# COUNTRY PRACTICE IN ENERGY STATISTICS

**Topic/Statistics: Energy Balance** 

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Institution/Organization: GSO

Country: Viet Nam

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## **Abstract**

Write a short abstract of the statistics, and try to limit it to one page. The purpose of the abstract is to give the reader a general overview of the statistics/topic. It should therefore include a brief overview of the background and the purpose of the statistics, the population, the sample (if relevant), the main data sources, and the main users of the statistics. The abstract should also mention what is the most important contribution or issue addressed in the country practice (e.g. the practice deals with challenges of using administrative data, using of estimation, quality control, etc.). If there are other elements that are considered important, please feel free to include them in the abstract.

Keep in mind that all relevant aspects of the statistical production will be covered in more detail under the different chapters in the template. Therefore, the abstract should be short and focused on the key elements. What the most important elements are can vary from statistics to statistics, but as a help to write an abstract you can use the table below. The table can either replace a text or can be filled out in addition to writing a short text.

Key elements				
Name of the statistics	Energy Balance			
Background and purpose of the statistics	- Enhance the relevance of energy statistics by providing comprehensive and reconciled data on the energy situation on a national territory basis; - Provide comprehensive information on the energy supply and demand on the national territory in order to understand the energy security situation, the effective functioning of energy markets and other relevant policy goals, as well as to formulate energy policies; - Serve as a quality tool to ensure completeness, consistency and comparability of basic statistics; - Provide data for estimation of CO2 emissions with respect to national territory; - Provide an input for modeling and forecasting.			
Population, sample and data sources	All energy producer and consumer in the country			
Main users	The main users include all levels of government, industries, trade associations, university, 63 provincial and research centres, and energy analysts			
Important contribution or issue addressed	<ul> <li>Provide data for estimation of CO2 emissions with respect to national territory;</li> <li>Provide the basis for indicators of the energy's role in the country's economy</li> <li>Calculate efficiencies of transformation processes occurring in the country.</li> </ul>			

Other remarks	- Up to now, Vietnam has not had a separate energy statistics, data collected from 3 surveys are: enterprises, individual establishment, the living standard survey and other ministries.
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## 1. General information

## 1.1. Name of the statistics/topic

The statistics/topic could either be a specific energy statistics (e.g. electricity production) or a topic within energy statistics (e.g. energy balances). For more information, please see Section III of the Instructions.

**Energy Balance** 

## 1.2. History and purpose

State when the statistics were first published.

The first Energy Balance by GSO Viet Nam in 2017

Describe briefly the main purpose of producing the statistics and why it is relevant.

- Gives a whole picture of a country's energy supply and demand, the energy transformation, and the relative importance of the different fuel supplies in their contribution to the economy.
- Provide comprehensive information on the energy supply and demand on the national territory in order to understand the energy security situation, the effective functioning of energy markets and other relevant policy goals, as well as to formulate energy policies;
- Serve as a quality tool to ensure completeness, consistency and comparability of basic statistics;
- Provide data for estimation of CO2 emissions with respect to national territory;
- Provide the basis for indicators of the energy's role in the country's economy;
- Calculate efficiencies of transformation processes occurring in the country (e.g., refining, electricity production by combustion of fuels, etc.);
- Calculate the relative shares of the supply/consumption of various products (including renewables versus non-renewables) of the country's total supply/consumption;
- Provide an input for modeling and forecasting.

## 1.3. Reference period

State the time period the data are collected for.

From January to October

## 1.4. Frequency

Specify how often the statistics are disseminated (e.g. annually, monthly, quarterly, etc.). If the statistics are not produced at regular intervals, state at what times they have been produced in the past and the main reasons behind the irregularities.

Annually

#### 1.5. Dissemination

Describe how the statistics are published (e.g. printed publications, online publications, online databases, etc.). If applicable, include the web address to the main website of the statistics.

Statistical Yearbook of Viet Nam

## 1.6. Regional level

State the lowest geographical level (e.g. administrative regions, municipalities, etc.) for which the statistics are made available to the public.

National

#### 1.7. Main users

Identify the key users of the data and the main applications. Include both internal and external users, and if possible try to distinguish between end users and others.

The main users include all levels of government, industries, trade associations, university, 63 provincial and research centres, and energy analysts

## 1.8. Responsible authority

Write the name of the institution and department/office with the main responsibility for disseminating the statistics (e.g.: Statistics Norway, Department of Economics, Energy and the Environment).

General Statistics Office

## 1.9. Legal basis and legally binding commitments

State the national legal basis for the data collection. Include a complete reference to the constitutional basis, and web address to an electronic version (e.g.: The Statistics Act of 16 June 1989 No. 54, §§2-2 and 2-3, http://www.ssb.no/english/about\_ssb/statlaw/forskrift\_en.html).

- Statistics Law 2015

If the data collection is not based on a legal basis, give a short description of other agreements or volunteer arrangements.

If applicable, give reference to national and international commitments that are legally binding (e.g. EU statistical legal acts).

## 1.10. Resource requirements

Specify how the production of the statistics is financed (e.g. over the ordinary budget, project based support, financial support from other institutions or organization). If applicable, state the contracting entity (e.g.: Ministry, EU Commission, OECD). A contracting entity is any entity which is ordering a survey or the compilation of a statistics, and paying for it

State budget

Specify the resource requirements for producing the statistics (e.g. man-labour days, number of workers involved in the statistical production process of the statistics/topic in question).

Statisticians of Province Statistics Offices

About 1000 number of workers from 63 provinces spend 90 labour days

## 1.11. International reporting

List any international organizations and names of reporting schemes that the statistics are reported to. If available, also include the website where the reported data are published (e.g. International Energy Agency, Monthly Oil Statistics, UNSD, etc.).

# 2. Statistical concepts, methodology, variables and classifications

## 2.1. Scope

Describe the scope of the statistics (e.g. the statistics cover supply and use of all energy products in Norway, classified according to International Standard Industrial Classification of All Economic Activities – ISIC).

VSIC 2018 (e.g Coal – 05; Crude Oil – 06; Gasoline – 19; Electricity – 35

## 2.2. Definitions of main concepts and variables

Describe the main concepts (e.g.: territory principle, resident principle, net calorific value, gross calorific value).

Territory boundary – defined by the boundary of the national territory of the compiling country Mining and quarrying B

Manufacture of food products, beverages and tobacco C10 C11 C12

Manufacture of textiles, wearing apparel and leather C13 C14 C15

Manufacture of wood and of products of wood and cork C16

Manufacture of paper and paper products, and printing C17 C18

Manufacture of chemical products C20 C21 C22 C23 other non-metallic mineral products C23

Iron and steel C24 C25

Machinery C26 C27

Construction F

Others

...

#### 2.3. Measurement units

Describe in what unit the data is collected (e.g. physical unit (m3, metric tons), monetary unit (basic prices, market prices)). Describe in what unit the data is presented. Describe if the calorific values are collected (e.g. on a net vs. gross basis) and how they are used.

If applicable, describe the density of the energy product(s) and the estimated *thermal efficiency coefficients* of different energy products and consumer groups or by appliance. Thermal efficiency coefficient indicates the share of the energy products which is actually usable for end consumption. Descriptions of density and thermal efficiency coefficient could alternatively be put in an annex.

1,000 ton; 1,000,000 m3; 1,000,000 kWh

#### 2.4. Classification scheme

Include references to relevant international and national standard classifications. If national, give a brief description of the standards. If available, include web addresses to the electronic version of the standards).

**VSIC 2018** 

#### 2.5. Data sources

Give an overview of the different data sources used in the collection and compilation of the statistics/topic (e.g. household survey, enterprise/establishment survey, administrative data/registers, foreign trade statistics, production statistics and other primary/secondary data sources).

Examples of administrative sources/registers are: business register for enterprises and establishments, population register, land register, housing and building registers, tax registers, international trade registers, etc.

- Enterprise Survey
- Individual Establishment Survey
- Standard Living Household Survey

## 2.6. Population

Describe the entire group of units which is the focus of the statistics (the population).

All energy producer and consumer in the country.

Specify the following statistical units:

- Reporting unit
- Observational unit
- Analytical unit

Examples of different kind of statistical units include: enterprise, enterprise group, kind-of-activity unit (KAU), local unit, establishment, homogeneous unit of production.

In most cases the reporting unit, observational unit and analytical unit are identical, but there are examples where this is not the case. In electricity statistics, you may find that energy companies (the reporting unit) provide data about different consumers like the individual household or manufacturing company (the observational unit). The analytical unit may be a group of energy consumers, defined by the ISIC.

## 2.7. Sampling frame and sample characteristics

Describe the type of *sampling frame* used in the collection and compilation of the statistics (e.g. list, area or multiple frames). A sampling frame is the source material or device from which a sample is drawn. Note that the sampling frame might differ from the population.

Use sampling of 3 surveys: enterprise, establishment, standard living. The following businesses are selected entirely by votes investigate

- Business 100% state-owned or state-owned enterprises have been equitized state capital more than 50% of the charter capital;
- Enterprises with capital foreign direct investment;
- Non-state enterprises with 100 employees or more;
- Provinces where the number of small businesses

Enterprise sample survey done votes 1A for non-state businesses under 100 employees.

- Sampling frame was made on the list of non-state enterprises with fewer than 100 employees
- Select a sample:
- + For groups outside the state enterprise labor from 50-99: Choose 50% of companies operating in all sectors
- + For groups outside the state enterprise labor from 10-49: Choose 20% of enterprises operating in the industry, construction, insurance, financial intermediation (Dong Nai, Binh Duong, Da Nang, Haiphong select 15%) and 15% of enterprises operating in the sector of trade and services unless the insurance industry, financial intermediation (Dong Nai, Binh Duong, Da Nang, Hai Phong select 10%);
- + For non-state enterprises under 10 employees: Choose 10% of companies operating in all sectors (Dong Nai, Binh Duong, Da Nang, Hai Phong select 7%);

For each survey(s) used for the compilation of the statistics, specify the *sampling design* (e.g. random, stratified, etc.). Describe the routines employed for updating the sample. Include information about the sample size, and discuss to what extent the sample covers the population (e.g. energy consumption in the sample compared to total energy use by the population).

Note that chapter 2.7: Sample frame and sample characteristics may overlap with chapter 3.4: Grossing up procedures.

#### 2.8. Collection method

For each survey used for the compilation of the statistics/topic, describe how the data are collected (e.g. face-to-face, telephone, self-administered, paper and internet-based questionnaires, or administrative data and registers).

Online questionaires (Enterprises access the enterprise survey website and directly respond to the information on web) and paper questionaires

## 2.9. Survey participation/response rate

For each survey used for the compilation of the statistics/topic, specify the average response rate, or refer to response rates for specific surveys conducted.

70-80%

# 3. The statistical production process

## 3.1. Data capture and storage

Describe how the data is captured and stored (e.g. if the respondent replies using Internet-based questionnaire, the received data are electronically transferred to the production database. Paper questionnaire responses are keyed manually to the production database).

Online questionaires (Enterprises access the enterprise survey website and directly respond to the information on web) and paper questionaires

## 3.2. Data editing

Describe the regular routines employed for detecting and correcting errors. This may include:

- Manual routines for detecting and correcting errors
- Automatic error-detection (and correction)
- Micro- and macro editing procedures
- Data validation procedures
- Outlier identification
- Processes and sources used for quality controls

Manual routines for detecting and correcting error

## 3.3. Imputation

Describe the principles for imputation and the assumptions that these principles are based on. Note that this chapter may overlap with chapter 3.2: Data editing and chapter 5.2: Accuracy

The missing estimate is based on a series of data for many years

## 3.4. Grossing up procedures

Describe how the population is divided into strata and what statistical models the estimations in the strata are based on. Describe how sub-indices are combined into aggregate indices and how uncertainty is estimated.

None

## 3.5. Analytical methods

Give a description of any analytical methods used to adjust the data (e.g.: seasonal adjustment and temperature adjustment). A more detailed description of the analytical method can also be included as an annex.

Synthesized by industry level 2> Because Yearly Energy Balance have not seasonal adjustment

## 4. Dissemination

#### 4.1. Publications and additional documentation

Describe the form of dissemination of the statistics/topics in question (e.g. printed publications, website, etc.). Please provide relevant website link(s) if available.

https://www.gso.gov.vn/nien-giam/

Give a complete reference to publicly available statistics databases where data from the statistics can be extracted. Include web addresses if available online.

https://www.gso.gov.vn/nien-giam/

Indicate whether you charge users for access to the statistics at any level of aggregation.

Energy Balance of Vietnam on web GSO free

#### 4.2. Revisions

Describe the current revision policies. E.g.: Is historical data revised when new methodology, new definitions, new classifications etc. are taken into use? Is the data continuously revised, or is the data revised at certain points in times (e.g. every third year, annually, etc.)?

https://www.gso.gov.vn/nien-giam/

If applicable, describe any major conceptual or methodological revisions that have been carried out for this statistic/topic in the past.

If detecting errors, annual data can be corrected (1 time). Annually if there is adjustment report of Vietnam Oil and Gas Group, Vietnam Electricity, Vietnam National coal - Mineral Industries Holding Corporation Limited, Viet Nam customs and some big enterprises.

#### 4.3. Microdata

Describe how microdata are stored.

Data Center of GSO

Specify if microdata are available for scientific and/or public use. If so, describe under what conditions these are made available.

None

## 4.4. Confidentiality

Describe the legal authority that regulates confidentiality, and what restrictions are applied to the publication of the statistics.

General Statistics Offices by Statistics Law

Describe the criteria used to suppress sensitive data in statistical tables (cell suppression).

Don't public micro data

Describe how confidential data are handled.

None

Describe any confidentiality standards that go beyond what is legally required.

None

# 5. Quality

#### 5.1. Relevance

State to which degree the statistical information meet the real needs of clients/users.

- Vietnamese Government 95%
- Foreign investors in Vietnam 70%
- International organizations 70%
- enterprise 60%
- Other users 50%

## 5.2. Accuracy

State the closeness of computations or estimates to the exact or true values that the statistics were intended to measure.

Measurable all the values to be calculated

## Measurement and processing errors

Discuss the measurement and processing errors that are relevant for the statistics. Try as far as possible to give an estimation of the size and scope of the errors.

Wrong or missing data estimates

#### Non-response errors

State the size of the unit non-response and the item non-response, distributed by important variables in the population (e.g. region, industry). Consider if the non-response errors are systematic, and if so, describe the methods used to correct it. Indicate whether the effects of correcting non-response errors on the results have been analysed, and, if so, describe them.

Estimate estimated missing data by industry, labor or revenue group

#### Sampling errors

Discuss the size of the sampling errors. Compare the population and sample with regards to important properties (e.g. coefficient of variance).

Because the energy servey conduct with other servey (enterprise servey) so not calculate variance, sampling error

#### Other sources of error

Discuss other sources of errors that might be relevant for the statistics. E.g.: Model assumption errors, coverage errors

None

## 5.3. Timeliness and punctuality

Specify the time between the end of the reference period and publication.

If the statistics are published both as preliminary and final figures, specify the time between publication of preliminary and final figures. You should also point out whether the publication date is set according to certain rules (e.g. advance release calendar, a specific day or prior to other publications).

April every year on the statistical yearbook and the website of GSO

Point out if there have been any major discrepancies between the planned publication date and the actual publication date in recent years. If so, state the length of this discrepancy and its cause.

None

## 5.4. Accessibility

Describe how easily accessible the statistics are. In particular, is there an advance release calendar to inform the users about when and where the data will be available and how to access them?

Are metadata and other user support services easily available? Are there particular groups that don't have access to the published statistics (e.g.: visually disadvantaged)?

Periodic press conference

## 5.5. Comparability

Discuss the comparability of the statistics over time, geographical areas and other domains.

#### Comparability over time

Discuss comparability over time and include information about whether there have been any breaks in the time series of the statistics and why. Also describe any major changes in the statistical methodology that may have had an impact on comparability over time.

Comparability

#### Comparability over region

Discuss comparability over geographical areas, and include information about whether the statistics are comparable to relevant statistics published by other countries and/or international organisations.

Comparability over province

#### Comparability over other domains

Discuss comparability over domains, and include information about whether the statistics are comparable between different industries, different types of households etc.

Comparability over province

## 5.6. Coherence and consistency

Discuss the coherence/consistency between preliminary and final figures.

Clealy

Discuss the coherence/consistency between monthly, quarterly or yearly statistics within the same subject area. Can the results of different frequencies for the same reference period be combined in a reliable manner?

Clearly

Discuss the coherence/consistency with other related statistics (also those produced by other institutions/organisations on the same subject).

Clearly

# 6. Future plans

Are there any current or emerging issues that will need to be addressed in the future? These could include gaps in collection, timeliness issues, data quality concerns, funding risks, confidentiality concerns, simplifications to reduce respondents' burden etc.?

Do a separate survey on energy statistics

## Annexes

#### **Illustrations and flowcharts**

Illustrations and flowcharts are useful to summarize information and to get a better overview of the statistical production process. Illustrations and flowcharts can either be places in annexes or be included under relevant paragraphs in the template.

#### E.g.:

- A conceptual flowchart which illustrates the flow of data in the production of the statistics.
- A flowchart which illustrates the main tasks in the production process and the dependency between them.

#### Time schedule

Include a time schedule for the different phases of the statistical production process. The statistical production process *may* be divided into the following phases. Phase 1-3 may only be relevant for when a new statistics/survey is set up.

- 1. Clarify needs (e.g. map users needs, identify data sources)
- 2. Plan and design (e.g. plan and design population, sample size, how to analyze and edit data)
- 3. **Build** (e.g. build and maintain production system, test production system)
- 4. Collect (e.g. Establish a frame, draw the sample, collect data)
- 5. Edit (e.g. identify and code micro data, edit data, imputation)
- 6. Analyse (e.g. quality evaluation, interpret, analyse)
- 7. **Disseminate** (e.g. publish data, user contact)

## Questionnaires

Include the complete questionnaire(s)/survey form(s) used

## **Example of publication tables**

Include an example of a typical table published for the statistics. Include web addresses if available online.

#### Detailed description on analytical methods

If relevant, a detailed description of analytical methods used in the statistical production (like seasonal adjustment, temperature adjustment etc.) may be described in an annex. A short description can also be included in chapter 3.5: Analytical methods or under other suitable chapters.

# **VIETNAM ENTERPRISE SURVEY 2020**

Form 1A/DTDN-DN

# **QUESTIONNAIRE FOR ENTERPRISE, COLLECTIVE**

In 2020

(Generally apply for state-owned enterprises, non-state enterprises, FDI enterprises, collectives/collective association - hereafter referrred to enterprise)

-Duty of enterprise for answering the following questions rulea by Statistic Law
- Information supplied by enterprises will be confidential and used for Under decision 1251/QĐ-TTg, 22 August 2018 of Director General statistical purpose only

# Principles for filling information:

- Don't fill information in square marked (x);
- For questions provided with alternative answers, mark a square with appropriate answer;
- For questions requesting for information, data, please write down information, figures in appropriate square or box;

Name of enteprise	e:				•••••			•••••				
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Tax code:												Ш
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									es)			
A	В	С	1	2	3	4	5	6	7	8	9	10
Electricity	01	1000 KWI										
Coal	02	Ton										
Of which:												
Antracite	021	Ton										
Coke	022	Ton										
Other Coal	023	Ton										
Crude Oil	03	1000 tons										
Petrol	04	1000 litre										
Of which:	041	1000 1:4										
Auto, motor petrol Plane petrol	041	1000 litre 1000 litre										
Petroleum	042 <b>05</b>	1000 litre										
Of which:	UO	1000 litre										
Paraffin	051	1000 litre										
Diezel	051	1000 litre										
Fuel	052	1000 litre										
Mazut	053	1000 litre										
Other	055	1000 litre										
LPG	06	Ton										
Gas	07	1000 m <sup>3</sup>										
Of which:		2000 111										
Natural gas	071	1000 m <sup>3</sup>										
Companion gas	072	1000 m <sup>3</sup>										
Biomas	8	Ton										
Waste (to produce	081	Ton										
electricity)												
Bagasse (to produce electricity)	082	Ton										
Other (Rice husk,												
	-		-	-		-		1	Ī		-	
bagasse, wood,	083	Ton										

		Dute 2020
Respondent	Interviewer	Director
- Full name:	- Full name:	(Sign, full name and stamp)
-Tel:	- Tel:	