



*Independent Statistics & Analysis*  
U.S. Energy Information  
Administration

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# Supporting Statement for Electric Power and Renewable Surveys

## **Part B: Collections of Information Employing Statistical Methods**

### **OMB No. 1905-0129**

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Form EIA-63B *Photovoltaic Module Shipments Report*

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-861M *Monthly Electric Power Industry Report*

Form EIA-923 *Power Plant Operations Report*

Form EIA-930 *Balancing Authority Operations Report*

January 2020



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## B.1. Respondent Universe

### Form EIA-63B Photovoltaic Module Shipments Report

Form EIA-63B collects information on a monthly and annual basis from companies engaged in photovoltaic module manufacturing, shipping, importing, or exporting within the United States, its territories, and possessions. The monthly survey, like the existing annual version, collects information on the volume and value of shipments, technical characteristics of the modules shipped, and employment data. The survey frame for Form EIA-63B contains approximately 57 respondents; 12 report monthly and 45 report annually. The monthly frame includes only 'large' producers with the intent of capturing at least 90% of peak kilowatts (kWp) shipped. Respondents reporting total shipments of at least 100,000 kWp during the previous year are surveyed monthly, and the published monthly data reflects only sampled units. The annual survey collects data from all known U.S. producers using a shorter version of the monthly form. Potential respondents are identified from U.S. Department of Energy (DOE) and U.S. Energy Information Administration (EIA) databases, industry/multiplier directories, and trade publications.

### Form EIA-860 Annual Electric Generator Report and Form EIA-860M Monthly Update to the Annual Electric Generator Report

Form EIA-860 collects data on the status of electric generating plants and associated equipment (such as environmental control systems) that are connected to the U.S. power transmission grid on an annual basis. The target population comprises existing and proposed electric power plants, including the following:

- A. All **existing plants** that have a total generator nameplate capacity (sum for generators at a single site) of 1 megawatt (MW) or greater; and where the generator(s), or the facility in which the generator(s) resides, is connected to the local or regional electric power grid and has the ability to draw power from the grid or deliver power to the grid; and
- B. All **proposed plants** that: 1) have an expected total generator(s) nameplate capacity of 1 MW or greater; 2) expect the generator(s), or the facility in which the generator(s) resides, to be connected to the local or regional electric power grid and expected to be able to draw power from the grid or deliver power to the grid; and 3) expect to commence commercial operation within 10 years in the case of coal, petroleum coke, nuclear, and hydroelectric (both conventional and pumped storage) units, or within 5 years for all other units.

Entities complete the form for all the plants they operate. Over 3,800 entities are required to file Form EIA-860. They currently operate and/or propose to operate approximately 8,700 facilities, containing over 24,700 generators. The respondents to this survey form the basis of the EIA electric power entity frame, from which samples for other surveys are drawn. Respondents are either self-identified or identified through industry publications and data services to which EIA subscribes.

Form EIA-860M monthly survey collects data from the Form EIA-860 population when a respondent has any of the following:

- A new generator scheduled to begin commercial operations within the next 12 months
- An existing generator scheduled for retirement within the next 12 months
- An existing generator undergoing modifications resulting in changes in capacity or other major modifications that are scheduled to be completed within 1 month

Respondents are the operators of the power plants where these new generators and existing generators are located. Based on recent experience, EIA estimates that Form EIA-860M collects data from approximately 312 respondent entities on average each month.

Form EIA-861 Annual Electric Power Industry Report; Form EIA-861S Annual Electric Power Industry Report (Short Form); and Form EIA-861M Monthly Electric Power Industry Report

The approximately 3,400 entities that constitute the universe for these three mandatory surveys are all participants in the electric power industry who are involved in the generation, transmission, or distribution of electricity in the United States and its territories. Target population members include electric utilities, wholesale power marketers (registered with the Federal Energy Regulatory Commission [FERC]), energy service providers, and electric power producers.

#### *Form EIA-861*

The annual Form EIA-861 collects a range of information related to electricity sales, number and type of customers, and demand response and energy efficiency activities. A sample of respondents report on Form EIA-861, where the largest of the 3,427 entities in the survey universe (approximately 2,323 entities) are sampled, based on a threshold of annual retail sales and other factors explained below. The remaining smaller entities, about 1,104 of the potential respondents, account for only about 1 percent of total U.S. electricity sales and rarely engage in any other activities outside of basic electricity sales and distribution.

In 2013, EIA implemented a burden reduction plan by creating a short form for the smallest 1,104 utilities that represent approximately 1% of the annual national retail sales. These smaller size utilities currently report on the annual Form EIA-861S. Respondents to Form EIA-861S report only a selected subset of data elements that are collected each year on Form EIA-861. All Form EIA-861S respondents are currently required to complete the long form in lieu of the short form once every eight years to account for changes in total revenues and sales over time. Consequently, these smaller entities are required to provide only a limited amount of sales, revenue, and customer count data on Form EIA-861S and, for certain respondents, they also report data on time-based rate customers and advanced meter reading. Once every eight years, and in lieu of the short form, all entities that normally complete Form EIA-861S are currently required to complete Form EIA-861.

#### *Form EIA-861M*

Form EIA-861M collects monthly data on electricity sales and related end-use categories. Since monthly survey reports are not required of all utilities, a model-based imputation process is used to estimate for non-sampled entities and for nonresponses. Only larger utilities report monthly sales and revenues data

on Form EIA-861M, as well as annually on Form EIA-861. Data reported by these monthly utilities form the bases for EIA's model-based imputations. This enables EIA to publish monthly estimates of *total* electricity sales and revenues by state, region and nation.

Form EIA-861M collects data from a sample of the universe of entities that report on Forms EIA-861 and EIA-861S. Cutoff sampling is used to select the survey frame for Form EIA-861M. Form EIA-861M frame includes approximately 640 entities. The survey respondents are generally identified through information submitted on the annual Form EIA-861. New respondents to the Form EIA-861M survey frame are also added to the annual Form EIA-861 census survey. All respondents to the monthly Form EIA-861M also report on the annual Form EIA-861 and EIA-861S.

#### Form EIA-923 Power Plant Operations Report (Annual and Monthly)

The target population for these mandatory annual and monthly surveys comprises all electric power plants in the United States that are connected to the electric power grid and have a generating capacity of 1 MW or greater. The survey frame for EIA-923 is established by Form EIA-860 and is identical to the set of operational and standby power plants within the frame of that survey.

There are over 9,000 power plants from which data are collected through Form EIA-923. The data collected includes electric power generation, fuel consumption, fossil fuel stocks, delivered fossil fuel cost, combustion byproducts, operational cooling water data, and operational air emissions control equipment data, such as nitrogen oxides (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), particulate matter emissions rates, and mercury, and acid gas removal efficiencies. Not all respondents answer all questions on the survey instrument; for example, questions on fuel consumption are inapplicable to hydroelectric, wind, and certain other types of power plants.

One survey form is completed for each power plant in the survey. If a single entity operates several power plants, it will complete a separate form for each plant and each form is treated as a unique response for estimation and burden calculation purposes.

The current monthly sample uses a model-based cutoff design. Approximately 1,945 plants report monthly. These plants report monthly data on electricity generation, fuel consumption, and, in some cases, the cost and quality of certain fossil fuel deliveries.<sup>1</sup> At the end of the year, most of the monthly respondents (approximately 1,580 of the 1,945 monthly plants) also file a supplemental form that provides annual information on nonutility power sales and the operation of environmental emissions control equipment.<sup>2</sup>

The approximately 7,000 plants not in the monthly sample only file data annually. This includes data on generation and fuel consumption and, when applicable, data on fuel cost and quality and environmental equipment performance.

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<sup>1</sup> Plants report fuel cost and quality data only if they meet the following criteria: 200 MW or greater nameplate capacity for plants fueled by natural gas, petroleum coke, distillate fuel oil, and residual fuel oil, and/or have coal-fueled capacity of 50 MW or greater.

<sup>2</sup> Plants file data on environmental control system performance if the plant has a minimum of 10 MW of nameplate capacity using combustible fuels.

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### Form EIA-930 Hourly and Daily Balancing Authority Operations Report

Form EIA-930 is a census survey of hourly electric power operating data from Balancing Authorities in the contiguous United States. The data collected include:

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

Balancing Authorities are generally either Regional Transmission Organizations or electric utilities that have transmission grid management responsibilities. There are currently 65 Balancing Authorities in the contiguous United States and they constitute the census frame for this survey.

## **B.2. Statistical Methods**

Four of the surveys in this Information Collection Request use sampling methodology:

- Annual Form EIA-861, annual Form EIA-861S (Short Form), and monthly Form EIA-861M
- Form EIA-923 monthly and annual surveys of power plant operations.

### **Cutoff Sampling Methods**

EIA utilizes cutoff samples for the survey frames of four of its electric power surveys mentioned above: the annual Forms EIA-861 and EIA-861S, the monthly Form EIA-861M, and the monthly and annual Form EIA-923 surveys. These cutoff samples comprise all units with measures of size (sales, revenues from sales for EIA-861 surveys, and capacity and/or production for EIA-923 surveys) variables larger than predefined thresholds, taking into account the need for data on multiple variables of interest within survey instruments.

EIA uses a monthly version, Form EIA-861M, of the annual survey Form EIA-861 to collect the same data from the largest but a smaller set of industry participants. Form EIA-861M respondents are drawn from the EIA-861 frame using cutoff sampling. The cutoff sample consists of all utilities with sales and revenues of electricity larger than predefined thresholds which are specific to key estimates for various publication strata. The monthly respondents generally provide upwards of 80 percent of total electricity sales or revenues.

Cutoff sampling allows EIA measure the change more accurately over time of electric utility activity, while reducing the monthly reporting burden for smaller industry participants. Because smaller units have been responsible for a high percentage of reporting errors historically observed for Form EIA-861, cutoff sampling may also reduce the levels of non-sampling error affecting the published estimates. Section B.2.3 below provides details about the sampling and estimation methods used for Form EIA-861M.

EIA uses a monthly version of the annual survey Form EIA-923 to collect the same data from a smaller set of industry participants. This approach allows EIA to better track the change over time of power plant operations data while reducing burden both for respondents and the agency. Form EIA-923M is the monthly version of the *Power Plant Operation Report* and its respondents are drawn from Form EIA-860 *Annual Electric Generator Report* frame using model-based cutoff sampling.

The current monthly sample design starts with a convenient core sample of power plants, calculates Relative Standard Errors (RSEs) --a measure of reliability of estimates, and then adds more sample units as needed, in publication categories where the RSE is larger than the desired threshold. The new cutoff sample for Form EIA-923 consists of all units with a capacity or generation size that is larger than the predefined thresholds. The monthly sample respondents generally provide upwards of 80 percent of total electricity generation.

Cutoff sampling eliminates the monthly reporting burden for smaller industry participants. Because smaller units have been responsible for a high percentage of reporting errors historically observed for Form EIA-923, cutoff sampling may also reduce the levels of non-sampling error affecting the published estimates. The section below provides details about the sampling and estimation methods used for Form EIA-923.

### **Relative Standard Error as a Measure of Sample Accuracy**

EIA uses the relative standard error (RSE) measure to evaluate the reliability of an estimated statistic. RSE is based on the standard deviation about the mean of a statistic in a sample. Standard deviation (error) is a measure of the spread of data values in relation to the mean value. Standard error normalizes this measure in terms of sample size, and RSE expresses this result as a percentage of the mean.

### **Sample Selection and Estimation/Imputation Procedures for Electric Power Surveys**

#### **Form EIA-861M**

Form EIA-861M is a monthly survey of all energy marketers and service providers, most investor-owned utilities, all federal end-use utilities, and a sample of municipal and cooperative electric power utilities which sell or deliver electric power to end users. The sample includes electric power entities that provide bundled electric services. From the respondents, the survey collects monthly operation information on retail electric sales, sale revenues and retail customer counts by end-use sector (residential, commercial, industrial, transportation) and state. These data are the monthly equivalent to the corresponding annual data reported on Form EIA-861.

Form EIA-861M uses the annual Form EIA-861 as its sampling frame, and each month estimates for the non-sampled members of the universe using regression based imputation models for each end-use sector. The same estimation procedure imputes for any missing monthly data or survey submissions that fail EIA validation edits. The monthly respondents are a model-based cutoff sample composed of larger companies that typically sell most of the electricity in each state and customer class.

Form EIA-861M respondents include:

- All investor-owned utilities (IOUs), except for a few small IOUs in Alaska
- All retail power marketers
- All end-use federal utilities
- All entities selling electricity to the public transportation sector, and
- A sample of the municipal and cooperative utilities

Form EIA-861M is a smaller cutoff sample of Form EIA-861. The Form EIA-861M sample design and estimation procedures employ weighted linear regression models to represent the relationship between a respondent's most recent annual and current monthly sales and revenue data. The retail sales and revenue reported on the most recently completed annual EIA-861 data are utilized as regressor data for the models.

For example, the weighted least square model used for estimating monthly data of a company in January 2017 would be:

$$\hat{y}_{i,2017} = \hat{\beta}_1 x_{i,2015} + w_i^{-1/2} e_i \quad (1)$$

where

- (1)  $\hat{\beta}_1$  in the model coefficient beta represents January
- (2)  $x$  represents most recent 2015 annual data
- (3)  $y$  represents current 2017 monthly data, and
- (4)  $w$  represents the weights, usually the inverse of  $x$ .

These model parameters are estimated for all respondents having valid data for both the current month on the Form EIA-861M and the most recent annual Form EIA-861 data. The model is not used when prior annual data are unavailable, as is the case for respondents that are new to the target population (although this is uncommon). For a new respondent, the respondent's monthly data are used in estimating totals.

The model parameters are estimated separately each month using three variables (sales volume in MWh, revenues in thousands of US dollars, and the number of customers) by end-use sector and geographic region. The models are then applied to estimate data for entities not in the Form EIA-861M monthly sample but with valid annual Form EIA-861 data. The same model is used to impute for non-respondents and cases where submitted data fails EIA's data review. Data for which EIA has a complete census each month – that is, retail power marketers and the electric utilities that provide



distribution services for the marketers<sup>3</sup> -- are added to the sampled and estimated values to obtain monthly estimates for the entire universe.

The monthly cutoff sample thresholds for Form EIA-861M are selected based on the criterion of having estimated RSE values of less than 1 percent for all data published at the state level by end-use sector. The RSE is a percentage measure of the precision of a survey statistic and is used as a way to measure error introduced by using model-based predicted monthly values in place of non-sampled and missing data for the quantities of interest (revenues, sales, and number of customers). Threshold values for the cutoff sampling have been adjusted over time to maintain low RSEs for the published estimates.

The entities excluded from reporting on Form EIA-861, which now complete the short Form EIA-861S, account for approximately 1 percent of total retail sales. To accurately impute and predict monthly sales and revenue values for EIA-861S respondents, EIA uses the model-based estimation methodologies currently used for the monthly Form EIA-861M.

For a general description of cutoff sampling as applied at EIA, see “Model-Based Sampling, Inference and Imputation” at <https://www.eia.gov/electricity/data/methodology/eiawebme.pdf>.

### **Form EIA-923**

Form EIA-923 is a monthly and annual survey of electric power plants. The survey collects information that includes electric power generation, energy source consumption, fossil fuel stocks at the end of the reporting period, as well as the quality and cost of fossil fuels received.

Form EIA-923 utilizes cutoff sampling to reduce the burden on smaller capacity plants. EIA collects monthly data on Form EIA-923 from respondents (i.e., power plants) with a large electricity generation capacity. Annual totals are collected at the end of the reporting year from plants with smaller generation capacities. The monthly sample is selected from the Form EIA-860 sampling frame of electric power plants. With the combination of monthly and annual respondents, Form EIA-923 collects data from all operational and standby power plants with a generation capacity of at least 1MW.

Since a cutoff sample is used to collect monthly power plant operation survey data and to construct weighted linear regression models from that data, EIA imputes monthly values for the smaller annual plants using these regression models. EIA can estimate monthly values for these out-of-sample plants because their latest annual regressor data are available to be used in the models. (See Equation (1) above for details.)

Nameplate capacity was used as the measure of size in the original sample selection process of Form EIA-923 and its high correlation with other data elements on the form ensured good coverage results for other reported values. Since then, sample validation studies were conducted on generation, fuel consumption, receipts, costs, and stocks, and the sampling methodology was modified accordingly.

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<sup>3</sup> If imputation is necessary due to nonresponse of either census group, the most recent census monthly data would be used to impute for the missing data.

The sampling strata are defined by facility sector, energy source used for power generation, and geographic region. For instance, one stratum is identified as electric utilities burning coal in the South Atlantic Census Division. There are four facility sector types: electric utilities, independent power producers, commercial facilities, and industrial facilities; 14 energy source categories, which correspond to the energy source classifications used in the *Electric Power Monthly* (EPM); and 10 geographic groups; all together resulting in more than 250 regression models used in the sample selection process.

### **Form EIA-923 Sample Selection Criteria**

The following five steps are used in selecting plants for the monthly sample in a particular publication category:

1. Select preliminary cutoff sample units based on nameplate capacity coverage values
2. Add sample units, where necessary, based on generation, consumption, and stocks
3. Add sample units, where necessary, to provide adequate sample counts for estimation groups
4. Add model-based cutoff sample units, where necessary, to reduce RSEs of key estimates to acceptable threshold levels
5. Add other facilities, based on special-case criteria

The first three steps are designed to ensure adequate coverage of the target population by including all of the largest contributors to key data elements. The fourth step ensures that the published estimates meet reasonable reliability standards. The fifth step in the sample design adds facilities based on the following special-case criteria. Facilities in the target population that meet any one of the sample selection criteria applied at any of the five steps are included in the final sample. Each sampled facility reports data each month for all combinations of prime mover and fuel source, regardless of which of the above five steps qualified it to be included in the sample.

All nuclear and pumped storage facilities report monthly, and hence are included among the monthly sample plants.

The remainder of this section provides further detail on the five sampling steps listed above.

#### **Step 1: Select Preliminary Cutoff Sample Units Based on Nameplate Capacity Coverage.**

Pre-determined capacity coverage percentages are tested to ensure a certain proportion of operational Form EIA-860 capacity is covered within each sampling stratum. Stand-by generators are not included in the operational capacity totals when data are aggregated to the level of prime mover, and only the largest consumed fuel source for each generator is used in identifying the stratum.

Different target coverage percentages are selected for each facility classification using plants with nameplate capacity over 25 MW and are applied to all regions and energy sources within each facility classification. Otherwise, the capacity coverage percentages to be included in the sample are, as follows:

1. Electric utilities – 70 percent
2. Independent power producers – 70 percent
3. Commercial facilities – 50 percent
4. Industrial facilities – 50 percent

***Step 2: Add Units Based on Generation, Consumption, and Stocks.***

Facilities accounting for large percentages of actual past reported gross generation, fuel consumption, or fuel stocks, are added to the sample, even if their nameplate capacities fall below the percentage cutoff for capacity coverage.

***Step 3: Add Units to Ensure Adequate Sample Counts in Estimation Groups.***

Instead of fitting models separately for each sampling stratum, the cases are collapsed to form *estimation groups* that have data as homogenous as possible while also having the largest number of observations. *The estimation groups* provide better fitting models than if the models were fit separately to each sampling stratum. These groups are re-formed over time as changes in the data occur. Units below the threshold value are added to any estimation group with fewer than 10 usable observations, until the usable count is brought up to 10.

***Step 4: Add Sample to Meet Reliability Standards.***

Weighted linear regression equations, identical to those currently employed in the Form EIA-923 imputation system, are run, and RSE (or Coefficient of Variation) estimates are calculated for each publication group by month. An additional diagnostic measure, the RSE for a Super Population (RSESP), is calculated to indicate the adequacy of the regression model fit. RSE thresholds for both measures, RSE and RSESP, are set individually for the estimated totals in each stratum of facility sector, energy source, and geographic region.

If one or both of the error measures fall outside of the limits, the next largest facilities, ranked by gross generation, are included until the estimated RSE/RSESP values are brought into the desired range. If only the RSESP estimate (and not the RSE estimate) is out of range, then it is difficult to lower the estimate of RSESP based on sampling, alone. In these cases, a change in modeling may be necessary. The RSE/RSESP data quality limits are outlined, as follows:

- Electric utilities – RSE less than 5 percent and RSESP less than 20 percent
- Independent power producers – RSE less than 5 percent and RSESP less than 20 percent
- Commercial facilities – RSE less than 10 percent and RSESP less than 30 percent
- Industrial facilities – RSE less than 10 percent and RSESP less than 30 percent

**Step 5: Add Special Cases.**

Lastly, additional facilities are added to the sample, as necessary. These include storage-only facilities (used in estimating stocks); new facilities for which the EIA has no prior-year's annual data for use in regression imputation; and any new large facilities that the survey staff identifies for inclusion in the sample.

**Sample Validation and Sampling Results**

The present proposal of implementing this new sample methodology in order to decrease the population of power plants reporting monthly is a result of EIA's extensive research into how a lower monthly sample size will affect the ability to impute/predict values for power plants reporting on an annual basis. EIA tested and confirmed the validity of the described sampling and estimation strategy by using less recent but relevant regressor data. These simulations, however, presuppose that the total census frame is maintained every year on Form EIA-923 to prevent over/under respondent imputation.

As already described above, the electric power plants currently reporting on a monthly basis on Form EIA-923M account for 94 percent of total electricity generation. It was determined that the current model-based estimation methodologies employed for the remaining population of power plants that submit data annually on Form EIA-923 provide sufficiently accurate imputed/predicted values.

As already described above, the electric power plants currently reporting on a monthly basis on Form EIA-923M account for approximately 87 percent of total electricity generation. It has been determined that the current model-based estimation methodologies employed for the remaining population of power plants that submit data annually on Form EIA-923 provide sufficiently accurate imputed/predicted values.

**Form EIA-930**

The purpose of the Form EIA-930 imputation procedure is to account for missing data or anomalous data reported by respondents that would prevent the calculation of complete or reasonably approximate regional and national totals. The imputed values are only used in the calculation of regional and national aggregate values whereas the values for each respondent Balancing Authority (BA) are published as reported.

The data processing system currently performs imputations for demand and net generation values only. Imputed values are flagged in the database as either missing or anomalous. Once corrected data are received, the corrected actual reported values are used to re-calculate regional and national totals, which are then updated.

Demand values that are imputed are identified as follows:

- Blank/missing values
- Zero values
- Negative values

- Values that are equal to or greater than 1.5 times a maximum value specified for each BA

Net generation values that are imputed are identified as follows:

- Blank/missing values
- Zero values, except for a small number of BAs for whom zero net generation is a valid value
- Negative values, except for a small number of “generation-only” BAs for whom a negative value between -11 and 0 is valid
- Values that are equal to or greater than 1.5 times a maximum value specified for each BA

The maximum values specified for each BA are based on their maximum reported historical demand and net generation values excluding likely anomalous values and, for demand, a comparison to FERC-714 monthly peak demand values if comparable.

Imputation for demand values is performed as follows:

1. Use the BA’s reported demand forecast value for the hour in question. (This step is skipped for a small number of BAs due to the non-comparability of their demand and demand forecast values.)
2. If the previous step’s value is missing, use the previous hour’s demand value.
3. If the previous step’s value is missing or imputed, use the demand value for the same hour of the prior day.
4. If the previous step’s value is missing or imputed, use the last available daily average demand for that BA.

Imputation for net generation values is performed as follows:

1. Use the previous hour’s net generation value.
2. If the previous step’s value is missing or imputed, use the net generation value for the same hour of the prior day.
3. If the previous step’s value is missing or imputed, use the last available daily average net generation for that BA.

### B.3. Maximizing Response Rates

The response rates for the EIA electric power and renewable surveys have historically been at or near 100 percent except for Form EIA-63B. Recent response rates are shown below in Table 1.

**Table 1. Recent Survey Response Rates**

Frequency of Survey	Survey	Survey Frame	Number of Responses	Response Percentage	Non-Responses	Non-Response Percentage
Annual	EIA-63B	41****	34	83%	7	17%

Frequency of Survey	Survey	Survey Frame	Number of Responses	Response Percentage	Non-Responses	Non-Response Percentage
Surveys Collection of 2017 Data*	EIA-860	4681	4680	99.8%	1	0.2%
	EIA-861	2316	2309	99.7%	7	0.3%
	EIA-861S	1105	1094	99%	16	1%
	EIA-923	6684	6858	99.6%	26	0.4%
	EIA-63B	9	9	100%	0	0%
Monthly Surveys Collection of January 2019 Data in March 2019**	EIA-861M	653	651	99.69%	2	0.31%
	EIA-860M	353	353	100%	0	0%
	EIA-923	1991	1989	99.9%	2	0.1%
Hourly and Daily Collection of April 1, 2019***	EIA-930	65	1385	99%	16	1%
<p>*The most current, complete annual surveys collection was for 2017 data, completed and published in January 2019. The annual surveys collection of 2018 data is currently being processed and prepared for final publication in late 2019.</p> <p>**The latest monthly data collection was for January 2019 data. The data, which are considered preliminary, were published in late March 2016. ***This day was chosen as a representative day. Hourly data are posted within one hour and daily data are posted the next day. ****The low response rate on Form EIA-63B may be due to unknown acquisitions and shut-downs of eligible companies. This frame had an approximately 33% reduction in size since 2015, and it is possible that several companies who did not respond to any communications no longer exist.</p>						

To maximize response rates, EIA survey forms and instructions are designed and written for clarity and conciseness. Data that are not expected to change from year-to-year or month-to-month are pre-populated on the forms. Notifications are emailed early to maximize the time that respondents have to complete the surveys.

As noted in Part A, EIA's Internet data collection system makes forms available on-line as soon as respondents obtain a secure ID and password. Given the high Internet use rate among respondents to these surveys (approximately 95 percent), most online respondents will log on in the next data collection period and access their required forms. Form due dates are the same each period so that respondents can schedule their completion activities.

Any non-respondents are contacted by email, telephone, and letter to request data submission, until an insignificant or zero non-response rate is obtained. Follow-up email messages citing sanctions for failing to file the required form(s) are sent to all non-respondents. If the follow-up email messages do not result in a response, additional correspondence requesting immediate submission is sent to the supervisor of the primary contact and, if necessary, to higher-level management officials at the nonresponding entity.

Respondents who file via the Internet system have the opportunity to either correct or explain unusual data during their submission. These explanations are reviewed by EIA staff. Respondents are contacted if further clarification is needed. For those respondents that do not file via the Internet, but rather on a hard copy of the form, email messages are sent and/or telephone calls are made to confirm corrections or clarifications of any data suspected to be in error.

Changes in plant ownership and/or contacts have contributed in the past to non-response. To address this issue, EIA developed an improved centralized frame system for the electric power surveys. This system affords all survey staff almost immediate knowledge of changes in entity ownership and/or contacts. This frame system is integrated with the EIA's Internet Data Collection system so that access can quickly be given to new owners and/or contacts.

#### **B.4. Test Procedures and Form Consultations**

The survey designs are reviewed by EIA cognitive specialists and modified as necessary to improve clarity and reduce burden.

For additional information on forms review, please see Part A, section A.8., "Summary of Consultations Outside of the Agency." For a summary of the comments received and EIA's responses, see the Public Comment File submitted with this OMB package.

#### **B.5. Statistical Consultations**

For additional information concerning this proposed information collection, please contact Sara Hoff at 202-586-1242, or at [electricity2020@eia.gov](mailto:electricity2020@eia.gov).