

## **Collections of Information Employing Statistical Methods**

### **1. Description of the Survey Plan**

Forms EIA-1, EIA-3, EIA-4, EIA-5, and EIA-20 collect data at the plant level. Forms EIA-6Q and EIA-8A collect data at the company level. Form EIA-7A is sent to individual mines and all data are reported at the mine level, i.e., a separate report must be filed for each mining operation.

For all surveys, the number of respondents equals the number of entities receiving the form each reporting period. Response rates are expected to remain high for the collection as a whole because response is mandatory. The response rate for Forms EIA-1, EIA-4, and EIA-20 when last conducted during a 1985 coal strike was 100 percent. Form EIA-6Q has never been used.

Response rate is measured as the percentage of surveys returned out of all surveys sent to respondents. In 2010, the Form EIA-3 had a response rate of 100 percent with 2,068 forms submitted. When non-respondents are encountered, EIA imputes values for coal use based upon use in prior periods. When data are not reported for other data elements, such as for origin of coal and ash and Btu contents of coal, EIA records the data as unknown.

Form EIA-5 had a response rate of 100 percent in 2010 with 80 forms submitted. When there are non-respondents, EIA employs the same imputation procedure for Form EIA-5 as it uses for Form EIA-3.

Form EIA-8A had a response rate of 97 percent in 2010, with 102 forms submitted. When there are non-respondents, EIA employs the same imputation procedure for Form EIA-5 as it uses for Form EIA-3.

Form EIA-7A had a response rate of 92 percent in 2009 accounting for 100 percent of coal produced. For non-respondents, EIA imputes values for coal prices based upon averages calculated using data for respondents that are located in the same counties as the non-respondents. To impute coal reserves, EIA uses prior year reserve estimates reduced by the current year's production estimate. MSHA collects current year production data at a 100 percent response rate. Values for productive capacity at the mine level are estimated (imputed) using prior year data, if available, or current year data for similar mining operations in the same county.

### **2. Sampling Methodology and Estimation Procedures**

The number of respondents equals the universe frame for all survey forms with the following exceptions:

- a. Mines with non-anthracite annual production of less than 25,000 short tons and preparation plants recording fewer than 5,000 person hours annually are not required to file a "Coal Production Report," Form EIA-7A. In addition, anthracite coal mines that

produced less than 10,000 short tons during the report year are not required to file Form EIA-7A.

b. Form EIA-3 requires a report only from plants or entities consuming in excess of 1,000 short tons of coal annually.

c. The Coal Stocks Report – Annual, Form EIA-8A does not require companies (coal brokers, coal traders and coal terminals) that owned less than 10,000 tons of coal stocks at the end of the reporting year to report.

There are no issues related to stratification since the coal surveys are census surveys with cutoff thresholds. Estimation for non-response and missing data elements is only done for the Form EIA-7A survey and partially for the Form EIA-3 and EIA-5 surveys when sites do not respond.

### 3. Maximizing the Response Rate

To help ensure maximum response, EIA uses a two-pronged approach for the surveys with an Internet Data Collection system (EIA-3, EIA-5, EIA-7A, and EIA-8A). First, approximately 7 to 10 business days before the start of the next reporting period, respondents on the latest respondent list are sent an e-mail inquiring whether they will continue to submit or if not, to reply with the name, telephone number and e-mail address of the new preparer. This advance query helps EIA keep its list of e-mail addresses and names current. It is important to keep e-mail addresses up to date because most communication is done via e-mail messages. The second prong is to send e-mail messages reminding respondents that on an upcoming date their survey forms will be due. Then, once the due date has passed, EIA sends e-mail messages indicating overdue survey forms. If a firm still does not respond, non-respondents are contacted by telephone, and finally, a noncompliance letter requesting submission by a specific date is sent. After the Internet Data Collection system is implemented for Form EIA-8A (2008), EIA will follow its standard two-prong procedure to maximize response rate.

### 4. Test of the Procedures

The new Internet Data Collection forms have been successfully used by EIA since 2004. We are drawing upon respondent feedback and experiences on other EIA data surveys to improve our methods of operation and procedures.

### 5. Statistical Consultations

The data collection for the Forms EIA-1, EIA-4, and EIA-20 would be done by contracted services if surveys are needed. The data collection for the Forms EIA-3, EIA-5, EIA-7A, and EIA-8A is done by the Office of Oil, Gas, And Coal Supply Statistics (OGCSS), Office of Energy Statistics, with contractor assistance. The OGCSS will also do the form EIA-6Q survey if activated. The OGCSS conducts the analysis on all forms. For more information please contact Barbara Mariner-Volpe at (202) 586-5878.