

ANNUAL ENERGY BALANCE OF ELECTRICITY

LEGAL BASIS

The survey is regulated by the Law on Official Statistics („Official Gazette of RS”, No 104/2009) and Programme of Official Statistics over the period 2016 – 2020 („Official Gazette of RS”, No 55/15).

METHODOLOGICAL BASIS

Objective and scope of the survey

The production of annual energy balance of electricity.

Survey coverage

Questionnaire EN-4.1 collects data on: electricity production, own consumption, electricity received from others, electricity consumed for pumping water into accumulation; electricity delivered to organizations for electricity power transmission, local distributors and final consumers by consumer groups.

Questionnaire EN-4.2 collects data on: consumption of fuels for electricity and heat production, fuels stock, their average calorific value; electricity production, own consumption, electricity received from others; electricity delivered to organizations for electricity power transmission, local distributors and final consumers by consumer groups.

Questionnaire EN-4.4 collects data on: the electricity received from transmission system, other distributors and electricity producers; losses; electricity delivered to other distributors and final consumers by consumer groups.

Questionnaire EN-4.5 collects data on: electricity production by type of plants; own consumption; electricity consumed for pumping water into accumulation; losses; electricity delivered to final consumers by consumer groups; list of direct consumers; production of reversible and small hydro power plants (power <1 MW, from 1 MW to 10 MW and power > 10 MW).

Questionnaire EN-4.15 (for industrial enterprises) collects data on electricity consumption.

Reporting units and statistical units (coverage)

Reporting units for the annual energy balance of electricity are enterprises (including Public enterprises). Observational units are hydro power plants, reversible hydropower plants, thermal power plants, CHP plants, autoproducers, electricity transmission and distribution, as well as kind of activities (KAU) of industrial and non-industrial enterprises which have production of electricity.

Method, period and sources for data collection

Data are collected annually by means of reporting method.

The sources for data collection are:

1. Annual questionnaires:

- Annual energy balance of electricity production and consumption – questionnaire for reporting units dealing with hydroelectricity production (EN-4.1),
- Annual energy balance of thermoelectric energy production and consumption – questionnaire for reporting units dealing with the production of thermoelectric energy and heat (EN-4.2),
- Annual energy balance of electricity production and consumption – questionnaire for reporting units dealing with electricity distribution (EN-4.4),
- Annual energy balance of production and consumption of electricity JP „Elektroprivreda Srbije“ (Public Enterprise “Electric Power Industry of Serbia) (EN-4.5),
- Annual energy balance for reporting units in industry – consumption and stocks of fuels in industry (EN-4.15E).

2. Regular statistical surveys of the Unit of Construction Statistics, Division of External Trade Statistics (data of the Customs Administration of the Republic of Serbia) and Transport Statistics.

(The questionnaires are available on the website of the Statistical Office of the Republic of Serbia

www.stat.gov.rs).

Obligation to protect personal data

The obligation to protect personal data is laid down in Article 3 of the provision on the protection of data providers, articles 44, 45, 46, 47, 48 and 49 of the provision of the Law on Official Statistics (“Official Gazette of RS“, No 104/2009).

List and definitions of main concepts – indicators

Primary production is a form of energy that has not been converted or transformed (coal, oil, natural gas, biomass, hydro power energy, geothermal energy, firewood, wind energy and solar energy).

Imports and exports cover quantities that crossed the national border.

Stock changes is the difference between stocks at the beginning of the year (initial stocks) and those at the end of the year (final stocks).

Marine bunkers cover the quantities delivered for international navigation purposes.

Statistical difference is a category that includes the sum of unknown statistical differences between the production and consumption of selected fuels.

Gross inland energy consumption is calculated as follows:

Primary production

+ Imports

– Exports

+ Stocks changes

– Marine bunkers

– Statistical difference.

Transformation input is the consumption of fuels as raw materials for energy production in thermal power plants, CHP, autoproducers, district heating plants, refineries, blast furnace plants and coal transformation.

Transformation output covers the production of transformed energy forms (thermoelectricity, heat, petroleum products, blast furnace gas, oxygen steel furnace gas wood pellets and producers of wood briquettes).

Exchange and transfers, returns include interproduct transferred (distillates), products transferred (hydroenergy) and recycled products (naphta, fuel oil and lubricants).

Product Transferred – refinery products reclassified as feedstock for further processing in the refinery, without delivery to final consumers.

Interproduct Transfers – quantities reclassified because their specification has changed or because they are blended into another product.

Backflow from petrochemical industry – products or semi-finished products returned to the refinery from the process of petrochemical industry.

Own consumption in energy sector covers the energy used for energy sector running.

Losses cover losses occurred:

- for electricity: during transmission and distribution;
- for heat: during transmission and distribution;
- for solid fuels: during transport;
- for liquid fuels: during transport and distribution;
- for natural gas: during transport and distribution;
- for geothermal energy: within the distributive system, and for
- for fuel wood: during transport.

Energy available for final consumption is the energy intended for final consumers.

Final consumption covers the consumption of energy available for final consumption for energy and non-energy purposes.

Final consumption for non-energy purposes covers final energy consumption as raw material for production of non-energy products in technological process, while consumption in chemical industry is separated from total consumption.

Final consumption for energy purposes covers final consumption of available energy for energy purposes in:

industry,

construction,

transport,

households (all households, including “households with employed persons“),

agriculture, and

other consumers (all other consumers, e.g. education, health, public administration, etc.).

Particularities of the energy balance of electricity:

The production of hydroelectricity includes also the production in reversible hydro power plants. Data on electricity that has crossed the national border are taken over from the public enterprise "Serbian Electricity Transmission System". Own consumption includes also electricity transmission losses. All items of final consumption for energy purposes present estimations of the Public Enterprise "Electric Power Industry of Serbia".

Level of data representativeness

(territorial level and level of the Classification of Activities, 2010 (CA))

Data are representative for the territory of the Republic of Serbia. Since 1999 the Statistical Office of the Republic of Serbia has no available data for AP Kosovo and Metohia, therefore they are not included in the data for the Republic of Serbia (total).

Harmonization with international recommendations, standards and practice

The annual energy balance of electricity fully complies with the recommendations of EUROSTAT and International Energy Agency.

DESCRIPTION OF THE SURVEY MANAGEMENT

Bodies in charge of the survey management *(responsible official statistics producer)*

- Statistical Office of the Republic of Serbia: Unit of Energy Statistics in Belgrade, Division of Statistics in the Sector of Statistics in AP Vojvodina and regional divisions in Subotica, Zrenjanin, Novi Sad, Sremska Mitrovica, Pancevo, Smederevo, Sabac, Valjevo, Kraljevo, Kragujevac, Zajecar, Nis, Leskovac and Uzice.
- Belgrade City administration, Secretariat for administration, Statistics sector.

Obligation to provide data

The obligation to provide data is laid down in Article 26, and penalty provisions in case of refusal or incorrect or incomplete data provided in Article 52 of the Law on Official Statistics („Official Gazette of RS, No 104/2009).

Timetable of the main phases of the survey *(including data publication)*

- The deadline within which the reporting unit is requested to send the filled out questionnaire to the relevant statistical body is 15 March.
- The deadline within which the Statistical Office of the Republic of Serbia shall publish the data for the previous year is defined in Regulation on defining the Plan of official statistics.

SURVEY TOOLS (refer to data collection sources)

List of nomenclatures and classifications used for the survey

(along with the information where they can be found)

- Classification of Activities CA (2010) regulated by the Regulation of the Government of the Republic of Serbia of 29 July 2010 ("Official Gazette of RS", No 54/10) according to the Law on the Classification of Activities ("Official Gazette of RS", No 104/09). Available also on the web site of the Statistical Office of the Republic of Serbia www.stat.gov.rs;
- Commission Regulation (EU) No 431/2014 Amending Regulation (EC) 1099/2008 (available in the Unit of Energy Statistics of the Statistical Office of the Republic of Serbia);
- Energy Statistics Manual, publication of the International Energy Agency (available in the Unit of Energy Statistics of the Statistical Office of the Republic of Serbia).

List of publications in which survey methodology and results are published
(hard copies and/or within Internet presentations)

Bulletin "Energy Balances"

(The publication is available on the web site of the Statistical Office of the Republic of Serbia www.stat.gov.rs).

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