



*BPS Statistics Indonesia*

## **Metadata and Data Collection Issues Energy Statistics of Indonesia**

Presented by:

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**International Workshop in Energy Statistics  
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## Metadata

### 1. Introduction

BPS Statistics Indonesia is a National Statistics Office (NSO) of Indonesia. In the government organization structure, BPS is directly under the President of the Republic of Indonesia. The main duties and responsibilities of BPS are as follows:

- 1) Collecting, processing, and presenting basics statistics data and sectoral statistics data.
- 2) Formulating, designing, and performing any related activities in order to make point (a) can be implemented.
- 3) Coordinating and assisting other government institutions and private agencies in carrying out any survey statistics activities.

In conducting statistics activities, BPS has statistics branch offices in all 33 provinces, 465 regencies/municipalities, and one statistics officer in each of 6.131 sub districts (a smallest government administrative region).

Energy Statistics is one of the statistics activities conducted by BPS. Concept and definition of Energy Statistics apply UNSD-UN Manual. Energy Statistics publication produced by BPS is based on the data collected from government companies producing energy.

Two main problems occur in collecting data of energy statistics carried out by BPS. Data collection issues giving impacts to the construction of energy statistics are response rate and timeliness. The occurring of these two issues is caused by the company, enumeration officer, document delivery, and management policy. Unfortunately, those two main issues are still going on.

This paper is trying to give a brief information relating to the metadata of Energy Statistics of Indonesia and present its data collection issues. It is hoped that this information can give additional knowledge for problem solving to other country having similar situation, and provides discussion inputs to get alternative data collection methods in reducing the issues.

### 2. Coverage

#### a. Company coverage:

Energy Statistics covers all companies which produce energy materials. The energy companies covered in this activity are government companies, i.e. state own enterprise of electricity, state own enterprise of city gas, and state own enterprise of water supply.

#### b. Geographical coverage

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Geographically, Energy Statistics presentation covers all provinces in Indonesia. i.e. 33 provinces, 465 regencies/ municipalities.

### 3. Scope

Energy Statistics of Indonesia produced by BPS consists of :

- a. Electricity Statistics,
- b. Water Supply Statistics, and
- c. Gas Statistics.

### 4. Survey Methodology

#### a. Data collection:

- i. Ultimate unit : Company producing energy
- ii. Sampling method : Complete enumeration
- iii. Sampling frame : Company Directory, updated annually
- iv. Counting method :

- Direct interview.

The statistics officers (enumerators) come to the companies to give the questionnaires and come back later to pick up the filled questionnaires, or the filled questionnaires are sent by mail to BPS offices.

- Mail and fax.

The questionnaire is sent to the company by mail and the company will send back by mail or fax after it is filled out.

#### b. Time schedule

For the Energy Statistics Year “y”, the activities is in year “y+1”.

- i. Field of survey : January – March (January – September)
- ii. Data processing : April – September
- iii. Publication : October – December

#### c. Estimation methods:

There is no estimation methods applied, because the data collection is a complete enumeration survey.

#### d. Treatment of missing value/non-response:

Estimation of missing value is based on the previous data for several years at least 8 years.

### 3. Timeliness

The length of time for producing Energy Statistics of Indonesia starting from field enumeration until publication is 1 years

### 4. Integrity/Confidentiality

- a. Individual establishment/company data is very confidential, except for its name and address.
- b. The published data in terms of aggregated data is for more than 2 establishments. If the data consist of less than 3 establishments, then they are combined to other establishments having nearest ISIC code.

c. Directory publication contains only name and address of company.

## 5. Characteristics data collected

Types of data collected in Energy Statistics Survey:

### Part I: General Information

- Time reference of data reported;
- Status units;
- Activity of establishment;
- Main product;
- Standard production process;
- Legal status;
- Capital source;
- Percentage of capital owned (Central Government; Local Government; National Private and Foreign);
- Starting year of commercial production;
- Number of working shifts.

### Part II: Workers and Workers Expenses:

- Average number of workers (Paid workers: production workers and other workers; Unpaid workers);
- Wage/salary of workers;

Part III: Fuel/lubricant used, power electricity/electric motor use, electricity purchase, raw material other expenditure; and other expenses.

Expenses, such as:

- Fuel and lubricants;
- Prime movers (directly to drive production equipment and for generating electricity);
- Electric motors, Generators, Source of electricity purchased and electricity produced;
- Raw materials

Other Expenses, such as:

- Expenses for other goods: Packaging, Spare part and maintenance and Stationery;
- Expenses for manufacturing services;
- Expenses for rent;
- Indirect taxes; and
- Other expenses (net interest on loan, gifts, charities, donation, etc; representation allowance, etc)

Part IV: Production (Type of goods, quantity and value)

Part V: Other Income Sources (Manufacturing services, Goods sold without modification and Gross income)

Part VI: Stock (Stock of raw materials, fuel, packaging and other materials; stock of semi-finished products, stock of finished product)

Part VII: Actual Investment (Source of Capital)

Part VIII: Financial Structure (Assets Liabilities and owner's equity)

Part IX: Fixed Capital (Addition/reduction/major repairs of fixed capital)

Part X: Business Constraints and Prospect

Part XI: Research and developments

**8. Data presentation**

Energy Statistics published by BPS are:

- a. Annual State Electricity Statistics
- b. Annual Water Supply Statistics, and
- c. Annual City Gas Statistics.
- d. Energy Balance of Indonesia

The use of energy statistics of Indonesia is mostly for the government purposes in designing, planning, evaluating, and making policy decision relating to the energy matters, and for the need of private establishments.

**Data Collection Issues**

The ultimate units or enumeration units of the energy statistics surveys are government companies which produce energy. The implementation of the data collection is not optimal. This is reflected by the low response rate and the timeliness of the activities implementation.

**1. Response rate.**

The response rate of collecting energy statistics data is still low. In electricity statistics surveys which apply mailing system, the response rate is 42,9 percent. While in city gas surveys which also apply mailing system, the response rate is 21,1 percent. On the contrary, water supply surveys which are conducted by direct enumeration, the response rate can achieve 99,6 percent. The suspected causes which influence to the response rate are the perception of the companies and the quality of the enumerators.

a. Companies, as the respondents:

- Companies are very busy with their technical and administrative works in running their business. So, they said that they do not have extra time for filling out the survey questionnaires. (33 %).
- Companies regularly receive too many kinds of “questionnaires” from governments institutions that have to be filled out and sent/reported to related government institutions. So, companies tend to ignore in filling out the questionnaires. (38 %)
- Companies are unable to fill out the questionnaires optimally, because internal restrictions and/or regulations. (20 %)
- Companies do not care to the obligation that, under the law, they have to give statistical information to the related government institutions (9 %).

b. Statistics officers, as the enumerator officers:

- The quality (education and vision) of the human resources of the enumeration officers in some provinces/regencies/municipalities are still low. So that their works are not optimal. (24 %).
- The laziness of the enumeration officers in doing revisits and/or recall the company several times. (10 %).
- The wage for enumerating data to the company is considered low, which is not suitable for paying transportation, buying meal, and taking home pay. (58 %).

- Others, making data collection is not optimal. (8 %).

## 2. Timeliness.

The schedule of the data collection frequently exceed its determined time schedule. Some causes that influence to the timeliness are government budgeted, survey documents delivery, and management policy.

### a. Government budgeted:

- The budgeted for the activities of the energy statistics is frequently received late by BPS, so that the implementation of the surveys also exceed the schedule which are planned.
- The budgeted for raising the enumeration wage and developing a redesign of the energy statistics is not available, so that implementation of the surveys and the development of the survey design and analysis modeling do not carried out properly yet.

### b. Survey Documents Delivery:

- The delivery of survey documents from BPS head office to the provinces and regencies/municipalities frequently exceed the interval time planned. (34 %).
- Documents are lost in the delivery and then it needs to be redelivered with new documents, which have to be reprinted. (10 %).
- The delivery of survey documents from the company to BPS offices is mostly late. (56 %).

### c. Management policy:

- The persons in charge who work and have responsibility in the energy statistics division are replaced by other persons who are relatively new in the energy statistics works.
- High level managements tend to give less attention to the energy statistics works than that to other statistics activities.

## Summary

Energy Statistics of Indonesia consists of electricity statistics, city gas statistics, and water supply statistics. The ultimate (enumeration) units of energy statistics are government companies producing energy materials. The data collection is carried out annually by implementing complete enumeration.

The implementation of the energy statistics surveys is considered not optimal, because the survey response rate is still low and the survey implementation frequently exceeds the time schedule determined.

Data collection issues which mainly influence to the survey results are response rate and timeliness. Those two issues are caused by the perception of the companies, the quality of the statistics enumerators, the exceeding time of the document delivery, the flow of the government budgeted, and the management policy taken.

In order to be able to enhance the response rate and conduct the energy statistics survey more timely, it is suggested to begin applying an E-Energy Statistics Survey.

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