII information.
- NRECA and NRECA/Trade Groups cited significant concern that the posting could contain CEII information that could potentially aid terrorists targeting high volume intertie lines. Edison said that there clearly may be risks in disclosing at a BA level the collection data, such as helping miscreants identify key locations and transmission paths.
- NW BAs and Edison said that transferring the data automatically from BA operating systems to the web raises cyber-security concerns.

On the other hand, DOE/OE said that actual flows between and among Balancing Authorities represent the aggregation of flows over many individual transmission assets. These aggregate flow values do not reveal potentially sensitive information about the utilization of specific physical transmission assets. Even so, they are willing to delay public release for months to mitigate these concerns.

Wood Mackenzie said that trade groups raising security concerns are simply trying to maintain a "stranglehold" on data to prevent independent third-parties from studying the electric system. They asserted that the data would be of little use in planning a terrorist attack.

EIA Response:

EIA has been unable to corroborate the security concerns raised by commenters. These concerns, in fact, appear to be at variance with everyday industry business practices.

As discussed in the main body of the report (page 24) Balancing Authorities have released voluminous public, real-time information on grid operations since the late 1990s, covering most of the United States. This coverage includes the largest and most congested power networks, such as the northeast and California. To the best EIA can determine the release of this operating information, and other operating data on grid conditions such as information on power plant outages, has never been identified as a security threat.[28]

The information to be collected by the EIA-930 will provide wider geographic coverage in a uniform format compared to current data, but will provide less detail and will be less timely than much of the data currently available. The EIA-930 data should therefore be less of a security concern than the data

[28] Since the development of the EIA-930 began in 2011 EIA has conducted several Internet searches and document reviews on grid security issues related to the release of operating data. Nothing was found identifying the on-going release of operating data by Balancing Authorities as a security risk. See: National Research Council, *Terrorism and the Electric Power Delivery System*, 2012, http://www.nap.edu/download.php?record_id=12050; National Research Council, *The Resilience of the Electric Power Delivery System in Response to Terrorism and Natural Disasters: Summary of a Workshop*, 2012, http://www.nap.edu/download.php?record_id=18535; Congressional Research Service, *Electric Utility Infrastructure Vulnerabilities: Transformers, Towers, and Terrorism*, April 2004, http://www.fas.org/sgp/crs/homesec/R42795.pdf.

already being released by Balancing Authorities, except that no security concerns appear to exist over current balancing Authority operating data releases.

In addition to the absence of any studies suggesting that the long-standing release of operating data by Balancing Authorities creates a security issue, EIA has not been able to identify any proposals made to reliability authorities, such as FERC or NERC, to restrict current data releases by Balancing Authorities.

The commenters' concerns seem focused on high-volume intertie lines and other key transmission facilities. The data that reveals the most about use of transmission is the actual interchange data. As DOE/OE points out, posted interchange data reflect flows over many facilities. There is not enough facility-specific information for terrorists to use. Further, the EIA-930 will not collect interchange data in real time. The data will be collected and released with a delay of one to two days.

It is true that in a few cases the posted interchange data will reveal, on a delayed basis, flow over individual transmission facilities. However, the EIA-930 data are not needed to identify these small, "single-connection" Balancing Authorities.[29] This can be accomplished with public data, including FERC Form 714 data. Other sources include maps, public aerial imagery, and direct observation.[30] In any event, to meet the commercial concerns of some parties, EIA will mask the interchange and other data reported for BAs that have only one or two links with the grid.

There is no cyber-security issue associated with the reporting method for the EIA-930. The Balancing Authorities that currently report real-time data for most of the United States have voluntarily established systems to post data on their public websites. They have presumably done so in adherence with the mandatory reliability standards for cyber-security. This experience demonstrates that cyber security is not a barrier to posting the EIA-930 data.

5. Public Availability of EIA-930 Data

Comments:

- DOE/OE said that its preparation of statutory congestion studies is hampered by lack of public data on the use of the transmission system.
- LBNL and DOE/OE strongly support public release of the Form EIA-930 data, but their research needs for the data do not require immediate release. DOE/OE recommended public release quarterly with a 1-2 month delay.
- BPA said that the risk of releasing the data outweighs the benefit to EIA.

EIA Response:

[29] A single connection Balancing Authority is typically a generation-only Balancing Authority that consists of one power plant. The plant has one transmission line ("tie-line") that connects it to a surrounding Balancing Authority and through that BA to the rest of the Bulk Electric System. The plant operator has established itself as a Balancing Authority for commercial, not operational reasons. A few single-connection BAs are small load serving entities.

[30] National Research Council, *Terrorism and the Electric Power Delivery System*, 2012, http://www.nap.edu/download.php?record_id=12050, pp. 32-33.

We agree with LBNL and DOE/OE that the Form EIA-930 data should be publicly released. We also agree that long-term research and analysis is an important use for the data. However, the congestion studies that DOE/OE is responsible for are only one use of the data. Above in the Need/Business Case section we discussed the reason for prompt reporting and public release of these data.

6. Data Availability and Quality

Comments

Commenters critical of the plans for the EIA-930 survey focused on the quality or accuracy of the same-day hourly demand data.

- *Data Accuracy*: Some commenters stated that the data were inaccurate and prone to errors and gaps (PowerSouth, SPP members, BPA, TVA, IRC, LG&E/KU, NW BAs, and Chugach).
- *Data Verification Requirements*: The commenters listed immediately above and others (APPA, NRECA/Trade Groups, and Edison) assumed that EIA was seeking verified data and stated that this was not practical for several reasons. These same commenters warned that verifying same-day demand data will at times distract system operators from their duties and threaten reliability.
- *Data Updates*: Edison mentioned the possibility that respondents would be caught in a cycle of updates. LG&E/KU asked whether updates would be required. Edison mentioned the NERC verification process for inadvertent interchange.[31] Several commenters stated that this process was completed by the end of the next business day (LG&E/KU, TVA, and IRC).
- *Uniformity of BA Data Practices*: KG&E/KU said that producing hourly demand values 10 minutes after the end of the hour was not a uniform practice and that many BAs only produced the data well into the next operating hour. GVEA explained how their process was unlikely to produce a demand value within 10 minutes. NW BAs and Edison explained that a BA's final demand calculations may include dynamic schedules which in the west only have to be validated within a hour and could be changed over a period of days later.
- *Other Issues*:
    - The IRC insisted that EIA include disclaimers about the poor quality of data with any posting of "as-is" data.
    - BPA said that the automation of the posting process using web forms was not possible.
    - AEL&P said that it has no interchange or demand forecast and does not automatically read hourly demand or net generation.

LBNL and the BANC confirmed that the EIA-930 data are tracked by BAs. TVA said that providing "raw" or "as-is" data would not increase the workload significantly.

[31] Inadvertent interchange refers to the difference between actual and scheduled transfers of electricity between Balancing Authorities. A mandatory reliability standard requires Balancing Authorities to reconcile their reporting of the volumes of electricity involved within one business day. For the applicable NERC standard see http://www.nerc.com/files/BAL-006-1.pdf.

EIA Response

As further elaborated below, the industry comments do suggest two technical modifications to EIA's initial proposal. However, the comments do not provide a basis for fundamental changes to the proposed data collection.

At the most basic level, we note that except for some Alaskan utilities, no commenter said that the data EIA is seeking are unavailable in the "as-is" form that EIA is requesting. This confirms our statement in the Federal Register Notice that "The surveyed data is typically produced in the normal course of business by Balancing Authority energy management systems."

We are aware of the preliminary nature of the EIA-930 data. We expect the proposed data to be posted in "as is" form using an automated system without any involvement by real-time system operators. Our proposal does not mention verification or the need to update posted data. As LG&E/KU said, we did "not address whether updates would be required…" This is because we did not propose an updating requirement and do not expect updates. BAs should not wait for actual values of dynamic schedules if it would delay posting of same-day hourly demand.

The requirement is that respondents post the best available "as-is" data at the time of posting. This is standard industry practice as reflected in the voluntary posting of near real-time operating data currently made by the seven regional transmission organizations (covering about half of the U.S. transmission system) and BPA.

As discussed above, the EIA-930 data are high quality information routinely used by system operators and Reliability Coordinators. Data that is of sufficient quality for system operations and reliability decision-making is also adequate for informational purposes.

The IRC advises EIA that "the provision of this data should be accompanied by appropriate disclaimers, noting it as being provided for informational purposes only." To accommodate industry concerns that the real-time data could be misinterpreted by the public, EIA will:

- Attach a disclaimer to all data products. The disclaimer will have language similar to the following: "EIA acknowledges that the information submitted by reporting entities is preliminary data. This preliminary data is made available "as-is" by EIA and neither EIA nor reporting entities are responsible for reliance on the data for any specific use."

- For a period of time after the survey is activated the data files and summary reports will not be publicly posted, but will be shared with industry and other experts (such as analysts at the national laboratories) for review and comment. EIA will incorporate these comments, as appropriate, into the format of its public data releases. After this data review period, expected to run about one or two months, is over, data will be reported by EIA to the public in near real time, essentially as rapidly as the data are captured by EIA. Summary statistics will be posted at longer intervals, such as weekly. Table shells for the data presentation are in Appendix A-2.

BPA said that data entry cannot be automated because of the use of web forms as the submission method. This comment misconstrues EIA's plans. We are relying on web forms only for the annual and

as-needed submission of respondent identification filing. The actual data submission is made via files posted on a website. This is the method BPA currently uses to post similar data, including:

- 5-minute total generation by resource type, posted every five minutes on an external website.
- 5-minute actual Balancing Authority load, posted every five minutes on an external website.
- 5-minute actual total interchange, posted every five minutes on an external website.

As noted above, industry comments suggest two technical adjustments to EIA's initial proposal. First, KG&E/KU said that not all BAs have same-day hourly demand available within 10 minutes after the end of the hour, but indicates that the data are available within the next operating hour. Therefore we amend the same-day hourly demand posting requirement to be that posting is required within 59 minutes after the end of the hour or as soon as it is available within the hour.

Second, four commenters referred to the FERC mandatory reliability standard that Balancing Authorities reconcile with their neighbors shared interchange for inadvertent interchange accounting by the end of the next business day. We also note DOE/OE's stated need for accurate interchange data. We are persuaded that taking advantage of a mandatory industry reconciliation process is worth delaying posting of actual interchange data by one day.

Therefore, we amend the posting requirement as follows. The posting of actual interchange values with each neighboring BA will now be for the day two days prior rather than one day prior. We add to the next-day file a requirement for hourly total net actual interchange for the prior day. (See Figures 1 and 2, above.)

7. Frequency of Reporting (Hourly and Daily Posting of EIA-930 Data)

Comment:

Many comments related to the frequency of the reporting required for the EIA-930. These comments questioned the practicality of hourly reporting and/or the utility of the data:

- *Longer Reporting Intervals*:
    - Commenters asked that the same-day, 10 minute after the hour reporting be eliminated (PowerSouth, SPP members, BPA, TVA, IRC, NW BAs, HEA, GVEA, and Chugach). They suggested that reporting be monthly, quarterly or annually.
    - Several comments said that less frequent reporting will increase the quality, utility and clarity of the collection data (BPA, TVA, and IRC). BPA said that with less frequent reporting BAs could more efficiently organize the data.
    - IRC and BPA said that daily obligations are at least arguably reasonable and NW BAs said that monthly or daily reporting of demand and forecasts are sufficient.
    - DOE/OE said that quarterly reporting of interchange data is sufficient for its needs.
- *Data Aggregation*:

- BPA and NW BAs said that receipt of near real-time data is not necessary or practical. BPA stated that "One bit of hourly information on demand, net generation, or net interchange is nearly useless for performing analysis or informing policymaking." And "Since the hourly data is interdependent for analytical uses" it makes sense to provide it on an aggregated basis.

- Edison encourages EIA to continue to use aggregation techniques to avoid disclosure of individual responses.

- *Linkage to Other Reporting Requirements*: BPA suggested having reporting timelines match the timing of reporting to Regional Reliability Coordinators. It states "Bonneville submits the requested data to the reliability coordinator through the following automated transfers and web page accessible forms:

  - 7-day load forecast, reported every eight hours to the reliability coordinator;
  - 3-day total interchange forecast, reported every eight hours to the reliability coordinator;
  - Annual total interchange with each interconnected Balancing Authority, reported on Form FERC-714;
  - 5-minute total generation by resource type, posted every five minutes on an external website;
  - 5-minute actual Balancing Authority load, posted every five minutes on an external website;
  - 5-minute actual total interchange, posted every five minutes on an external website."

- *Data Verification*: TVA and IRC said that actual interchange data that have been through the NERC inadvertent interchange accounting verification (end of the next business day) will be of higher quality. PowerSouth suggested monthly reporting by the 15th of the next month to allow for the current timing of checkout and true-up of interchange data with neighboring BAs.[32]

- *Alaskan Time Zone Issue*: ML&P pointed out that the 7 am ET next-day posting deadline means that Alaskan utilities would have to post at 3 am their local time. Chugach said that this would be extremely burdensome.

EIA Response:

Our rationale for the same-day, 59 minute after the hour reporting is provided above in the discussion of the Need/Business case for the survey. As stated, monthly, quarterly or annual reporting significantly diminishes the immediacy, and the analytical and educational value of the collection. Enhanced data quality does not outweigh the benefits of same-day and next-day reporting, except in the case of hourly actual interchange with each neighboring BA. As we said above, we are convinced that taking advantage

[32] We assume PowerSouth is referring to checkout and true-up of interchange billing not the mandatory next business day inadvertent interchange accounting reconciliation of interchange quantities. The Form EIA-930 does not collect billing information.

of a mandatory industry reconciliation process is worth delaying posting of detail actual interchange data by one day.

The information from BPA on its reporting of operating data to its Reliability Coordinator provides useful context. BPA's reporting of forecast demand, demand, net generation and total net actual interchange is more frequent than the Form EIA-930 reporting requirement. Only the reporting of interchange with each interconnected Balancing Authority is less frequent. We also note that IRC, BPA and NW BAs accept daily posting.

We do not agree with BPA that one bit of hourly operating data is useless because of a lack of context. The same-day hourly demand has the context of the day-ahead demand forecast for that hour and the preceding hourly values on that day. Historical data will be built up through the collection and will provide more immediate context than aggregated data posted on a delayed basis. BPA also suggests that less frequent reporting would allow respondents to better organize the data. We believe that the one year archive of daily postings will allow users to organize the data as best fits their needs.

The actual interchange data will be available for DOE/OE when it needs it.

Dropping the proposed reporting by Alaskan utilities, as discussed elsewhere in this section, eliminates the need to address the 3 am posting requirement.

8. Duplicative Data Collection

Comments

A number of commenters stated that the proposed data collection is not needed since the data are available from other sources. Specifically:

- Several Balancing Authorities and trade organizations said that BAs are already providing this type of data to Reliability Coordinators (BPA, IRC, NW BAs, WAPA, and Edison).
- SPP members and the IRC said that the proposed collection data are already available to federal agencies through NERC's situational awareness project.
- Edison and NW BAs suggested that the existing FERC requirement that Transmitting Utilities post forecasted and actual daily peak-hour demand on their OASIS websites should suffice.
- NW BAs said that "e-tag" data used for scheduling interchange is available to EIA.
- Edison suggested that FERC Form 714 annual data should meet EIA's needs.
- The IRC said that the data are available to the public already.

EIA Response

For the reasons discussed below none of these suggestions provide the comprehensive and timely data that EIA seeks to collect.

- Neither FERC, NERC, nor the Regional Reliability Coordinators have the EIA-930 data. These entities receive a confidential feed of selected operating data from certain "data providers," including but not limited to Balancing Authorities. This confidential feed is referred to as the "SAFNR V2" data (from "Situation Awareness for FERC, NERC, and the Regional Entities, Version 2"). EIA has confirmed that the SAFNR feed contains none of the EIA-930 data.[33]

  In a September 10, 2013 teleconference with the Regional Reliability Coordinators (meeting as members of the NERC Operating Reliability Subcommittee), EIA asked whether the Coordinators had the EIA-930 data and whether they would be interested in supplying the data to EIA. The Coordinators replied in the negative to both questions.

- The daily OASIS postings of forecast and actual daily peak-hour demand do not provide the hourly detail of our proposed data collection. In any event almost all the data elements proposed for the EIA-930 are not included in the OASIS data postings
- E-tag data do not provide any of the EIA-930 data.
- While the FERC Form 714 provides hourly demand data it does not include all of the EIA-930 data fields and it does not include all Balancing Authorities. What data FERC does collect are posted with an unacceptable delay. Form 714 data are posted by FERC in August of the next year; as an example, January data are not made available to the public until 19 months after the fact.

RTOs already voluntarily post much of the EIA-930 data, in hourly or more discrete form. BPA also makes this data publicly available. In addition EIA has been able to identify seven other BAs that post portions of this data.[34] However, none of these BAs provide all of the data EIA is seeking to collect, nor have they any obligation to continue to provide this information to the public. In addition, each BA uses different electronic formats and delivery methods. As discussed earlier EIA first identified this problem of data availability and consistency in 2004 and the EIA-930 is intended to be a solution. The object of the EIA-930 is to provide a consistent, standardized, and reliable means of collecting, processing, and publishing a complete set of key power system operating data. Relying on current RTO and other data posts will not accomplish this goal.

9. Survey Frame

Comments:

- *Treatment of MISO and SPP*: Wood Mackenzie requested that the MISO and SPP be required to report hourly demand for their member local Balancing Authorities due to their large geographic footprints. It argues that certain areas of the country are currently a black box in terms of this

[33] See the SAFNR V2 End User License Agreement, SAFNR V2 Subscriber Agreement, and the SAFNR V2 Request for Proposal, September 30, 2010; also the email from Chanoski (NERC) to Kaplan (EIA) of October 23, 2013.

[34] These other BAs are Duke Energy Carolinas, Tampa Electric Company, NorthWestern Energy, South Carolina Public Service Authority, Sierra Pacific Power Company, El Paso Electric Co., and Imperial Irrigation District. There may be others that EIA has been unable to identify.

operating information. The DOE/OE also asked EIA to consider collecting information on transmission utilization within Balancing Authorities with very large geographic footprints.

- *Reporting for Alaskan Utilities*: Alaskan utilities asked to be exempt from the reporting requirement. AEL&P said that it is not part of an interconnection transmission grid; it has no interchange or demand forecast and does not automatically read hourly demand or net generation. HEA said that it and several other utilities specifically identified as required respondents on the proposed form are not Balancing Authorities. Chugach recommended that EIA wait to see how the form works in the lower 48 states before requiring it in Alaska.

EIA Response:

For the Form EIA-930, we rely on the NERC Compliance Registry to identify entities performing the balancing function. These entities are required respondents for the survey, except that in our initial proposal we exempted Balancing Authorities that are party to coordinated functional registration agreement JRO0001. These exempt Balancing Authorities are the local Balancing Authorities of MISO referred to by Wood Mackenzie.

We sympathize with Wood Mackenzie's desire to enhance transparency by extending the collection to local Balancing Authorities. However, as the Midcontinent Independent System Operator (MISO) described in its comments, MISO local Balancing Authorities do not produce the collection data. The collection data is produced by MISO itself. Therefore, it would not be appropriate to require local Balancing Authorities to report data that they do not produce in the normal course of business.

Form EIA-930 was designed to collect operating data from Balancing Authorities operating as part of large interconnected grids and subject to mandatory reliability standards and NERC compliance. The Alaskan and Hawaiian utilities listed in the instructions as required respondents do not operate as part of large interconnected grids. Some are not connected to any other Balancing Authority. Alaskan and Hawaiian utilities are not listed in the NERC Compliance Registry and are not subject to mandatory reliability standards. Accordingly, EIA has removed the requirement that Alaskan and Hawaiian utilities file this form.

10. Implementation Date for the EIA-930 Survey and Waiver Request

Comments:

- *Implementation Time*: Edison stated that the industry should have at least six months to a year to implement changes to existing forms and any new forms.
- *Request for Waiver*: Omaha Public Power District (OPPD) requested waiver of the filing requirement to cover the two month period between the proposed effective date (January 1, 2014) of the form and when the Southwest Power Pool will assume balancing functions for OPPD (March 1, 2014).

EIA Response:

EIA agrees that Balancing Authorities may need some additional time to implement the new reporting requirement. Therefore, we change the effective date of Form EIA-930 to March 1, 2014. This new effective date obviates the need to grant OPPD a waiver.

11. Form-Related Issues

Data Collected

Comments:

- Dr. Meyn asked why EIA is proposing to collect only hourly data rather than data at shorter time intervals.
- LBNL asked that hourly available transfer capabilities between Balancing Authorities be collected.

EIA Response:

Dr. Meyn's comment refers to the fact that some Balancing Authorities are producing intra-hourly operating data. Some RTOs produce demand data every 5 or 15 minutes. BPA produces demand, net generation and total net actual interchange every 5 minutes.

In Orders 764 and 764-A, FERC requires each Transmitting Utility to offer intra-hourly transmission scheduling at 15-minute intervals. While this requirement may lead to Balancing Authorities changing the basic interval for real-time operations, it is still too early to know since compliance filings were only recently due to FERC. We will follow developments in the industry closely to determine whether the Form EIA-930 requirements need to be adjusted in a subsequent clearance to better reflect what operating data is produced in the normal course of business.

We decline to follow LBNL's suggestion to add hourly available transfer capabilities to the public data collection because the data are currently available on OASIS websites with the appropriate registration and automation.

Web Posting and Format

Comments:

Capone argued for posting the data in XML format. He said that "XML is a universal language for data transfer because it provides interoperability and flexibility. By posting required files as XML, the burden

on respondents and on EIA will be significantly reduced. Maintenance and flexibility would also be enhanced." Capone also suggested:

- That dates be posted in Julian format since this is likely how the original date is stored and can easily be handled by the receiving computer.
- That time is posted in Greenwich Mean Time (GMT). This overcomes the problems of having respondents reporting in four time zones and dealing with daylight savings time. He said to express time in 24 hour format with a "Z" suffix to denote GMT.

Chugach also recommended using a universal time that is convenient to all reporting time zones.

TVA said that the proposed format is unusual and suggested that EIA work with industry experts to enhance the collection process.

KG&E/KU said that EIA fails to explain how the proposed format has practical utility.

EIA Response:

- *XML Format*: EIA's original proposal specified posting the data in CSV format. Nonetheless, we are persuaded of the benefits of respondents posting Form EIA-930 in XML format. We therefore amend our initial proposal to require respondents to post in XML format.
- *Date Format*: EIA adopts the proposal to use a Julian date format ("DDDYYYY").
- *Specifying Time and Dates*: The proposed format does not include reporting hour explicitly. There are 25 fields for values to be reported that correspond to the 24 hours in the day and an extra hour to accommodate the move from daylight savings time to standard time on the first Sunday in November. The time zone applicable to the posted data must be assumed. Use of Greenwich Mean Time can make the relative time zones of posted data explicit and account for daylight savings time without the need for a field that has a value only one day a year.

  We are therefore revising the proposal such that the file format will include a GMT field after the date field. The GMT field will contain an integer value between 4 and 8 that is the GMT hour associated with the first hour field for that date. With this change, only 24 hour value fields are needed.

Filing Method

Comments:

- PowerSouth said it prefers uploading data to a secure EIA FTP site.
- WAPA asked EIA to consider importing data directly from Reliability Coordinators using existing processes and equipment.

- BPA recommended transmitting data using a FTP (File Transfer Protocol) site, web service, email, or other automatable protocol.
- TVA suggested a filing process where EIA sweeps the data at specified times.

EIA Response:

As an alternative to respondent posting of same-day and once a day files to a website, respondents may arrange with EIA automated, business-to-business or web service methods of submitting the files as long as they are in the standard XML format. The form and instructions have been modified to reflect this. Acceptance of alternatives will be at the discretion of EIA; this is because it would be impractical for EIA to collect data using dozens of different data transfer methods.

Respondents may still choose to post the data to a website they control and maintain. EIA intends to sweep posted data every hour for same-day postings and once a day for the next-day posting.

12. Instantaneous vs Integrated Demand

Comment:

Edison commented that "The proposal still does not recognize the difference between net instantaneous and net integrated loads."

EIA Response:

EIA is requesting integrated loads. In the posted instructions for the proposed Form EIA-930, the first item under general instructions is "Report hourly integrated values in megawatts."

13. Single-generator BA Exemption

Comments

In the Federal Register Notice, we requested comments about exempting single-generator BAs. We received the following comments:

- SPP members said that if one Balancing Authority is required to submit the data, all should be required to submit the data.
- BPA agreed with the statement in the Federal Register Notice that if EIA's goal is to have a comprehensive survey of the power system operating statistics, then the query should include all parties that have an effect on the power system. However, they stated that the most efficient way to do this is reporting through Reliability Coordinators.

EIA Response

Based on these comments and the lack of comments from single-generator BAs, we will not provide a reporting requirement exemption for single-generator BAs. Also see the discussions above regarding comments dealing with market sensitive and CEII data.

14. Liability

Comments

The IRC, KG&E/KU and Chugach are concerned about the potential that the preliminary nature and the frequency of reporting of the collection data may expose respondents to non-compliance liability.

EIA Response

As discussed elsewhere in this section, the intent of the proposed survey is to collect "as-is" data. Accordingly, there can be no sanctions associated with the preliminary nature of the data.

The other concern of these parties appears to be whether they would be subject to sanctions if due to a mechanical failure or other factor beyond their control they were unable to supply data on the required hourly and daily schedule. To meet this concern, the Sanctions section of the instructions for the EIA-930 has been modified to include the following statement: "In the case of the EIA-930, EIA will not pursue sanctions if mechanical failure or other factors beyond the control of the respondent cause a failure to report."

15. Non-disclosure Agreements

Comments

Edison and NRECA/Trade Groups stated that a BA may be required to report data for other entities within the BA and BAs do not necessarily have proprietary rights to disclose the data to EIA.

EIA Comments

The collection data are produced by the BA and the scope of the data is the whole BA. There is no requirement for the BA to report data for entities within the BA.

16. Due Process

Comments

Edison stated that by effectively ignoring industry input EIA fails the tests of meaningful review under the Paperwork Reduction Act (PRA), 44 USC 3501 et seq. and meaningful dialogue with the regulated community under the Administrative Procedure Act, 5 USC 551 et seq. They said that to propose the form over such industry objections without seriously addressing those objections is arbitrary and capricious.

EIA Response

Edison states in its comments that in the summer of 2012 its staff and members participated in eight of EIA's consultation sessions on our initial plans for revising the surveys and adding the EIA-930 survey. Of the many consultations held by EIA (see Part A, Section A.8.) one briefing was held solely for Edison staff, at the request of Edison (May 24, 2012). Edison and its members provided substantial feedback at and after these briefings.

Several consultations were held to address the EIA-930 specifically:

- Consultation with Balancing Authorities and all other interested parties (June 7, 2012 and July 26, 2012).
- Consultation with the North American Electric Reliability Corp. (July 19, 2012).
- Consultation with Federal Energy Regulatory Commission staff (August 14, 2012).
- Consultation for Edison Electric Institute, American Public Power Association, Electric Power Supply Association, National Rural Electric Cooperative Association, and Xcel Energy (September 11, 2012).
- Teleconference consultation for Alaska utilities (May 7, 2013).

Edison appears to believe that disagreeing with industry comments is equivalent to ignoring industry comments. This is, of course, not the case. We believe that we have given Edison, its members and others ample opportunity to discuss the EIA-930 survey with us. The Form EIA-930 was formally proposed in the March 6, 2013, Federal Register Notice and as discussed in this section we have addressed industry's comments and, where appropriate, modified the original proposal in response to those comments.

17. Electricity Imports/Exports

Comments

The IRC commented that examining interchange data solely from U.S. Balancing Authorities could lead to incorrect assumptions and conclusions regarding interchanges at the U.S. borders.

EIA Response

IRC's comment relates to reconciling interchange between Balancing Authorities. In the case of interchange between U.S. BAs, a crosscheck built into the data collection is that each pair of neighboring BAs will both be reporting the same hourly actual interchange; therefore the corresponding values can be compared for consistency. However, the IRC points out that the crosscheck is not available for interchange between U.S. and foreign BAs (i.e., BAs in Canada and Mexico) since the latter do not report to EIA.

In response, we note that the power industry standard of next business day interchange reconciliation between neighboring BAs (discussed above) applies to interchange with foreign BAs. Therefore, while EIA will be unable to compare values from U.S. and foreign BAs for consistency, the value reported to EIA by a U.S. BA will have been already reconciled with foreign BA in the normal course of business.

18. Reporting Conventions

Comments

The IRC pointed out that varying sign (+/-) conventions for actual interchange used by the Balancing Authorities could impair public understanding.

EIA Response

We agree that differences in sign conventions could be confusing. We will revise the form instructions to specify the sign convention for actual interchange reporting.

H. Comments Applicable to Multiple Surveys

1. The Bureau of Economic Analysis "strongly supports the continued collection of data by the Energy Information Administration (EIA) for the Electric Power Surveys. The data collected on these forms are crucial to key components of BEA's economic statistics."

Comment From: BEA

EIA Response: No response necessary.

2. In publishing aggregate statistics, EIA needs to continue applying aggregation techniques to avoid disclosure of individual utility responses.

Comment From: Edison Electric Institute

EIA Response: In other data areas (such as some petroleum surveys) EIA has for many years not applied disclosure limitation rules, even though the data are more uniformly confidential than in the highly regulated power industry. In practice this has, to the best of our knowledge, created no commercial problems. Eliminating disclosure limitations will greatly reduce the complexity of EIA's data processing operations and, by eliminating complementary suppression, make more data available to users.

3. EIA is creating excessive burden due to the changes proposed to the EIA-923 and EIA-860 surveys and the addition of the new EIA-930 survey.

Comment From: Big Sky Dairy Digester Plant

EIA Response: As discussed above EIA believes the burden created by these surveys is reasonable, is commensurate with the value of the data collected, and to the extent possible is tailored to the size of the respondent. For example, in the case of this commenter, a 1.6 megawatt facility in Idaho, because of its small size it only files an annual report on the EIA-923, does not need to provide any of the environmental or water data collected by the EIA-923 and EIA-860 surveys, and because it is not a Balancing Authority it will not respond to the proposed EIA-930 survey.

4. EIA should set a materiality threshold to avoid the reporting of immaterial levels of information.

Comment From: Edison Electric Institute

EIA Response: Materiality thresholds already exist. In the case of the monthly EIA-923 (power plant operations) and EIA-826 (utility retail sales) surveys, only a sample of larger entities are surveyed. The annual EIA-923 and EIA-860 (generating capacity) surveys are limited to power plants with a capacity of at least one MW that are connected to the power grid. The questions on fuel cost and quality, environmental equipment, and water use on the annual EIA-923 and EIA-860 surveys only apply to larger power plants. The EIA-411 is limited to the high voltage Bulk Electric System in the contiguous 48 states and the same generator thresholds as the EIA-860. There is no size threshold for the annual EIA-861 survey of power company operations, but small utilities (about a third of the frame) only file a greatly truncated short form. The EIA-860M monthly survey of changes in power plant status is limited to plants that will be entering service or retiring within a rolling 12 month time horizon; it is also limited to plants of one MW capacity or greater.

5. Post notices on the EIA website whenever the functionality of the IDC system changes.

Comment From: Edison Electric Institute

EIA Response: EIA currently does this but the fact that EIA received this comment suggests that, in some instances, updates were not posted or were incomplete. EIA will work to improve this process.

6. EIA should ask for the name of the person submitting each report and reference this name when EIA contacts the filing company with questions about the data. Large organizations that file reports with EIA may have multiple personnel submit such reports. In such cases, including the name of the person who submitted the report on the report itself would assist if EIA later contacts the company about a given report.

Comment From: Edison Electric Institute

EIA Response: The surveys request contact information for the person who submits the survey and that person's supervisor. If EIA contacts a company it always references the survey contact and supervisor.

7. Eliminate duplicative data reporting between surveys, such as the EIA-860 and EIA-923.

Comment From: Edison Electric Institute

EIA Response: EIA cannot identify any overlap. In respect to the EIA-923 and EIA-860 surveys, the former collects dynamic operating data and the latter static data on unit characteristics; no overlap is apparent.

8. The National Mining Association "appreciate[s] EIA's efforts to include additional survey questions on plant and distribution system reliability, smart meter and smart grid information, plant construction costs, wind and solar plant characteristics, emissions control systems and ash pond conditions. We are in favor of fair and even collection and reporting/release of all primary energy and electricity sources. However, in an era of increasingly tight agency budgets, the additional costs of adding new data elements to EIA surveys may eventually result in the elimination or curtailment of collection and reporting of some of EIA's core electricity and other vital energy information."

Comment From: National Mining Association

EIA Response: The proposed data collection is intended to be within the scope of EIA's capabilities for editing the data and ensuring high data quality and does not put at risk EIA's core capability of publishing vital energy information.

Appendix A-2: Table Shells for the Data to be Collected by the Proposed EIA-930 Survey

Note: To accommodate industry concerns that the real-time data could be misinterpreted by the public, EIA will attach a disclaimer to all data products. The disclaimer will have language similar to the following: "EIA acknowledges that the information submitted by reporting entities is preliminary data. This preliminary data is made available 'as-is' by EIA and neither EIA nor reporting entities are responsible for reliance on the data for any specific use."

Balancing Authority Real-Time Report (Downloadable Data File)

BA Name	eTag Code	EIA ID	NERC Registry ID	Upload Timestamp	File Generation Time	Data Type	Day	Hour	Universal Time Adjustment	Actual Load (MW)	Forecasted Load (MW)	Difference (MW)	Percent Difference
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 01:13	June 9 2013 13:30	Real Time	6/9/2013	1	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 02:10	June 9 2013 13:30	Real Time	6/9/2013	2	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 03:11	June 9 2013 13:30	Real Time	6/9/2013	3	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 04:13	June 9 2013 13:30	Real Time	6/9/2013	4	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 05:12	June 9 2013 13:30	Real Time	6/9/2013	5	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 06:12	June 9 2013 13:30	Real Time	6/9/2013	6	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 07:10	June 9 2013 13:30	Real Time	6/9/2013	7	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 08:10	June 9 2013 13:30	Real Time	6/9/2013	8	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 09:12	June 9 2013 13:30	Real Time	6/9/2013	9	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 10:11	June 9 2013 13:30	Real Time	6/9/2013	10	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 11:13	June 9 2013 13:30	Real Time	6/9/2013	11	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 12:12	June 9 2013 13:30	Real Time	6/9/2013	12	4				
XYZ Power Authority	GRPR	45678	NCR00016	June 9 2013 13:12	June 9 2013 13:30	Real Time	6/9/2013	13	4				

This is the shell of a data file users will be able to generate and download from the EIA website. The file provides the real time load data collected hourly by the EIA-930 for a hypothetical balancing authority. Because the report was generated at 1:30 pm, data is available only through hour 13. By or shortly after 2:10 pm data will be available for hour 14 and so on through the day.

Real-Time Load, by Region and U.S. Interconnected System Total, in Gigawatts

A version of this display will be installed on the EIA website. It will be updated hourly.

Date: June 9, 2013 **Current Time 13:35 EDT**

Hour	Northeast Actual	Northeast Forecast	% Diff	Mid-Atlantic Actual	Mid-Atlantic Forecast	% Diff	Southeast Actual	Southeast Forecast	% Diff	Florida Actual	Florida Forecast	% Diff
1												
2												
3												
4												
5												
6												
7												
8												
9												
.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.
23												
24												

Hour	Texas Actual	Texas Forecast	% Diff	Central Actual	Central Forecast	% Diff	West Actual	West Forecast	% Diff	U.S. Actual	U.S. Forecast	% Diff
1												
2												
3												
4												
5												
6												
7												
8												
9												
.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.	.	.	.
23												
24												

Notes: The U.S. Interconnected System constitutes the interconnected grids that cover all of the contiguous 48 states. The Northeast region includes the New York Independent System Operator (NYISO) and ISO New England; the Mid-Atlantic region consists of the PJM Interconnection; Florida includes the area covered by the Florida Regional Reliability Council; Midwest consists of the Midwest ISO; Southeast covers the balance of the eastern United States; and West includes the entire Western Interconnection including the California ISO. For a map of these regions see page xx or any issue of EIA's Electricity Monthly Update. For an overview of the organization of the U.S. power market see the Federal Energy Regulatory Commission's Energy Primer at http://www.ferc.gov/market-oversight/guide/energy-primer.pdf.

Source: EIA-930 data files.

Balancing Authority Next-Day Report

Balancing Authority	XYZ Power Authority
eTag Code	GRPR
EIA Entity No.	45678
NERC Compliance Registry No.	NCR00016
Report Timestamp	June 9, 2013 07:30 EDT

Day of Report	Load and Generation For:	Validated Net Interchange For:	Load Forecast For:	Hour	Universal Time Adjustment	Load (MW)	Net Generation (MW)	Net Interchange (MW)	Load Forecast (MW)
6/9/2013	6/8/2013	6/7/2013	6/9/2013	1	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	2	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	3	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	4	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	5	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	6	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	7	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	8	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	9	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	10	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	11	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	12	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	13	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	14	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	15	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	16	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	17	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	18	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	19	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	20	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	21	4				
6/9/2013	6/8/2013	6/7/2013	6/9/2013	22	4				
6/8/2013	6/7/2013	6/6/2013	6/8/2013	23	4				
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.
.	.	.	.	.	.	.	.	.	.

This report will be generated from the EIA-930 data files on demand for download by users. Time period covered can vary from one day to every day in one or more years. Note that the size of the report is not very large by current standards. A report covering every day of the year would have 8,760 rows.

Daily and Weekly Load by Region (Megawatt-Hours)

June 9 to 15, 2013

Region	6/9/2013	6/10/2013	6/11/2013	6/12/2013	6/13/2013	6/14/2013	6/15/2013	Total
Northeast								
Mid-Atlantic								
Southeast								
Florida								
Texas								
Central								
West								
Total U.S. Interconnected System								

A version of this display will be installed on the EIA website. It will be updated weekly. A version covering an entire month will appear in EIA publications, such as the *Electric Power Monthly*.

Notes: The U.S. Interconnected System constitutes the interconnected grids that cover all of the contiguous 48 states. The Northeast region includes the New York Independent System Operator (NYISO) and ISO New England; the Mid-Atlantic region consists of the PJM Interconnection; Florida includes the area covered by the Florida Regional Reliability Council; Midwest consists of the Midwest ISO; Southeast covers the balance of the eastern United States; and West includes the entire Western Interconnection including the California ISO. For a map of these regions see page xx or any issue of EIA's *Electricity Monthly Update*. For an overview of the organization of the U.S. power market see the Federal Energy Regulatory Commission's *Energy Primer* at http://www.ferc.gov/market-oversight/guide/energy-primer.pdf.

Source: EIA-930 data files.

Actual and Forecasted Daily Load by Region (Megawatt-Hours)

June 9, 2013

Region	Total Load	Forecasted Load	Difference (MWh)	Percent Difference
Northeast				
Mid-Atlantic				
Southeast				
Florida				
Texas				
Central				
West				
Total U.S. Interconnected System				

A version of this display will be installed on the EIA website. It will be updated daily. A version covering an entire month will appear in EIA publications, such as the *Electric Power Monthly*.

Notes: The U.S. Interconnected System constitutes the interconnected grids that cover all of the contiguous 48 states. The Northeast region includes the New York Independent System Operator (NYISO) and ISO New England; the Mid-Atlantic region consists of the PJM Interconnection; Florida includes the area covered by the Florida Regional Reliability Council; Midwest consists of the Midwest ISO; Southeast covers the balance of the eastern United States; and West includes the entire Western Interconnection including the California ISO. For a map of these regions see page xx or any issue of EIA's Electricity Monthly Update. For an overview of the organization of the U.S. power market see the Federal Energy Regulatory Commission's Energy Primer at http://www.ferc.gov/market-oversight/guide/energy-primer.pdf.

Source: EIA-930 data files.

A version of this display will be installed on the EIA website. It will be updated daily. A version covering an entire month will appear in EIA publications, such as the *Electric Power Monthly*.

Daily Net Interchange by Region (Megawatt-Hours)

June 9, 2013

Region	Northeast	Mid-Atlantic	Southeast	Florida	Texas	Central	West	Canada	Mexico
Northeast	---								
Mid-Atlantic		---							
Southeast			---						
Florida				---					
Texas					---				
Central						---			
West							---		

Notes: The U.S. Interconnected System constitutes the interconnected grids that cover all of the contiguous 48 states. The Northeast region includes the New York Independent System Operator (NYISO) and ISO New England; the Mid-Atlantic region consists of the PJM Interconnection; Florida includes the area covered by the Florida Regional Reliability Council; Midwest consists of the Midwest ISO; Southeast covers the balance of the eastern United States; and West includes the entire Western Interconnection including the California ISO. For a map of these regions see page xx or any issue of EIA's Electricity Monthly Update. For an overview of the organization of the U.S. power market see the Federal Energy Regulatory Commission's Energy Primer at http://www.ferc.gov/market-oversight/guide/energy-primer.pdf.

Source: EIA-930 data files.

Appendix A-3: Comments Received in Response to the Open Federal Register Notice (Federal Register/Vol. 78, No. 247) Published December 24, 2013

On December 24, 2013, a request for comments from interested persons was solicited in the Federal Register, proposing a three year extension and/or changes to the following existing forms:

- Form EIA-63B, "Annual Photovoltaic Cell/Module Shipments Report"
- Form EIA-411, "Coordinated Bulk Power Supply Program Report"
- Form EIA-826, "Monthly Electric Utility Sales and Revenue Report with State Distributions"
- Form EIA-860, "Annual Electric Generator Report"
- Form EIA-860M, "Monthly Update to the Annual Electric Generator Report"
- Form EIA-861, "Annual Electric Power Industry Report"
- Form EIA-861S, "Annual Electric Power Industry Report (Short Form)"
- Form EIA-923, "Power Plant Operations Report"

The FRN also solicited comments on the creation of a new data collection instrument, Form EIA-930, "Hourly and Daily Balancing Authority Operations Report."

Comments were received from the 17 entities listed below. The comments and EIA's responses are summarized in this appendix.

Commenter	Abbreviation Used in Text (if any)
American Public Power Association	APPA
Bonneville Power Administration	BPA
Bureau of Economic Analysis	BEA
Carnegie Mellon Electricity Industry Center	CEIC
DOE Office of Electricity Delivery and Energy Reliability	DOE/OE
Eastern Interconnection States Planning Council	EISPC
Edison Electric Institute	EEI
Energy Storage Association	ESA
Energy Ventures Analysis	
IEEE - Distribution Reliability Working Group	IEEE-DRWG
ISO/RTO Council	IRC
Luminant	

Commenter	Abbreviation Used in Text (if any)
North American Electric Reliability Corp.	NERC
Solar Energy Industries Association	SEIA
Tacoma Public Utilities	Tacoma
The Solar Foundation	TSF
Wood Mackenzie	

In addition to the commenters listed immediately above, this section of the supporting statement refers to the Regional Transmission Organizations that operate the power grid in about half of the continental United States (RTOs, also referred to as Independent System Operators or ISOs). There are seven of these entities, listed below:

- ISO New England (ISO-NE)
- New York ISO (NYISO)
- PJM Interconnection (PJM)
- Midcontinent ISO (MISO)
- Southwest Power Pool (SPP)
- Electric Reliability Council of Texas (ERCOT)
- California ISO (CAISO)

A map showing the boundaries of the RTOs is available at: http://www.ferc.gov/industries/electric/indus-act/rto.asp.

A. Form EIA-63B, Annual Photovoltaic Cell/Module Shipments Report

1. The Solar Energy Industries Association (SEIA) suggests discontinuing this survey as burdensome and unnecessary. SEIA states that "This report places an unnecessary reporting burden on certain parts of the solar industry. At the same time, the results are of minimal value because the data it collects is incomplete and outdated by the time it is released. Other sources of information on manufacturing activities and employment levels are already available. These provide more comprehensive and timely views of industry activity."

Comment From: NERC

EIA Response: In the past EIA has reviewed other government data sources of PV data, such as Census data, and found no duplication. In response to SEIA's comments we reviewed the primary alternative source SEIA seems to have in mind, the proprietary solar PV industry studies produced by Greentech Media (GTM). We found that most of the data cannot be compared because the GTM manufacturing chapter – the focus of the EIA-63B survey -- is limited, with much of the coverage in the GTM reports focusing on state analysis of installations. Specific data items collected by EIA that are not covered by GTM include:

- Average module efficiencies by module technology (crystalline silicon, thin-film, concentrating)
- U.S. PV manufacturing industry characteristics, e.g. company counts, type of business activities, employment figures.
- Detailed accounting at U.S. total level for the PV manufacturing cell/module business: includes year-start PV inventories, quantity manufactured, imports, purchases/sales for resale, cell quantity assembled into modules, exports, and year-end inventories.
- Total U.S. PV module shipments by sector to grid-connected distributed vs. grid-connected centralized vs. off-grid indoor vs. off-grid remote systems. PV module shipments by destination state to grid-connected distributed vs. grid-connected centralized vs. off-grid indoor vs. off-grid remote systems.
- Total PV module shipments by origin state and module technology. Total/residential/commercial/industrial/electric power sector PV module shipments by destination state and module technology.
- Total PV module imports by origin country and module technology. Total PV module exports by destination country and module technology.

We have therefore concluded that the EIA-63B survey collects information on the solar PV sector that is not otherwise available to the public. However, we agree with SEIA's comment that the value of the data is reduced by the length of time it has taken EIA to publish survey results, and we will attempt to improve our internal processes so that we can accelerate the data publication schedule.

B. Form EIA-411, Coordinated Bulk Power Supply Program Report

1. NERC wants to ensure consistency between the EIA-411 and NERC's data request for its upcoming annual Long Term Reliability Assessment (LTRA; the LTRA data is the source for most of the information provided on the EIA-411). In particular NERC is concerned that certain definitional changes approved by NERC's Planning Committee in December 2013 are reflected in the EIA-411.

Comment From: NERC

EIA Response: EIA will incorporate the recommended changes to ensure consistent definitions and instructions are used by EIA and NERC.

2. EEI is concerned with the plan to beginning collecting transmission system reliability data for the entire bulk electric system, "even below the 200 kV level, a large expansion of detailed new data."

Comment From: EEI

EIA Response: The Transmission Availability Data System (TADS) program was first established by NERC in 2006 to provide information on the reliability of the transmission grid. Prior to the creation of TADS no data was available on the reliability of the transmission system. Given the central

importance of the transmission grid to the operation of the nation's electric power system this was seen by NERC and EIA as a substantial data gap.

The purpose and value of TADS is explained by NERC as follows:

> NERC will use the information to develop transmission metrics that analyze outage frequency, duration, causes, and many other factors related to transmission outages….While TADS is not intended to provide determinative performance measures, it will be used to quantify certain performance aspects. In addition to collecting simple transmission equipment availability, TADS will collect detailed information about individual outage events that, when analyzed at the regional and NERC level, will provide data that may be used to improve reliability. Specific equipment outages will be linked to disturbance reports filed with NERC, enabling better association of transmission outages with load and generation outages. Additionally, outages by one transmission owner will now be tracked to outages of other transmission owners so that any relationship between multiple outages can be established. (http://www.nerc.com/pa/RAPA/tads/Pages/default.aspx)

TADS was originally intended to collect data for transmission lines with a capacity of 200 kV or greater, consistent with FERC's definition of the Bulk Electric System (BES). With the decision by FERC to change the definition of the Bulk Electric System (i.e., the portion of the grid subject to FERC reliability oversight and rules) to include facilities with a capacity of 100 kV and greater, NERC decided to expand the coverage of TADS accordingly. EIA agrees with this decision and has made corresponding changes to the EIA-411 survey to include TADS data for facilities of 100 kV and greater.

This issue was discussed extensively by EIA with NERC and the NERC Transmission Availability Data System Working Group. The key point, with which NERC agrees, is that the sub-200 kV data are needed to provide a full picture of forced outages for the Bulk Electric System, which is the system under federal reliability jurisdiction per the Energy Policy Act of 2005. While there is increased burden, the increase is compensated for by removing from the data collection non-automatic (i.e., manually engaged) planned transmission outages. Also, as noted above, language has been added in Schedules 6 and 7 to inform respondents that reporting is required only for elements that are covered by the BES definition.

For additional information see Part A of the Supporting Statement, pages 8, 49, and 50.

C. Form EIA-826, Monthly Electric Utility Sales and Revenue Report with State Distributions

1. EEI supports EIA's plan to drop questions on green pricing (Schedule 3, Part A), from the form.

Comment From: EEI

EIA Response: No response necessary.

2. SEIA supports the proposal to eliminate the 2 MW cap on net metered systems, as this will provide "a more complete view" of net metered technology.

Comment From: SEIA

EIA Response: No response necessary.

3. TSF and SEIA suggest that EIA improve the quality of the data, including coverage of net-metered solar activity, by expanding the size of the sample.

Comment From: TSF and SEIA

EIA Response: The EIA-826 sample already provides coverage of most of the electric utility industry. Increasing the sample size significantly would increase burden without a commensurate benefit in coverage or estimation accuracy.

4. For net metered systems, collect the DC capacity in addition to the current collection of AC capacity.

Comment From: TSF

EIA Response: The data on the EIA-826 is collected from the distribution companies that take power from the net metered systems, not directly from the operators of the systems. We have not researched whether the distribution companies have the capability to report information on the DC ratings of solar PV systems. EIA can investigate this for the next clearance of the survey.

5. EIA should set "reasonable" reporting thresholds on the EIA-826 and EIA-861 surveys for the collection of data on net metering systems and certain other data items including demand response, distribution system reliability, and energy efficiency.

Comment From: EEI

EIA Response: Thresholds are already in place, based on company size and type of business. The smallest utilities, comprising about a third of all companies, are only required to file an annual short form (the EIA-861S). Of the remaining approximately 2,200 companies, only 531 (as of February 2014) are required to file monthly on the EIA-826 survey.

6. SEIA suggests for the EIA-826 and EIA-861, "For PV and other net energy metering (NEM) customers, in addition to continuing the collection of data on "electric energy sold back (MWh)," begin collecting data on both total energy delivered to NEM customers and *net* energy sold to NEM customers (this value could be negative if NEM customers are net exporters instead of net importers of electricity).

Further, also collect data on *net* sales (dollars) to NEM customers excluding any payments for renewable energy credits."

Comment From: SEIA

EIA Response: EIA does not believe the suggested questions will yield meaningful and consistent results, at least not at the current time. Net metering tariffs have complexities and vary across the states in a manner that would require additional highly detailed questions that would significantly increase burden. In addition we expect these tariffs to change and become more standard over time.

7. EIA should collect detailed data on all existing utility rate structures.

Comment From: SEIA

EIA Response: While it would undoubtedly be useful to have a central repository of utility rate structures, this would be a mammoth task that is well beyond the resources available to EIA and would significantly increase the reporting burden on the industry. Rate structures exist as text documents without any standard format. There are thousands of utilities from which the rates would have to be collected. While in principal EIA might require utilities to store rate tariffs in a standard electronic format the burden on industry would be considerable. In summary, this request is currently impractical to implement.

D. Form EIA-860, Annual Electric Generator Report

1. The Bureau of Economic Analysis, National Accounts office, stated that the planned collection of data on the cost of building new power plants could be useful in their work on investment estimates. The Solar Foundation also supports the collection of this data.

Comment From: BEA, TSF

EIA Response: No response necessary

2. The Carnegie Mellon Electricity Industry Center (CEIC) "support[s] 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."

Comment From: CEIC

EIA Response: No response necessary.

3. DOE's Office of Electricity Delivery and Energy Reliability (DOE/OE) supports EIA's proposal to collect information on black start units and to keep this information confidential. DOE/OE notes that it's Office of Infrastructure Security and Energy Restoration (ISER) "is involved in mitigation, protection, response, and recovery activities. Information about blackstart capability (and dual fuel capability [already collected by the EIA-860 survey]) is important to gauging the ability of an area to recover or come back on line quickly after a voltage collapse or blackout. These units would be the building blocks of a restart of a collapsed portion of the grid…. At present we have no information on where these units are or how many of them there are. The details of this information must be closely held, as it is sensitive…."

Comment From: DOE/OE

EIA Response: Although EIA appreciates DOE/OE's support, upon further review EIA is unsure of the utility of these data given confidentiality issues. We will remove the collection of this data from the EIA-860 survey and study the matter further.

4. TSF "feel[s] that the proposed changes do not address the challenges of obtaining and maintaining data on small net metered systems where the system owner or host is not in the electric power business. For such systems/entities, the inclusion of simple questions aimed at determining whether the system is still in operation and whether any changes have occurred to the system would be helpful." SEIA suggests that EIA should "Make a question about whether the plant is net-metered one of the first questions in the survey to quickly eliminate most of the questions that are not relevant to NEM systems…"

Comment From: TSF and SEIA

EIA Response: For Form EIA-860, the Internet Data Collection system pre-fills all questions with the responses from the prior year. This should make submitting the form very simple when no changes have occurred to the system, which will typically be true for small net-metered system.

5. Eliminate or restate questions concerning nameplate capacity, net capacity, and power factor for solar PV systems (Sch. 3, Part B, questions 1a, 1b, and 2) so that they are more applicable to PV technology.

Comment From: SEIA

EIA Response: EIA believes that nameplate and net capacity are meaningful and important characteristics of PV systems. After a discussion with SEIA the instructions for reporting net capacity for PV systems will be amended to include the following:

> For solar photovoltaic generators, report the peak net capacity during the day for the generator assuming clear sky conditions on June 21 for summer capacity and on December 21 for winter capacity; assume average seasonal temperatures and average wind speeds for June 21 and December 21, respectively.

EIA agrees with SEIA that PV systems should not be required to provide a power factor. This conclusion also applies to wind turbines (which are variable speed AC generators) and batteries, fuel cells, and flywheels (technologies that use inverters). The form and instructions will be changed accordingly.

6. Restate the question on energy storage (Sch. 3, Part b, question 20) to ask for additional detail on charge and discharge rates and capacity.

Comment From: SEIA

EIA Response: EIA agrees that the original question it proposed should be revised, but we have also concluded that additional research is needed to ensure that the survey requests useful information on storage that is commensurate with burden. EIA will delete the proposed question, perform the necessary research, and propose revised questions for the next clearance or earlier.

7. Net-metered solar PV systems should be "exempted from reporting as proposed generators because the development cycle of these plants may be only months and reporting proposed net-metered systems is not practical or useful given the timeframe of data publication for this survey."

Comment From: SEIA

EIA Response: Data on proposed small metered PV systems has been routinely collected by EIA without difficulty and with no indication that the data collection puts unusual burden on these respondents. Moreover, the data is important for maintaining a current frame of planned generators, especially given the rapid growth in the solar PV sector. Accordingly, there is no persuasive reason to cease collecting this data. The requirement to report is long-standing and not a change to the survey.

8. The proposed question requesting the number of inverters at a planned solar PV plant site should be eliminated as the data is of little value and may change if the planned design changes (Sch. 3, Part C, question 11).

Comment From: SEIA

EIA Response: EIA realizes that designs may change, but these plans give the public an insight into the technological and system design trends in the solar PV sector. Information on the characteristics of planned generating units is collected annually. Because of the short development cycle for solar PV power plants – often from planning to operation in just one or two years – we do not believe the inverter information will change frequently. More broadly, EIA believes it is very important for the agency to collect more complete data on solar and other renewable technologies because of the growing role these systems are playing in the nation's power supply system. The number of inverters is a key characteristic of solar plants and therefore, we believe, an important data element to collect.

9. Schedule 4 of the EIA-860 survey requests information on each owner of a jointly-owned generator. SEIA suggests that "For net-metered PV systems, eliminate this detail and ask only if system is owned by the owner of the host site."

Comment From: SEIA

EIA Response: A basic purpose of the EIA-860 is to allow analysts and policymakers to determine the ownership of the nation's generating capacity. This information has increased in value as electric power industry restructuring has resulted in more complex ownership arrangements. Net metered systems are an increasing important component of the power generation industry and should not be exempted from providing this basic information.

10. Collect the street address of power plants as well as the geographic coordinates.

Comment From: TSF and SEIA

EIA Response: The proposed Schedule 2, Line 2 requests the street address.

11. The Solar Foundation (TSF) "support[s] the proposed change to collect information on whether a plant that has a primary purpose other than electricity generation for sale is net metered."

Comment From: TSF

EIA Response: No response necessary.

12. The Carnegie Mellon Electricity Industry Center (CEIC) supports the collection of data on generator minimum and maximum loads, and the time required to reach full load. The data "would aid modeling efforts in industry, government, and universities…. 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."

Comment From: CEIC

EIA Response: EIA appreciates CEIC's support. EIA does not currently collect data on generator minimum and maximum load, nor the time required to reach full load. This information, which is referred to as the "ramping" capability of a generating unit, applies to thermal generators not PV or wind. (As stated on the survey form, "Solar and wind generators should skip this question." Schedule 3.B., questions 21 and 22.)
The information on ramping capacity of thermal units is proposed for collection because it relates to the ability of the power system to accommodate swings in the output from weather-dependent wind and solar generators. This issue is of growing interest due to the increased use of solar and wind power. For additional information see Part A of the Supporting Statement, pages 12 and 13.

13. CEIC supports EIA's proposal to collect the name of each power plant's balancing authority. This information "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."

Comment From: CEIC

EIA Response: No response necessary.

14. CEIC supports EIA's proposal to collect information on whether combined cycle plants can operate in single cycle mode, noting that "As the agency points out, this information is important for reliability assessments." However, CEIC suggests that the question be restated to ask "whether combined-cycle units are capable of operating in simple-cycle mode due to a multishaft configuration or due to the presence of a clutch in a single-shaft configuration."

Comment From: CEIC

EIA Response: After discussion of the issue with CEIC, EIA believes the question as originally proposed is the clearest and most concise way to solicit the requested data.

15. According to TSF, "instead of collecting information as to whether a combined-cycle unit is capable of operating in simple-cycle mode by bypassing the heat recovery steam generator, it may be more useful to ask directly about ramp rate capabilities."

Comment From: TSF

EIA Response: This is a valuable recommendation but not practical to add at this point in time because of the need to consult with industry on how to specify the question (for instance, whether to specify the ramp rate from a cold or hot start). We will consider this for the next clearance.

16. Collect the capacity of solar photovoltaic generators in terms of DC output under standard test conditions (DC STC) in addition to the current collection of AC data.

Comment From: TSF and SEIA

EIA Response: We will modify Schedule 3B Line 31 to ask "What is the net capacity of this photovoltaic generator in direct current (DC) under standard test conditions (STC)?"

17. TSF "would like to point out that some [solar photovoltaic] plants may have multiple answers for questions on the characteristics of solar energy systems (tracking, technology, panel material)." SEIA suggests that EIA collect more detailed information on solar array configuration, such as panel tilt and azimuth.

Comment From: TSF and SEIA

EIA Response: The proposed question currently allows the respondent to select multiple solar tracking, concentrating and collector technologies. The survey will be modified to allow respondents to also select multiple panel materials.

The recommendation to request additional array configuration information is not practical to adopt at this point in time. We will consider this for the next clearance, in particular to determine if this level of detail is practical to collect and if the value of the data is commensurate with the increase in burden.

18. When collecting data on plant construction and financing costs EIA should differentiate between plants built under direct ownership versus third-party ownership.

Comment From: TSF

EIA Response: The proposed Schedule 3A, Line 4 identifies whether generators are owned by the respondent or wholly owned by an entity other than the respondent.

19. SEIA offered several miscellaneous suggestions. These are listed and addressed below

- **Comment**: Schedule 2, page 3, question 1: Do not ask for the "plant name" for net-metered PV systems as these plants are typically not named. Instead, consider automatically generating a name based on the plant's street address.
    - ***Response****: We believe that the respondent should generally choose the name for the generator. In the case of net metered system the respondents often choose the name of the host facility.*
- **Comment**: Schedule 2, page 3, question 2: Make the answer for [the] question [plant latitude and longitude] auto-populate by geo-coding the address information supplied in question 2 of schedule 2.
    - ***Response****: the geographical coordinates and the street address act as checks on each other. EIA has found many instances in which they are inconsistent and we work with respondents to resolve the differences.*
- **Comment**: Schedule 2, page 3, questions 4 and 5: the owners/operators of net-metered PV systems may not know the answer to these questions [the name of the NERC reliability region and Balancing Authority within which the plant resides].
    - ***Response***: *EIA assists respondents with the answers to these questions as necessary.*
- **Comment**: Schedule 2, page 4, question 8a: Question 8a [which requests the plant's North American Industry Classification System (NAICS) Code] seems unnecessary and should be removed to reduce burden.
    - ***Response****: Schedule 2, Line 8a provides information about what sector of the economy the facility operates in. This is critical to assigning generating capacity and power output to the correct elements of the electric power industry. The information can also be useful in determining whether a facility is a combined heat and power plant. The collection of this information is not a change from what has been collected on the previously approved form EIA-860.*

20. Reduce the reporting time frame for planned coal and nuclear generators from 10 years to five years.

Comment From: EEI

EIA Response: The longer reporting time frame for coal and nuclear plants is justified by the multi-year planning and construction periods for these technologies. With a five year reporting time frame a coal or nuclear plant could be under construction and yet would not appear in the EIA-860 data collection.

E. Form EIA-860M, Monthly Update to the Annual Electric Generator Report

1. It is not practical for new small or net metered solar projects to report on the EIA-860M survey.

Comment From: TSF and SEIA

EIA Response: These types of plants have routinely reported on this survey. EIA is not aware of any factor that makes it difficult for small or net metered solar projects to report. The requirement to report is long-standing and not a change to the survey.

F. Form EIA-861, Annual Electric Power Industry Report

1. SEIA supports for the proposal to eliminate the 2 MW cap on net metered systems

Comment From: SEIA

EIA Response: EIA appreciates SEIA's support. By way of further explanation, net metering relates to "distributed generation"; i.e., generation located at or near the customer. Distributed generation can range from large cogeneration units at industrial facilities to residential rooftop solar.

Net metering tariff arrangements permit a facility, typically generating electricity from a renewable resource and using a meter that reads inflows and outflows of electricity, to sell excess power generated over its load requirement back to the electrical grid, typically at a rate equivalent to the retail price of electricity. Net metering is generally viewed as a means of encouraging the use of distributed generation and renewable energy in particular.

It would be excessively burdensome and impractical for EIA to survey each of the tens of thousands of individual operators of distributed power units about their net metering status. For this reason EIA collects data from the utility companies that link up to the units. The utilities provide aggregated data for the amount of net metered distributed generation connected to their systems, not data for each specific installation. This approach provides useful information without creating an excessive burden.

The elimination of the 2 MW cap has no impact on the survey frame and does not bring into the EIA-861 survey any new respondents. All utilities must report annually on the EIA-861 survey, other than

the very smallest who report on the EIA-861S short form. The criteria for whether a utility reports on the long or short form is based on annual retail sales of electricity. Net metering plays no role in determining whether a utility must complete the long or short form.

The elimination of the 2 MW cap for reporting net metered capacity is a technical adjustment that, in combination with the data on large generating units reported on the EIA-860 capacity survey, will help EIA determine the size distribution of net metered capacity. It is unlikely that this change will have any discernable impact on burden, but if anything it will probably reduce burden. This is because we are now asking the utilities to report all of the net metered capacity on their systems rather than to determine the subset below a 2 MW threshold.

2. EEI supports EIA's plan to drop questions on green pricing from the form.

Comment From: EEI

EIA Response: No response necessary.

3. DOE's Office of Electricity Delivery and Energy Reliability (DOE/OE) "supports EIA's proposal to collect information on distribution reliability through EIA-861. OE needs consistently defined and publicly available annual statistics on distribution reliability in order to perform its mission to conduct policy analysis and technology R&D to maintain and improve electricity reliability." DOE/OE also requests that "EIA's plans to collect information on SAIDI and SAIFI due to loss of supply should be extended" to all utilities that file distribution reliability statistics.

Comment From: DOE/OE

EIA Response: EIA will evaluate for the next survey clearance whether the distinction between outages caused by loss of supply can be extended to all utilities.

4. EIA should collect detailed data on all existing utility rate structures.

Comment From: TSF and SEIA

EIA Response: While it would undoubtedly be useful to have a central repository of utility rate structures, this would be a mammoth task that is well beyond the resources available to EIA. Rate structures exist as text documents without any standard format. There are thousands of utilities from which the rates would have to be collected. While in principal EIA might require utilities to store rate tariffs in a standard electronic format the burden on industry would be considerable. In summary, this request is currently impractical to implement.

5. For net metered systems, collect the DC capacity in addition to the current collection of AC capacity.

Comment From: TSF

EIA Response: The data on the EIA-861 is collected from the distribution companies that take power from the net metered systems, not directly from the operators of the systems. We have not researched whether the distribution companies have the capability to report information on the DC ratings of solar PV systems. EIA can investigate this for the next clearance of the survey.

6. IEEE-DRWG suggests deleting several questions from Schedule 3, Part A, dealing with distribution system characteristics and automation. IEEE-DRWG believes that the questions will fail to collect consistent and meaningful information. APPA, which "generally supports the proposed changes to Form EIA-861 and as such encourages OMB to accept these changes," in this case agrees with IEEE-DRWG that these questions should be removed. IEEE-DRWG also suggests clarifications to the new questions on distribution system reliability in Schedule 3, Part B.

Comment From: IEEE-DRWG and APPA

EIA Response: EIA held a conference call with members of the IEEE-DRWG, DOE/OE, and Lawrence Berkeley National Laboratory to review IEEE-DRWG's recommendations. EIA agrees to make the following changes:

- EIA will delete from Schedule 3, Part A questions dealing with distribution system automation because there is a lack of technical standards and common definitions in this area that will prevent the collection of useful information.
- EIA will change the definition of what constitutes a distribution circuit based on the recommendations of IEEE-DRWG.
- EIA will change the question concerning VAR to address Volt/VAR Optimization and will clarify the accompanying definition.
- In the questions and instructions dealing with distribution system reliability EIA will make technical changes to certain definitions such as the definition of system average interruption frequency index (SAIFI) statistic, based on the recommendations of IEEE-DRWG.

7. The Solar Foundation asks "For Schedule 7, Part B, *Distributed and Dispersed Generation*, it is unclear as to how each utility will know if a generator filed Form-860. If they are to only assume that all plants over 1 MW ac have filed this form, what does the removal of the 2 MW limit from Schedule 7, Part A achieve?"

Comment From: TSF

EIA Response: The data on net metered capacity and distributed and dispersed capacity requested on the EIA-861 and EIA-860 surveys is intended to provide wide coverage of these sectors. The data are of interest because of public policy debates over the use of net metering, including its impact on the adoption of renewable energy sources and implications for utility rates, and the growth of small scale renewable capacity such as roof-top solar.

The survey forms interact to provide the following information:

1. Total net metered capacity: from the EIA-861/Sch. 7A
2. Net metered capacity of 1 MW or greater: from the EIA-860
3. Net metered capacity of under 1 MW: the difference between (1) and (2)
4. The portion of distributed capacity that is not net metered: this can be derived from the data reported on the EIA-860 and the EIA-861, Schedules 7B.
5. Dispersed capacity under 1 MW: from the EIA-861/7B

The comment is correct in noting that the respondent can use capacity to identify if data has been filed on the EIA-860 survey. The reporting threshold for the EIA-860 is 1 MW.

The frame for the EIA survey consists of electric utility companies, Demand Side Management (DSM) Program Managers (entities responsible for conducting or administering a DSM program), wholesale power marketers, energy service providers (registered with the states), and certain electric power producers. There is no circumstance in which individual households could be required to report.

8. SEIA suggests for the EIA-826 and EIA-861, "For PV and other net energy metering (NEM) customers, in addition to continuing the collection of data on "electric energy sold back (MWh)," begin collecting data on both total energy delivered to NEM customers and *net* energy sold to NEM customers (this value could be negative if NEM customers are net exporters instead of net importers of electricity). Further, also collect data on *net* sales (dollars) to NEM customers excluding any payments for renewable energy credits."

Comment From: SEIA

EIA Response: EIA does not believe the suggested questions will yield meaningful and consistent results, at least not at the current time. Net metering tariffs have complexities and vary across the states in a manner that would require an increase in level of detail and questions that would significantly increase burden. In addition we expect these tariffs to change and become more standard over time.

9. EIA should set "reasonable" reporting thresholds on the EIA-826 and EIA-861 surveys for the collection of data on net metering systems and certain other data items including demand response, distribution system reliability, and energy efficiency.

Comment From: EEI

EIA Response: Thresholds are already in place, based on company size and type of business. The smallest utilities, comprising about a third of all companies, are only required to file an annual short form (the EIA-861S). Of the remaining approximately 2200 companies, only 531 (as of February 2014) are required to file monthly on the EIA-826 survey.

G. Form EIA-861S, Annual Electric Power Industry Report (Short Form)

1. "APPA recommends that OMB urge EIA to add fields for respondents to provide the number of customers for each sector (residential, commercial, and industrial). This is readily available information that should not add any time burden. This information would allow industry analysts to observe any notable changes in the size and makeup of smaller utilities without waiting five years for these utilities to report their complete information. It would also enable EIA and other analysts to make better use of the other survey data being collected on EIA-861S."

Comment From: APPA

EIA Response: EIA's experience is that small utilities have difficulty providing accurate customer counts by sector. Requesting this information will increase the burden on respondents and create additional data review and correction work for EIA. This would partially negate the objective of the short form, which is to reduce burden for all parties.

H. Form EIA-923, Power Plant Operations Report

1. "Exempt net-metered PV systems from this survey. Justification: The facilities that host net-metered PV systems are not primarily engaged in the electricity generation business and may not maintain the type of data collected in this report."

Comment From: SEIA

EIA Response: EIA collects operating data on all grid-connected power plants with a capacity of one MW or greater. Solar PV systems, net metered or otherwise, are a rapidly growing segment of interest to the public and policymakers. Excluding these plants from reporting would create a significant gap in EIA's data on power plant operations. Also note that because of their small size solar PV plants generally have to file only an annual survey and because of the nature of the technology these plants do not have to answer most of the questions on the survey (e.g., questions on fuel consumption and the operation of environmental control systems).

2. The survey should ask for the "chlorine" content of coal, not the "chloride" content.

Comment From: Energy Ventures Analysis

EIA Response: The correct term is "chlorine content." This is the "term of art" used in the coal and power industries. The use of "chloride" was a typographical error. The survey form and instructions will be corrected.

3. Luminant states that EIA should not move forward by a month the filing dates for the annual version of the EIA-923 survey. Luminant also states that the "EIA-860 included a note that allowed for the filing date to be moved back day-for-day if for some reason the EIA was late in opening its Internet Data Collection system. The EIA-923 should include a similar note regarding the filing date."

Comment From: Luminant

EIA Response: The filing date has not been moved forward. The *current version* of the survey states that the response is due 45 days after the form opens for data entry. The *proposed survey* sets the last business day of February as the due date. Since EIA attempts to open the surveys on the first business day of January, the February due date actually gives the respondents more time than in the past – about 60 days – to file the survey.

A note will be added to the Response Due Date section of the instructions explaining that if EIA is late in opening its Internet Data Collection system the filing deadline will be extended day for day. Respondents will be notified by email of the delays and new survey opening date.

I. Form EIA-930, Balancing Authority Operations Report

The comments received on the EIA-930 survey address the start date, the file format, the need for the survey, the burden estimate, power grid security, the business sensitivity of the data, and the granularity of the data collected. We summarize and respond to the comments below.

1. Comparison of Comments Received in Response to the Federal Register Notices

OMB received 11 comments concerning the EIA-930 in response to the second Federal Register Notice. This compares to 30 comments received in response to the first notice, most of which criticized the proposed survey.

During the period between the notices EIA continued its efforts to explain the rationale and process for the EIA-930. EIA also modified its proposal to address industry concerns.

Only six of the entities that responded to the first Federal Register Notice filed 30-day comments. Of these:

- Two maintained their opposition (EEI and APPA);
- Two dropped their opposition (Bonneville and ISO/RTO Council)
- Two reiterated their support (DOE/OE and Wood Mackenzie).

One respondent, Tacoma Power, was part of a group that filed 60-day comments opposing the survey. Tacoma continues to oppose the proposal although the larger group (Northwest Balancing Authorities) did not respond to the second notice.

The four other entities that filed comments are new. All are data users and support the proposal:

- Bureau of Economic Analysis,
- Eastern Interconnection States Planning Council,
- Solar Energy Industries Association and,
- Energy Storage Association.

In summary, of the 11 comments filed:

- Three data providers oppose the survey,
- Two data providers do not oppose the survey, and
- Six data users support the survey.

2. Start Date

Comments

The proposal for the EIA-930 survey in the Supporting Statement was to initiate the survey on March 1, 2014. Several commenters pointed out that given the OMB clearance schedule and the need for respondents to set up the necessary systems, this date is no longer practical.

The Edison Electric Institute (EEI) urged that respondents be given six months from the date of OMB approval to implement the survey. Tacoma Power (TP) also proposes a six-month implementation period. The ISO-RTO Council (IRC) requests an October 1, 2014 start date.

The American Public Power Association (APPA) mentions an almost year-long period the Federal Energy Regulatory Commission (FERC) gave respondents for implementing changes to their Electric Quarterly Report (EQR). APPA says the "quarterly survey [is] similar in many respects to the EIA-930."

EIA Response

We agree that the start date for the EIA-930 survey should be delayed. For planning purposes EIA will provide six months of lead time after finalizing the survey before data will be collected, which is consistent with the suggestions of EEI, TP, and IRC.

APPA's assertion that the FERC EQR data collection and the EIA-930 survey are comparable is incorrect. The FERC EQR collects detailed contract transaction level data on wholesale electricity sales in the U.S. This is billing data collected quarterly. The collection of this information involves significant back office validation and processing by respondents. EIA-930 data are "as-is" operational data requiring minimal processing that will be posted using automated systems. One reason for the long implementation period for the recent changes to the EQR is that for the first time non-jurisdictional entities with no experience filing with FERC will be required to file. All respondents to the EIA-930 already file with EIA under other surveys.

3. File Format

Comments

The IRC would like EIA to accept the data file in either XML or CSV format.

Tacoma is concerned about the "lack of technical information about the EIA-specified xml schema."

EIA Response

As requested by IRC we will accept data postings in XML or CSV file formats. The XML schema will be made available once the survey is finalized.

4. Treatment of Time

Discussions with industry and review of an existing industry XML schema for operating data has made us aware that our proposed treatment of time will not adequately handle changes between standard and daylight savings time. To address this, a 25th hour will be added to the file format. Also to assist in disambiguation of the data from BAs in different time zones, we will add reporting of the Coordinated Universal Time (UTC/GMT) for each hour.

5. Business Case

Comments

APPA says that "No business case has been made to justify the release of this information in real-time or near real-time." Tacoma Power is concerned with the "continued lack of purpose for posting of granular data in near real time" and argues that some research uses for the data do not require immediate release of the data.

EEI states that "While we understand how such information could be useful to EIA and policy makers, the information need not be published in open, discrete, near to real time to accomplish these

purposes." EEI also states that "no other government agency publishes economic or other data with such degree of real time detail."[35]

Other comments argued for the value of the EIA-930 data including release of data in near real-time. These include:

- The Eastern Interconnection States' Planning Council (EISPC), representing 39 states, urges the adoption of the EIA-930 survey.[36] EISPC states that it shares EIA's objective to improve the evaluation of renewable power, smart grid and demand response. "Hourly data is needed to evaluate these developments." EISPC also notes that as part of states' statutory requirements to ensure reliability of power supply, the EIA-930 near real-time information would improve the process of recovery of the power system due to natural disasters. They also say that consistent with their members' statutory charge to provide customers with an economical power supply, the EIA-930 hourly data will facilitate demand response and dynamic prices programs. EISPC states that the EIA-930 survey should foster innovation.
- The Bureau of Economic Analysis (BEA) said that "real-time collection may lead to more timely release" of certain of the economic data that BEA publishes.
- The Energy Storage Association (ESA) says that the EIA-930 data would support their efforts to define how electricity storage technology can best provide frequency regulation, frequency response, ramping, peak shifting, renewables integration and flexible capacity.
- DOE's Office of Electricity Delivery and Energy Reliability (DOE/OE) says that the EIA-930 data will enhance their ability to prepare statutorily mandated National Electricity Transmission Congestion studies by ensuring that electricity flow data are collected consistently across the nation and made publicly available.
- The Solar Energy Industries Association stated that it "supports the creation of this new survey and data collection." As discussed below in the section on data granularity issues, SEIA would prefer the collection of more detailed information than EIA is proposing.

---

[35] The EEI comments appear to suggest that all of the data collected by the EIA-930 will be collected in near real-time (see the second page, third paragraph of EEI's letter of January 23, 2014 to OMB). The only data the survey will collect in near real-time is demand, which must be made available to EIA within 59 minutes after the end of an hour. All other data, dealing with interchange, forecasted demand and net generation, will be published with a lag of one to two days depending on the specific data item. For more information see page 20 of the Supporting Statement.

[36] According to the EISPC website, "The Eastern Interconnection States' Planning Council (EISPC) is an historic endeavor initially funded by an award from the United States Department of Energy (DOE) pursuant to a provision of the American Recovery and Reinvestment Act (ARRA). The goal is to create an unprecedented collaborative among the states in the Eastern Interconnection. It is comprised of public utility commissions, Governors' offices, energy offices, and other key government representatives….This collaboration will foster and produce consistent and coordinated direction to the regional and interconnection-level analyses and planning." See: http://communities.nrri.org/web/eispc/charter.

EIA Response

The commercial concerns raised by EEI, Tacoma, and APPA in the second comment period are the same as these parties raised in discussions and correspondence with EIA before the first Federal Register Notice and in response to that notice. We have explained the purpose of the EIA-930 in numerous meeting with industry, in the initial Federal Register Notice, and in the Supporting Statement.[37] For a detailed discussion of the business case for the EIA-930, see pages 21 to 22, and 68 to 70, above. We will address three fundamental issues associated with the EEI and APPA comments.

Unique Nature of the Electricity Market and Balancing Authorities: At the most basic level the comments from APPA, Tacoma, and EEI do not address the unique aspects of the electric power market. EIA's proposed hourly release of demand data, and the release of other operating data within one or two days, may on its face seem very frequent and fast. This is because most economic activity occurs at a much more leisurely pace. Most commodities take significant time to move and can be stored. Even oil and gas transported through pipelines moves at rates measured in miles per hour, and can be stored in large quantities near users. Electricity moves at the speed of light and very little is stored. Unlike any other markets, the electric power markets operate in real time and near real-time data are needed to understand market operations.

EIA is not proposing to the collect the EIA-930 data from Balancing Authorities to assist Balancing Authorities in operating the grid. The EIA-930 data is intended to inform government and private sector stakeholders concerned with the current operation and future of the electric power system in the United States.

The need for the EIA-930 data collection is rooted in the physical nature and institutional organization of the electric power system. Due to the lack of sufficient cost-effective electricity storage, electricity must be produced at the moment it is demanded. The industry relies on certain entities to ensure the moment-to-moment balancing of supply and demand. Electric utilities that perform the balancing function are called Balancing Authorities. Balancing authorities are the basic operating unit in the electric industry. They are responsible for managing a system that by design reacts immediately to changes in demand.

Recent developments in the power industry have heightened the importance of near real-time system operations, including:

Utility operations have been complicated in recent years with the addition of significant variable energy resource capacity, primarily wind and solar.

There is growing use of distributed generation and electricity storage.

---

[37] Bonneville Power Administration (BPA), initially opposed the survey, but in its 30-day comments said that it "understands EIA's goals for this collection."

A wide variety of devices (of which the best known are probably smart meters) and programs, collectively known as demand response, have the potential to enhance electric system efficiency and help maintain balance by influencing consumer demand.

There is concern over the possibility of more frequent disruption to the power system due to natural events or human actions.

The EIA-930 will collect basic near real-time operating data from Balancing Authorities. The largest BA's apparently agree that this information is of public value since they are currently posting much of the required data on their public websites voluntarily.

Some of the applications of the EIA-930 data include:

To evaluate the impact of demand response programs and increased use of intermittent renewable energy technology. As these resources are introduced, the pattern of hourly demand will change. The Form EIA-930 will allow EIA and others to track these changes. These changes will impact wholesale power prices, retail electricity rates, the revenues and profitability of utilities and generators, and the demand for technologies (transmission, generation, smart grid, and others).

To provide near real-time information on the recovery of the power system in the wake of system upsets (e.g., hurricane damage, wide-area blackouts, or other human actions).

To provide state and local officials experimenting with or implementing demand response and dynamic pricing programs information on the impact of these programs.

To provide a near real-time indicator of electricity-using economic activity.

In summary, the purpose of this survey is to provide basic operating statistics for the nation's electric power system on a current basis. The business case for the EIA-930 is discussed in Part A of the Supporting Statement, pages 21, 22, and 68 to 70.

The operation of Balancing Authorities is central to understanding electricity system operations and markets. The BA members of EEI and APPA are not autonomous businesses. The level of connectedness and interdependence of electric utility balancing authorities is unique. BAs are physically connected by wires. The operation of their systems is synchronized to an alternating current of 60 hertz frequency in real-time. Balancing authorities' actions in maintaining a balance between supply and demand in their areas is instantly propagated throughout the grid. These businesses share the operation of a huge, economy driving, machine in the national interest.

EIA is statutorily charged with collecting relevant energy information. The EIA-930 survey focuses on this all-important supply/demand balance and the associated flow of power between systems. We propose to collect the information from all interconnected balancing authorities in the lower 48 states because

they jointly share in the operation of the U.S. electric system. We propose to collect this data on an hourly integrated basis because this is how the industry currently records energy balance data.

The suggestions by EEI that we aggregate much of the BA data (discussed below) are antithetical to purpose of the survey. The focus of the EIA-930 is on the balancing function. The demand, net generation and actual interchange data we propose to collect are not separate unrelated data elements. They are the three elements that together must balance hour by hour for each balancing authority. Aggregated data collection would prevent data users from understanding the operation of the balancing authorities, thus undermining the purpose of the survey.

Nonetheless, EIA will aggregate data for one category of respondents, the "small" BAs. As discussed below in Item 6, Burden, no commenter defined what constitutes a "small" balancing authority. The trade associations have also never provided specific examples of how commercial harm would result from the release of the EIA-930 data.

In the absence of suggested guidance from industry, and as an accommodation to industry concerns, EIA's proposal is to mask the data for any Balancing Authority with only one or two interconnections with the larger grid. When the data for these BA's is first published it will be aggregated with that of larger neighboring Balancing Authorities, making it impossible to discern the specific information for a "limited-connection" BA. The detailed information for the "small" BA will not be released for two days which, because of the rapidity with which the electricity market moves (on a scale of hours or minutes) should obviate the issue of commercial sensitivity.

Common Availability of Real-Time Electric Power Data: The industry comments imply that there is something exotic or unusual in publishing real-time electric power data. This is not the case. For most of the past 15 years the RTOs covering more than half of the United States, and the Bonneville Power Administration, have published demand and other data at intervals ranging from every five minutes to hourly. This is presumably done because the data are important to power producers and consumers and other stakeholders. The EIA-930 will simply expand the availability of near real-time demand data to the entire contiguous 48 states, and ensure that is available in a consistent format from a single (EIA) source. This will make it easier and cheaper for the public to access the data.

The data currently being posted by the Regional Transmission Organization (RTO) Balancing Authorities and the Bonneville Power Administration Balancing Authority varies from case to case, but in general is more detailed and timely than the data EIA is proposing to collect through the EIA-930 survey. For example:

- The Bonneville Power Authority Balancing Authority publishes real-time load data at five minute intervals and real-time data on net generation at the same interval with detail for hydroelectric, wind, and thermal generator output. In comparison, the EIA-930 will collect real-time load at one hour intervals and will publish net generation the next day (that is, not in real-time) and without any breakdown by energy source.

- The California ISO Balancing Authority publishes load at 10 minute intervals and also provides a continuous comparison of real-time load with resources available to meet load. The ISO also shows generation by renewable energy source every 10 minutes and therefore, by difference, the extent to which the grid is reliant on thermal generation, large hydro, and power imports. The EIA-930 will collect no data on available resources or, as noted above, a breakdown of generation by energy source.
- The ERCOT Balancing Authority, covering most of Texas, provides real-time information on the loading of the handful of transmission ties that connect ERCOT with the rest of the national electric power grid. The EIA-930 collects no comparable data.
- The Southwest Power Pool Balancing Authority (SPP) makes available generation by energy source (for example, coal, natural gas, wind, etc.) updated every five minutes; a real time display of the SPP system Area Control Error, an indicator of system supply/demand balance; and actual load at five minute intervals and a running comparison with forecasted load. The EIA-930 will report load at hourly intervals, net generation with no distinction by energy source the next day (not in real time), and no information on Area Control Error.
- Most of the RTO Balancing Authorities (PJM Interconnection, Mid-Continent ISO, ERCOT, SPP, and California ISO) operate real-time markets for electricity that establish publicly available prices at hundreds or thousands of "nodes" throughout the RTO. These nodal prices directly reflect demand, transmission system loading, and generating unit availability, and as such provide an indicator of the stress points within the transmission system. The EIA-930 will collect no nodal-level data of any kind, price or otherwise.

The foregoing are examples of the data made publicly available in real time (generally as graphic displays and as downloadable files), not a complete list. For additional discussion see Part A of the Supporting Statement, pages 24 – 26.

The Need for Near Real-Time Data: The industry comments observe that some research applications of the EIA-930 data do not require near real-time release. This is true, but the unquestioned value of the data for longer-term research is not EIA's justification for immediate release. As explained in the Supporting Statement, the purpose of hourly release is to provide stakeholders with immediate visibility into the impact of variable renewable resources (solar and wind), energy storage, smart grid, and demand response programs on the operation of the power grid. In addition, EIA believes that the near real-time data will be of value to first responders and policymakers in the event of a major disruption to the operation of the power grid.

Other aspects of the need for real time data include the following:

- ***It appears EIA has not demonstrated that anyone who balances the grid needs this information for the function of the grid***. EIA has never suggested that the EIA-930 data is needed in any respect for grid balancing or other grid operations. We have not attempted to demonstrate the utility of the data for grid balancing because this is unrelated to the purpose of the survey.

- ***If this information is being used for policy making or for academic reasons, why not delay the release of the hourly data to monthly intervals?*** EIA agrees that there are purposes for the EIA-930 data, such as academic research, that do not require near real-time and daily reporting of EIA-930 data. However, there are other purposes that do require near real-time data. These include:
    - Encourage more efficient use of electricity by helping power consumers understand the real-time status and operation of the electric power system.
    - Providing government and private sector stakeholders with necessary context for how solar and wind power, which have variable output, are affecting the operation of the grid.
    - Provide stakeholders an immediate window into other technologies that are changing grid operations, including smart grid, demand response programs, and energy storage technologies.
    - The near real-time data will be of value to first responders and policymakers in the event of a major disruption to the operation of the power grid.

  A final consideration is EIA's belief that immediacy of experience contributes significantly to understanding and developing intuition. Where practical, experience is the preferred approach to learning. Real-time and next day posting of these data allows interested parties to assess hourly operating data with weather and systems conditions fresh in their minds.

  For further discussion see Part A of the Supporting Statement, pages 83 – 84.

- ***Delaying the release of the data would still allow policy makers and those in academia to have the hourly data for their modeling purposes, but it would prevent the data from potentially being used to disable or damage the grid.*** EIA has been unable to corroborate the security concerns raised by commenters. These concerns, in fact, are at variance with long-standing, everyday electric power industry business practices.

  As discussed in Part A of the Supporting Statement (page 24) the largest Balancing Authorities – that is, those that also function as Regional Transmission Organizations (RTOs) plus the Bonneville Power Administration – began releasing voluminous public, real-time information on grid operations in the late 1990s. This data covers most of the United States including the biggest and most congested power networks, such as the northeast and California. To the best EIA can determine the release of this and other operating information has never been identified as a security threat.[38] To the best of our knowledge no trade association or other party has

[38] Since the development of the EIA-930 began in 2011 EIA has conducted several Internet searches and document reviews on grid security issues related to the release of operating data. Nothing was found identifying the on-going release of operating data by Balancing Authorities as a security risk. See: National Research Council, *Terrorism and the Electric Power Delivery System*, 2012, http://www.nap.edu/download.php?record_id=12050; National Research Council, *The Resilience of the Electric Power Delivery System in Response to Terrorism and Natural Disasters: Summary of a Workshop*, 2012, http://www.nap.edu/download.php?record_id=18535; Congressional Research Service, *Electric*

argued to the reliability authorities, NERC and FERC, that the long-standing release of this data – which is generally more timely and detailed than the proposed EIA-930 -- poses a security threat.

The commenters' concerns seem focused on key transmission facilities. The data that reveals the most about use of transmission is the actual interchange data. The EIA-930 will collect the total interchange between Balancing Authorities, which typically reflects flows over multiple transmission lines. There is no facility-specific information for a miscreant to use. Further, the EIA-930 will not collect interchange data in real time. The data will be collected and released with a delay of two days.

There is no cyber-security issue associated with the reporting method for the EIA-930. The Balancing Authorities that currently report real-time data for most of the United States have voluntarily established systems to post data on their public websites. They have presumably done so in adherence with the mandatory reliability standards for cyber-security. This experience demonstrates that cyber security is not a barrier to posting the EIA-930 data.

Government entities and some larger Balancing Authorities publish other operating data which goes well beyond the EIA-930 collection. This includes:

- Most of the RTO Balancing Authorities operate real-time markets for electricity that set publicly available prices at hundreds or thousands of "nodes" throughout the RTO. These nodal prices are influenced by demand, transmission system loading, and generating unit availability, and as such provide an indicator of the stress points within the transmission system. The EIA-930 will collect no nodal-level data of any kind.
- Information on the operating status of many individual power plants is in the public domain. DOE's Office of Electricity Delivery and Energy Reliability (DOE/OE) posts on the afternoon of each business day information gathered from public sources on the operating status of generating units and transmission lines.[39] The Nuclear Regulatory Commission posts daily the status of every nuclear generating unit in the United States.[40] The California ISO publishes each afternoon a list of "Curtailed and Non-Operational Generating Units."[41] EIA has been unable to identify any assessment that has concluded that the release of this information, which is much more detailed than the EIA-930 data, creates a security risk.
- Information on the physical characteristics of the grid is available in the public planning studies for transmission line projects. This information is also available from studies of

Utility Infrastructure Vulnerabilities: Transformers, Towers, and Terrorism, April 2004, http://www.fas.org/sgp/crs/homesec/R42795.pdf.

[39] DOE/OE, *Energy Assurance Daily*, available at http://www.oe.netl.doe.gov/ead.aspx. The *Energy Assurance Daily* is based on press reports and other public sources, not on a government data collection.

[40] See the *Power Reactor Status Reports* posted at http://www.nrc.gov/reading-rm/doc-collections/event-status/reactor-status/.

[41] http://www.caiso.com/market/Pages/OutageManagement/UnitStatus.aspx

power system disruptions. For example, the joint report of the U.S. and Canadian governments on the 2003 blackout provided a detailed guide to the configuration, operation, and vulnerabilities of the Midwestern power grid.[42] These studies provide much more detail on the transmission system than the EIA-930 data; but again, we have been unable to identify any studies that suggest that this information poses a security threat.

In summary, Balancing Authorities have released voluminous public, real-time information on grid operations since the late 1990s, covering most of the United States. To the best EIA can determine this data and other public operating data on grid conditions such as information on power plant outages, has 1) not been identified as a security threat, and 2) NERC or FERC have not been asked to treat this data as a security threat.[43] The information to be collected by the EIA-930 will provide wider geographic coverage in a uniform format compared to current data, but will provide less detail and will be less timely than much of the data currently available.

For further discussion see Part A of the Supporting Statement, pages 24-26 and 78 to 80, and Section 7 of this Appendix (below).

- ***How would EIA envision first responders and policymakers using this data? What do they currently do when there is a major disruption to the operation of the power grid and how will the new data have any practical utility?*** As EIA understands it first responders and government authorities use telephone and, in some cases, radio to communicate with utilities. This type of communication is obviously essential, but the limitation is that the information is at the level of a single utility or a portion of a utility. It does not provide an overview of the status of the grid at the level of its main operational component, the Balancing Authority. The EIA-930 will provide information on the status of the grid at the operating level and how that status is

[42] http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/BlackoutFinal-Web.pdf.

[43] One question is why the detailed and real-time public information made available by Balancing Authorities and other entities does not create a security threat. There are two considerations. First, this detailed information is not needed to identify grid vulnerabilities. System stress is largely a function of the weather (very hot or very cold). Unusual stress – generally created by a combination of extreme weather and power plant or transmission line outages – is publicly announced by utilities and governments in requests for consumers to reduce power demand. Many important transmission lines can be identified as the high voltage lines that radiate from power plants. One study notes that "high-value choke points" on the grid can be determined through a review of maps, public aerial imagery, and on-the-ground observation (National Research Council, *Terrorism and the Electric Power Delivery System*, 2012, http://www.nap.edu/download.php?record_id=12050, pp. 32-33).

The second consideration is that even if a high value point can be identified this is in itself not enough information to plan an attack. The power grid is designed with redundancy; in the jargon of the industry, the grid is built to withstand multiple "contingencies" before it fails. A miscreant would need to understand the redundancies built into the system and then target the correct combination of facilities to trigger a system failure, keeping in mind that this combination of facilities is not static but changes with system conditions.

trending; this information should be of use to authorities in deciding how to deploy resources and to inform the public.

It is also important to note that the telephone/radio model of emergency communications will begin to break down when a grid emergency covers a large geographic area. There are simply too many entities to contact to get a picture of how grid is operating (this will in particular be an issue at the federal level in the case of a major event). The EIA-930 will help to solve this situational awareness problem. The data will be generated directly by the Supervisory Control and Data Acquisition (SCADA) systems of the Balancing Authorities, and made available electronically to EIA using automated systems. There is no human intervention. This approach increases the speed, manageability, and accuracy of communications.

In principal government authorities could call the Balancing Authorities to get status information. The problem with this approach is that the operation of the power grid is not well understood and it is unlikely that many municipal or state offices are aware of the role of BAs, which BA they should be concerned with, or how to reach them.

6. Burden

Comments

EEI, APPA and Tacoma challenge our burden estimates. EEI and APPA do not provide any specific quantitative values.

- EEI lists steps necessary to comply with the EIA-930 and characterizes the burden as substantial.
- APPA says that "this proposal would create an excessive time burden for BAs…"
- EEI and APPA both emphasize the burden impact on "small" Balancing Authorities. APPA states that many of its members "do not have significant operating budgets." EEI claims that "many of the nation's smaller BA's do not currently collect, report, or post this information on a real time basis…"
- Tacoma Power "estimates approximately 300 hours to develop a website at a cost of approximately $29,000. As a utility that is owned by the citizens of Tacoma, we are concerned about the lack of clear benefit to our customers this investment provides."

EIA Response

The APPA and EEI statements on burden offer no quantification and therefore cannot be evaluated in any meaningful way. Neither defines what constitutes a "small" BA, so their claims concerning the cost or inability of "small" BAs to comply with the EIA-930 also cannot be evaluated.

APPA's comment that many of its members "do not have significant operating budgets" is irrelevant because these tiny municipal utilities are not Balancing Authorities. Only eight of APPA's roughly 2,000 members are BAs. These eight are the municipal utilities serving:

- Gainesville, FL
- Homestead, FL
- Los Angeles, CA
- New Smyrna Beach, FL
- Seattle City Light, WA
- Springfield, MO
- Tacoma Power, WA
- Tallahassee, FL

As an accommodation to industry concerns, we stated in the Supporting Statement that we would mask for two days the data for BAs with one or two interconnections. APPA argues that this accommodation "does not address the issue of smaller BAs with more than two interconnections." However, it is entirely unclear what APPA means when it refers to "small" balancing authorities that also have more than two interconnections. Of the eight public power systems listed above three have more than two interconnections: Los Angeles, Seattle, and Springfield. None of these are "small." Seattle and Los Angeles are members of the Large Public Power Council, an association of the largest public power systems.[44] The Springfield utility is a multi-faceted organization that operates electricity, natural gas, water, broadband and transit services.

As Balancing Authorities all of these entities must, by definition, have the information technology and management capacity to manage system demand in real time. With respect to EEI's statement that "many of the nation's smaller BA's do not currently collect, report, or post this information on a real time basis," this comment is contradicted by EEI's own statement that the EIA-930 will add "another costly and time consuming data link *to an already long list of information exchanges required of BAs"* [emphasis added]. EEI's depiction of the (undefined and unnamed) smaller BAs is also contradicted by the specifications in NERC's *Functional Model* for what constitutes a Balancing Authority. These specifications include numerous hourly and real-time data gathering and reporting tasks.[45]

---

[44] Tacoma is also a member. According to its website, "Founded in 1987, the Large Public Power Council (LPPC) is comprised of 26 of the nation's largest public power systems." See: http://www.lppc.org/about-lppc/introduction/.

[45] See the NERC *Functional Model*, pp. 33-34, at http://www.nerc.com/files/functional_model_v5_final_2009dec1.pdf. The NERC *Functional Model* "describes a set of Functions that are performed to ensure the reliability of the Bulk Electric System…. The Model assigns each Function to the entity that performs the function…. The Model also describes the interrelationships between [entities]. The capabilities and tasks defined in the NERC function model are not mandatory but are described by NERC as the "the framework for the development and applicability of NERC's Reliability Standards." (*Functional Model*, p. 7)

(Neither FERC nor NERC collect or otherwise obtain EIA-930-type data, something EIA confirmed with these entities during the process of developing the proposed survey. For related information see Part A of the Supporting Statement, pages 85 and 86.)

It is true that BAs vary greatly is size. But it is unlikely that any BA would be deemed a small business. There are no technical issues that require an entity to become a BA. It is strictly a commercial decision. Small size, however it is defined, is not a legitimate argument for avoiding obligations associated with performing the balancing function. "Small" BAs are not exempt from the NERC reliability standards and compliance obligations of being a BA.

In relation to claimed data confidentiality issues EEI states that EIA "has declined to adopt our industry's proposal to allow smaller BAs outside the RTOs and ISOs to group together in reporting the data…." It is unclear how on the one hand the smaller BA's can lack the ability to comply with the EIA-930, yet on the other hand have the technical wherewithal, management capacity, and funding necessary to create an entirely new IT infrastructure to collect data across multiple companies in near real-time.

In relation to claimed data confidentiality issues, EEI has suggested both that EIA aggregate the data and that the small BAs should perform their own aggregation. In EEI's most recent comments (letter from Comer to Whiteman and Peterson, January 23, 2014) the association suggests on page 4 that EIA should perform the aggregation. However, on page 3 EEI makes the comment that EIA "has declined to adopt our industry's proposal to allow smaller BAs outside the RTOs and ISOs to group together in reporting the data…." EEI appears to be simultaneously arguing that small BAs (which it never defines) lack the ability to easily respond to the EIA-930 survey, but nonetheless have the technical wherewithal, management capacity, and funding necessary to create an entirely new IT infrastructure to collect data across multiple companies in near real-time.

EEI, APPA, Tacoma also do not appear to consider the burden implications of the proposals to aggregate the data before making it available to EIA or to delay the submission of the data. Additional processing of raw data results in additional burden. EIA-930 survey data are produced hourly by balancing authority energy management systems. The EIA-930 survey burden involves packaging the data in a file and posting it. This process is expected to be fully automated. As the Tennessee Valley Authority said in its 60-day comments, the workload after start-up of posting raw or as-is data would not be significant.

Aggregation of these data for reporting involves coordinating the data transfer of respondents and additional data processing. This results in additional burden. Balancing authorities go through a process of validating, correcting and truing-up the data over the following month. We would expect the data to reflect these revisions if posting were delayed for a monthly or quarterly reporting cycle. This revision process involves considerable work by hand and revising the raw data will add significant burden. It may seem that a move to quarterly reporting, as proposed by EEI and APPA, would lessen reporting burden, but in the case of the EIA-930 survey it will increase burden.

EEI states that "each BA will be required to create a communications link to the EIA to transmit the data…" There is no such requirement for the EIA-930. The standard data "filing" method is for BAs to post files to their own website. However, if a BA wants to transmit the data to EIA we will attempt to accommodate them.

Tacoma estimated that developing a website will take 300 hours and cost $29,000. Three hundred hours translates into 37.5 person-days. This is substantially more than our start up cost estimate in the Supporting Statement of eight person-days.

Our initial start-up time estimate was confirmed by Chugach in its 60-day comments. Chugach is still the only party to provide a burden estimate with any detail.[46] Chugach stated that setting up a system for posting EIA-930 data would require 5 to 10 days of initial work. It is not surprising to find that the start-up cost estimate of two respondents varies; our burden estimate must necessarily be an average for respondents. The information provided by Tacoma does not provide a convincing basis for modifying our burden estimate.

7. Security

Comments

EEI and APPA warn of the security risks from releasing near real-time EIA-930 data. For example, EEI says in its 30-day comments that "much of the nation's electric grid is critical infrastructure, and it is important to protect it" and that public release "can reveal information that terrorists or others would not otherwise be able to obtain easily." APPA alludes to security issues in its 30-day comments but does not explain further.

As noted in the Supporting Statement, EIA has been unable to corroborate the security concerns raised by commenters (see pages 24-26 and 78 to 80, above). In addition to our own research on the security issue we also look to the Federal Energy Regulatory Commission (FERC), which has statutory authority over electricity reliability, and the North American Electric Reliability Corporation (NERC), which the FERC designated as the Electric Reliability Organization responsible for the reliability of the grid. We briefed staff in FERC's Office of Electricity Reliability on the EIA-930 last year. They did not submit either 60-day or 30-day comments. We briefed NERC, discussed the EIA-930 with NERC staff on other occasions, and also briefed the Regional Reliability Coordinators meeting as members of the NERC Operating Reliability Subcommittee. NERC has never raised any security or other concerns about the

[46] Chugach estimated "that setting up a system for automatic disclosures for Chugach's system would require 5 to 10 days of initial work, several hours of follow-up monitoring/system revisions during each of the initial months and then approximately 40 hours per year of monitoring, maintenance and reporting."

EIA-930, and the comments it submitted in response to the Federal Register Notices do not discuss the EIA-930. If the EIA-930 poses security concerns, we would expect FERC and NERC to raise them.

EIA also briefed DOE's Office of Electricity Delivery and Energy Reliability (DOE/OE) – whose mission is to "provide national leadership to ensure that the Nation's energy delivery system is secure, resilient and reliable" -- on the EIA-930, and had subsequent discussions with DOE/OE staff. As noted earlier, DOE/OE supports the EIA-930 proposal. EIA is charged by its enabling legislation to serve as an independent and non-partisan source of energy information and analysis. DOE's Office of Electricity Delivery and Energy Reliability (OE) is organizationally distinct from EIA and has a mission to help "ensure that the Nation's energy delivery system is secure, resilient and reliable." EIA believes OE's support of the EIA-930 should be viewed as an independent action that carries significant weight.

As in prior statements and discussions with EIA, APPA and EEI assert security issues without providing any explanation to substantiate their claims. Their concern that reporting this information causes security risks is misplaced and conflicts with the long-standing and routine publication of real-time data by Bonneville and the RTOs that serve over half the United States. EEI argues that "the RTOs and ISOs that post some or all of the proposed information do so for large geographic areas, thus effectively masking operations at the individual utility and plant level and so minimizing commercial and security impacts." What this argument does not consider (but as we discussed in the Supporting Statement, page 25) is that the RTOs operate real-time markets for electricity that establish publicly available prices at zones or, in most cases, hundreds or thousands of "nodes" throughout the RTO. These zonal and nodal prices directly reflect demand, transmission system loading, and generating unit availability, and as such provide an indicator of the stress points within the transmission system at a far greater level of detail than anything proposed for the EIA-930.[47] Nonetheless this information is routinely released to the public because it does not create a security concern.

As discussed above, the EIA-930 will collect data that is less detailed and less timely than the information currently made available by the large Balancing Authorities. For example, the various large Balancing Authorities publish on their public web sites, as graphic displays and downloadable files:

- Load data at intervals as short as five minutes (compared to an hour for the EIA-930),
- Real-time data on net generation (compared to next day collection by the EIA-930),
- Net generation broken down in real-time by energy source (coal, natural gas, etc.) (the EIA-930 does not provide any breakdowns of net generation),

[47] For examples, see the five minute and hourly nodal data posted by PJM Interconnection at http://www.pjm.com/pub/account/lmpgen/lmppost.html; the five minute prices posted by NE-ISO at http://www.iso-ne.com/markets/5min_data/fiveMinLMP.do (the web page shows zonal prices; a downloadable file available at the same page has nodal prices); and the five minute nodal prices posted by SPP as a table at http://www.spp.org/LIP.asp and as a contour map at http://www.spp.org/LIP-Contour-Map.asp.

- Nodal prices that indicate stress points on the transmission system (the EIA-930 collects no nodal information),
- The real-time balance between load and available generating resources, a key indicator of stress on a power system (the EIA-930 collects no information on available resources),
- Real-time reporting of Area Control Error, a direct measure of system supply/demand balance (the EIA-930 does not collect this information or any comparable data).

It is correct that the EIA-930 will cover the entire contiguous 48 states, which is not true of current data releases. However, the data that is being released now covers most of the nation, including the largest and most congested power grids, including:

- New England
- New York
- The Middle Atlantic region
- The industrial Midwest
- Louisiana and Texas
- California,
- The Pacific Northwest

The areas cited above are in addition to more rural areas, such as much of the northern and central Great Plains, for which large BAs already release detailed information. The EIA-930 will fill in the gaps, collect a standardized set of data, and will provide a central repository for users to access.

As discussed above EIA has been unable to corroborate the notion that the release of this type of data creates a security issue. EIA believes it is significant that to the best we can determine no party has ever brought to the national reliability authorities, FERC or NERC, the idea that the data releases by large BAs – which date from the late 1990s – constitute a security issue.

8. Business Sensitivity

Comments

EEI and APPA both state that the release of the EIA-930 data will in particular put "small" Balancing Authorities at commercial risk. For example, APPA notes that "Posting this hourly information in near real-time poses serious data confidentiality concerns and may also lead to the exercise of market power against small load serving BAs." Tacoma states that "EIA's assertion that commercial entities already provided this commercially sensitive information in a more detailed and timelier fashion is false."

The remedies proposed by EEI, Tacoma, and APPA include delaying the release of the data; releasing the data only to entities that have been "screened" by EIA and required to sign non-disclosure agreements; an arrangement in which small BA's would group their data to mask BA-specific detail; and/or agreement by EIA to publish the data for small BA's only in the aggregate.

EIA-Response

The comments from EEI and APPA reiterate arguments that they have made in the past and are addressed in the Supporting Statement, pages 23-24 and 74-78, above. In this section we will address specific comments relating to interchange data and commercial sources of data.

Interchange Data: In its 30-day comments, APPA says that suppliers would be able to use interchange data to become aware of the loss of a generating unit or fuel supply. This comment does not consider that the detailed interchange data will not be collected by EIA until two days after the fact. BAs would therefore have sufficient time to make arrangements before suppliers would be aware of the opportunity solely based on the EIA-930 data. We also explained in the Supporting Statement that utilities normally have pre-existing commercial arrangements to handle such supply emergencies.

Commercial Sources of Data: EIA has explained in the Supporting Statement and in discussions with industry that commercial data vendors provide commercial intelligence on power flows and generating unit status. This data includes instantaneous information on transmission line loading, percent of capacity to which a line is loaded, generating unit output, and whether a generating unit is ramping up or down or is out of service. The EIA-930 will collect no data with this content or on this timescale.

Both APPA and Tacoma misunderstand our point and suggest that these commercial sources provide "EIA-930-type" information. This is incorrect. As described immediately above the commercial sources make much more detailed information available faster.

Tacoma appears to misunderstand the nature of the data the EIA-930 will collect and how more timely data are made available by commercial firms. Tacoma claims that one vendor, Genscape, relies on infrared technology, which is susceptible to weather-related degradation, to determine line loadings, and that the Genscape information is therefore of questionable accuracy. In contrast to the inaccurate Genscape readings, Tacoma states that "Form EIA-930 would provide the exact loading information on the lines."

Tacoma's statements are in error. The EIA-930 will not collect information on the "exact loading" of transmission lines. Genscape does not use weather-dependent infra-red technology to collect line loading, only in some cases to gain more detailed information on power plant operations. The actual approach is to record power flows and frequency on transmission lines by measuring the electromagnetic field strength under the line using sensors positioned on private land. This method has proven to be highly accurate. The Joint U.S./Canada Task Force investigating the 2003 northeast blackout relied on Genscape data.

Tacoma also refers to "[t]he infrared information provided by IIR…" IIR is another information vendor that provides customers the operating status of units on a daily basis (see pages 23 and 75, above). They do not use infrared technology. Instead they contact units and ask for status information. The EIA-930 will collect no data on generating unit outages.

9. Add Granularity

Comments

Wood Mackenzie, the Energy Storage Association, and the Solar Energy Industries Association (SEIA) urge us to expand the granularity of the EIA-930. Wood Mackenzie wants the data reported by local BAs in Midcontinent ISO (MISO). ESA would like more granular demand data on the time scale of fractions of a second at which electricity storage devices operate. SEIA would like to have sub-hourly data on demand and price reported by node in RTOs.

EIA Response

As with the suggestion that we aggregate reporting, more granular reporting is not consistent with the balancing function focus of the EIA-930. More granular data – less than an hour and less than the whole BA system, such as zones or at nodes – is not how system-wide resource decisions and commercial activity are currently done.

However, a small change to the EIA-860, *Annual Electric Generator Report*, will facilitate the type of analysis SEIA proposes. EIA will add a question for generating units operating in Regional Transmission Organizations (RTO) to report their RTO price node designation. With this designation, RTO posted nodal energy prices can be more readily associated with specific generators. This designation will also allow linking transaction data about wholesale sales by generators in RTO energy markets as reported to the Federal Energy Regulatory Commission's Electric Quarterly Report. These connections will provide nodal level hourly price and volume information. EIA agrees with SEIA that these data are valuable in analyzing transmission congestion.

J. Comments Applicable to Multiple Surveys

1. The Bureau of Economic Analysis, Industry Accounts office, states that "The new data collected is definitely welcomed" and that "As for the terminated data, we don't think that will affect our programs either."

Comment From: BEA

EIA Response: No response necessary.

2. The Carnegie Mellon Electricity Industry Center (CEIC) "believe[s] 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."

Comment From: CEIC

EIA Response: No response necessary.

3. The Solar Energy Industries Association (SEIA) "believes that the changes proposed will provide more accurate and complete data on the contribution of solar energy to the nation's energy supply…" However, SEIA also "believes there are additional opportunities to 1) improve data with minimal burden and 2) reduce burden without harming data value."

Comment From: SEIA

EIA Response: SEIA has informed EIA that it intends to create a stakeholders group that will aim at finding ways to rationalize and standardize the collection of data on solar energy systems. EIA expects to participate in this process.

4. "APPA does not offer further comment on EIA-860 and EIA-923, as the proposed changes do not constitute a substantial burden to filers."

Comment From: APPA

EIA Response: No response necessary.

5. EEI notes that "EIA is proposing to have the proposed new form EIA-930 take effect March 1, 2014, and EIA reportedly plans to have changes to the other forms take effect as soon as possible following OMB approval, allowing time only for EIA to adjust its website and information collection system. However, as our industry has told EIA, it takes time for reporting utilities to adjust their data collection, verification, and reporting systems and processes in order to accommodate changes of the magnitude and sort EIA is proposing…., we encourage OMB to reauthorize the existing forms without changes through December 31, 2014, and to authorize whichever of the proposed changes and the proposed new form OMB decides to approve for two years beyond that, from January 1, 2015 through December 31, 2016. Such phased approval would avoid disrupting the existing EIA surveys and would give EIA and reporting utilities adequate time to adjust their data gathering, verification, and reporting processes and systems. Such phased approval also would avoid imposing unnecessary extra burden on reporting utilities, which otherwise would have to expend significant resources trying to adopt the changes on a more accelerated schedule."

Comment From: EEI

EIA Response: Most of the new data elements requested by EIA are discrete pieces of information, produced in the normal course of business, which should not require respondents to modify data systems. Examples are the annual average reliability statistics and the cost of building a power

plant. The exception is the new EIA-930 survey. As discussed in the EIA-930 section of this appendix EIA agrees with industry suggestions that the start date for the EIA-930 should be delayed, and we are proposing a start date of October 1, 2014.

6. The Edison Electric Institute "support[s] EIA's plans to allow electronic uploads of data as an option to manual data entry.

Comment From: EEI

EIA Response: No response necessary.

7. EEI "encourage[s] EIA universally in its forms to require reporting only of information that the reporting utility has readily available in its data systems. Again, these steps will help to reduce burden without devaluing the data collection."

Comment From: EEI

EIA Response: The proposed information collection is consistent with the record keeping practices within the industry and is the type of information produced and relied upon by respondents in their normal course of business.

8. **EEI supports EIA's proposal to hold confidential certain new data items (black-start and generator cost data in the EIA-860), and to treat as confidential the contact information for the individuals who respond to the surveys. However, EEI disagrees with EIA's proposal to cease applying disclosure limitation procedures to the aggregate statistical data published from the surveys. EEI states that "Statistical aggregation is important in protecting the confidentiality of data because it prevents the disclosure of individual utility and plant information. We encourage EIA to continue aggregating sensitive data in the electric survey forms as needed to avoid causing harm to individual utilities and plants."**

Comment From: EEI

EIA Response: Eliminating disclosure limitations will greatly reduce the complexity of EIA's data processing operations and, by eliminating complementary suppression, make more data available to users.