



Form EIA-861 and the New Form EIA-861S

Proposal: Modify the frame of the Form EIA-861, “Annual Electric Power Industry Report,” from a census to a sample, and use sampling methods to estimate the sales revenues and customer counts by sector and state for the remaining industry. Use random sampling, if needed, to estimate for changes in advanced metering infrastructure (AMI) and time-based tariff programs.

Proposal: Create a new Form EIA-861S, “Annual Electric Power Industry Report (Short Form),” for the respondents that have been removed from the Form EIA-861 frame. The form would ask them for contact information and would contain a series of yes/no questions to query their status. In addition, it would collect limited data for use in estimating. Once every five years, the Form EIA-861S respondents would be asked to fill out the Form EIA-861 for sampling methodology purposes.

Background

EIA has undertaken significant efforts to study the possible reduction of burden in collecting and processing data for the Form EIA-861 while maintaining high data quality. Also directly impacted is the Form EIA-826, “Monthly Electric Utility Sales and Revenue Report with State Distributions,” which has relied on the Form EIA-861 census, since its inception, to estimate monthly data.¹ EIA proposes to remove approximately one-third of the respondents that report on the Form EIA-861 under Schedule 4 Part A (Bundled Service). These are small entities that report in aggregate approximately 1 percent of national retail sales. EIA has found that it can use cut-off sampling and model-based estimates for retail sales, revenue, and customer counts by state and sector for these respondents for both monthly (Form EIA-826) and annual (Form EIA-861) reports, as long as select information is collected for all members of the population and the frames are maintained. In addition, EIA determined that random sampling can be used for time-based rate programs and advanced metering programs.

EIA is proposing a new annual survey – the Form EIA-861S. As mentioned above, the frame would consist of the respondents removed from the Form EIA-861 frame, and the form would collect very limited data from these respondents. Once every five years these respondents

¹ The target population for the Form EIA-826 comprises all U.S. electric utilities, electric service providers, and distribution companies. Cut-off sampling is used to select the sample, which includes most of the investor-owned utilities (188), 4 Federal utilities, all electric service providers (150), all distribution companies, and a sample of approximately 164 municipal, cooperative, State and political subdivision utilities that have sales to end-use customers. The Form EIA-861 serves as the universe from which the sample for the Form EIA-826 is drawn.

would be required to fill out the Form EIA-861 in lieu of the Form EIA 861S, and this information will be used in the methodologies deployed.

Currently there are some schedules on the Form EIA-861 that in the future will collect information from a subset of the population and the information will be reported with that limitation noted. Those schedules include;

- Schedule 2, General Information and Energy Sources and Disposition
- Schedule 3, Electric Operating Revenue
- Schedule 6, Demand Side Management
- Schedule 7, Distributed and Dispersed Generation
- Schedule 8, Distribution System Information.

Other schedules on the Form EIA-861 will maintain data collection from the population of Schedule 8 simply because the smaller entities do not have those programs currently.

It is possible that a respondent could, in the future, be initially moved to the Form EIA-861S and then, in subsequent years, be moved back to the Form EIA 861, based on whether or not it started to have some of the programs in the other schedules of the Form EIA-861. These schedules include Schedule 2C Green Pricing and Schedule 2D Net Metering. It is also possible that, in the future, too many small entities elect to have these programs, and therefore too many would need to be added back to the sample. In this case, EIA would elect to collect and report on a subset of the population in lieu of attempting to maintain a census for those schedules. Because future respondent behavior is not completely known, EIA would need to have the flexibility to modify the management of these schedules in order to maintain significant burden reduction savings for respondents.

Sampling Methodology

The EIA would like to eliminate small entities from the regular data collection that report approximately 1 percent of sales to EIA when aggregated via Form EIA-861. EIA would like to retain accurate estimates for retail sales, revenue and number of customers by state and sector in addition to the amount of time-based rate programs and advanced metering programs. To reduce burden, EIA will collect less information from entities, and find ways to estimate for data no longer consistently collected. Estimation by forecasting does not take into account current market information and deteriorates rapidly; therefore, it was not considered. Survey estimation can be by design-based sampling and corresponding estimation, model-assisted design-based methods, or model-based estimation. Before 1990, the EIA-826 used EIA-861 census data in model-assisted design-based estimates. After that, it was found that the EIA could reduce burden without adversely impacting data quality for results needed from the EIA-826, by using strictly model-based estimates. The same could be done for parts of the EIA-861 sales and revenue data collection, as long as there is some data on all members of the population collected at some time, and the frames are maintained.

For the other data elements collected on Form EIA-861, EIA has expressed a desire to estimate for some, specifically time-based rate program and advanced metering participation, but for other data elements, publish only a total of whatever is collected. This presupposes the need to later determine changes in the volume covered for a given data element collection in each category published, or an assumption that it never changes substantially.

For retail sales and revenue, maintaining less frequent collection of data on some members of the industry is possible, as long as frame maintenance is continued on a yearly basis. For data elements on time-based rate programs and advanced metering, we will have to rely on random sampling, as good auxiliary data are not forthcoming.