# **Energy balance**

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## 3. Statistical presentation

### 3.1. Data description

The energy balance is statistical accounting on the production, trade, transformation and final consumption of energy resources. Energy balance of Georgia has been introduced since 2013, which corresponds to the International Energy Agency (IEA), Eurostat standards and considers requirements of Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics. The energy balance includes the following indicators of energy resources:

- Production;
- Import;
- Export;
- International marine bunkers;
- •International aviation bunkers;
- Stock changes;
- Domestic supply;
- Available;
- Transfers;
- Statistical differences;
- Transformation sector Input;
- Transformation sector Production;
- Energy sector own use;
- losses;
- Final consumption.

## 3.2. Classification system

Energy Balances are published according to the National Classification of Economic Activities NACE Rev.2: <u>https://www.geostat.ge/media/20893/1-NACE\_rev.2.pdf</u>

The nomenclature of the energy products are given in accordance with the International Recommendations for Energy Statistics (IRES), UN, 2018:

https://www.geostat.ge/media/52764/International-Recommandations-for-Energy-Statistics.pdf

### 3.3. Sector coverage

The research subject of energy statistics are producers, distributors, importers/exporters of the energy resources and groups of energy final consumers.

3.4. Statistical concepts and definitions

For energy statistics definitions, concepts and methodology are harmonized at international level. The methodology is described in the Energy Statistics Manual. Definitions and concepts are given in THE REGULATION (EC) No 1099/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 22 October 2008 on energy statistics. **Energy Production** – energy resources are directly extracted or derived from natural resources. It could be primary and

secondary. Primary energy is obtained from various sources such as crude oil, coal, natural gas, hydropower, wind, solar, geothermal, biofuel and waste etc. Secondary energy comes from transformation of primary or secondary energy (petroleum products, electricity generated by thermal plants, etc.). Energy resources could also be renewable or non-renewable. Renewable energy includes hydropower, wind, solar, and geothermal energy, biofuels, and waste. **Imports –** include the amount of primary and transformed energy which crossed the territorial boundaries of the country. The transit volume of the natural gas is not represented in import.

**Exports** – Comprise the amount of energy forms leaving the national territory. Exports imply both domestic exports and re-exports of imported goods. Domestic exports include export of goods produced in the country, as well as imported from abroad, the value of which has significantly changed as a result of domestic processing.

**International Marine Bunkers** – include the amount of fuel delivered to ships for consumption during international voyages transporting goods or passengers. They do not imply the delivery of fuels for domestic navigation, fishing, they are included in the final energy consumption. For the purposes of energy statistics, international marine bunkers are not included in exports, they are recorded separately due to their importance, e.g. for the estimation of greenhouse gas emissions.

**International Aviation Bunkers** – includes the amount of fuel delivered to civil aircraft for consumption during international flights transporting goods or passengers. They do not imply the delivery of fuel for domestic flights, they are included in the final energy consumption (domestic aviation). For the purposes of energy statistics, international aviation bunkers are not included in exports, they are recorded separately due to their importance, e.g. for the estimation of greenhouse gas emissions.

### Formula of calculation for each energy commodity:

Stock Changes – the difference between opening and closing stock levels of the reporting period.

**Domestic Supply –** Production+Import-Export +/-Stock changes.

Available - Domestic supply+Energy generated from primary energy transformation/processing.

Transformation Sector, Input – Primary energy for transformation.

**Transformation Sector, Production** –energy generated as a result of the transformation/processing of primary energy. **Energy Sector Own Use** – energy consumed by transformation industries for heating, pumping, traction and lighting purposes. For example, own use of energy in coal mines, on consumption in power plants and energy used for oil and gas extraction.

Losses – losses in electricity and natural gas transmission and distribution system also losses in the coal mine, etc. Final Consumption – energy consumption by consumers' groups (Industry, Transport and Other sectors). Also includes non-energy use.

### 3.5. Statistical unit

The statistical unit is the enterprise, household, public service and various administrative units.

## 3.6. Statistical population

The survey includes all the entities that represent energy producers, suppliers and distributors, importers, exporters and final consumers.

### 3.7. Reference area

The entire territory of Georgia, except the occupied regions.

### 3.8. Time coverage

From 2013.

### 3.9. Base period

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## 4. Unit of measure

Physical units (thousand tons, mln. cub. m, gwh, thousand cub. m.); Energy units (terajoule, thousand tons of oil equivalent).

### 5. Reference period

Calendar year.

### 6. Institutional mandate

### 6.1. Legal acts and other agreements

The Law of Georgia on Official Statistics;

https://www.geostat.ge/media/20817/latest-Law-of-Georgia 2018.pdf

Statistical Work Programme (annual);

https://www.geostat.ge/en/modules/categories/307/statistical-work-programme

Charter of the National Statistics Office of Georgia.

https://www.geostat.ge/media/20845/10%2Csaqstatis-konsolidirebuli-debuleba.pdf

## 6.2. Data sharing

## 7. Confidentiality

## 7.1. Confidentiality – policy

- 1. The Law of Georgia on Official Statistics:
  - According to the article 4 of the law individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.
  - According to the article 28 (Observing Confidentiality of Statistical Data) of the law 1. The data collected for the purpose of producing official statistics shall be confidential if it allows for identification of observation unit or r it is possible to identify such data through it. 2. The confidential statistical data shall not be issued or disseminated or used for a non-statistical purpose but for the exceptions envisaged by the Georgian legislation.
    3. When producing the official statistics, it is obligatory to destroy or store separately the identity data including the questionnaires containing such data and used for statistical surveys according to the rules defined in the Georgian legislation.
  - According to the article 29 (The Obligations and Responsibilities of the Employees of the Geostat) of the law the confidential statistical data collected and processed for the purpose of statistical survey shall not be used or disseminated by the employees of the units of the Geostat.
  - https://www.geostat.ge/media/20817/latest-Law-of-Georgia 2018.pdf
- 2. Data Confidentiality Policy at Geostat https://www.geostat.ge/media/20860/Data-Confidentiality-Policy-at-Geostat En.pdf
- 3. Public Use Microdata Dissemination Policy at Geostat <u>https://www.geostat.ge/media/20862/Microdata-Dissemination-Policy\_Eng.pdf</u>
- 4. The Law of Georgia on Personal Data Protection https://matsne.gov.ge/en/document/view/1561437?publication=9

## 7.2. Confidentiality – data treatment

• Confidentiality guidelines.

• Written undertakings by an employee of Geostat on ensuring confidentiality of gained/collected data as a result of official duties.

## 8. Release policy

## 8.1. Release calendar

Data dissemination dates are defined by the calendar developed on the basis of the Statistical Work Programme, which is published on the website of Geostat and is publicly available.

8.2. Release calendar access

https://www.geostat.ge/en/calendar

### 8.3. User access

All users have the equal access to the statistical data simultaneously.

### 9. Frequency of dissemination

Year.

10. Accessibility and clarity

10.1. News release

News release is attached to the results of the survey:

https://www.geostat.ge/en/news

## 10.2. Publications

Energy Balance of Georgia:

https://www.geostat.ge/en/single-categories/118/energy-balance-of-georgia

### 10.3. On-line database

Energy balance tables are available in MS Excel format:

https://www.geostat.ge/en/modules/categories/328/energy-balance-of-georgia

### 10.4. Microdata access

## 10.5. Other

Statistical data is also disseminated using social network (Facebook).

10.6. Documentation on methodology

Energy Statistics Manual:

https://www.geostat.ge/media/13382/8.-Manual-of-energy-statistics-%28Eurostat%2C-OECD%2C-International-Energy-Agency%29.pdf

International Recommendations for Energy Statistics:

https://www.geostat.ge/media/52763/International-Recommandations-for-Energy-Statistics.pdf

Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics. **10.7. Quality documentation** 

## 11. Quality management

### 11.1. Quality assurance

To ensure the quality of the statistical processes and products Geostat follows Article 4 – Basic principles of official statistics – of the Law of Georgia on Official Statistics, as well as the European Statistics Code of Practice, the UN Fundamental Principles of Official Statistics and Quality Assurance Framework of the European Statistical System (QAF).

## 11.2. Quality assessment

Methodology and Quality Management Division of Geostat, along with the sectoral departments, is responsible for the quality of the produced statistical products and processes. The Division carries out quality audit of statistical processes and assesses the risks for the quality of statistical processes and products. Geostat has developed policy documents, guidelines and standard routine descriptions. These documents ensure the standardization of statistical processes and products and the establishment of a unified quality assurance system.

## 12. Relevance

## 12.1. User needs

The main users of the data are representatives of the Ministries and Business sector, NGOs, International Organisations (Eurostat, International Energy Agency, Energy Community, United Nations Statistical Division, United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Organisation for Economic Cooperation and Development (OECD) (Statistics Directorate)), Governmental Organizations, Experts, Media, Students and other users. They need these data to carry out different types of statistical analysis, to plan a marketing strategy, or to study and evaluate the economic tendencies.

### 12.2. User satisfaction

In 2021 user satisfaction survey was conducted, the target of the survey was to analyze the assessment of quality of statistical data by users and explore ways to improve user services. The survey report is available on the website of Geostat (in Georgian):

https://www.geostat.ge/ka/page/customer-service

### 12.3. Completeness

The data appropriates to international standards.

## 13. Accuracy and reliability

13.1. Overall accuracy

The data fully complies with international standards and methodology. The processed data is compared to the corresponding data of the previous year. In some cases, in processing and forming energy balance, the data is verified both in administrative sources and with the representatives of the enterprises.

### 13.2. Sampling error

Sampling error does not exceed 3% at the country level.

#### 13.3. Non-sampling error

In order to minimize non-sampling error, data is compared with administrative sources.

### 14. Timeliness and punctuality

14.1. Timeliness

The data is published in the middle of December of the following year of the reference year.

### 14.2. Punctuality

The data is published in accordance with the date indicated in the programme of statistical works. The violation fact of publishing dates has not been occurred.

### 15. Coherence and comparability

#### 15.1. Comparability – geographical

For all regions of Georgia have been used the same methodology and approaches that corresponds to the international methodology.

#### 15.2. Comparability – over time

The time series are comparable to each other.

## 15.3. Coherence – cross domain

The data is coherent.

## 15.4. Coherence – internal

The data is coherent.

### 16. Cost and burden

The budget of energy resources consumption survey for 2022 is 30 375 GEL and is about 4 500 enterprises in the sampling process.

### 17. Data revision

### 17.1. Data revision – policy

Statistical data revision policy is available on the website of Geostat: https://www.geostat.ge/media/44385/Revision-policy-and-error-correction Geo.pdf

#### 17.2. Data revision – practice

Data planned revision is not carried out. Unplanned revision (in order to specify the data) can be carried out in accordance with the methodology.

### 18. Statistical processing

18.1. Source data

Completed questionnaires (online questionnaire) for the survey of supply and consumption of energy resources.

## 18.2. Frequency of data collection

Annual.

### 18.3. Data collection

In most cases an online questionnaire is used. In order to form energy balance is used customs declaration of the Revenue Service of the Ministry of Finance of Georgia and various administrative sources. In a particular case an expert assessment are made.

#### 18.4. Data validation

Initial data validation is carried out by software, based on the arithmetic control in the database. Secondary control is carried out by relevant staff of business statistics department.

#### 18.5. Data compilation

Sampling of enterprises is based on the random stratified sampling. Data is weighted annually. Data acquired from the

survey are multiplied by weight, they are given and then summarized in compliance with the requirements of the business statistics methodology.

## 18.6. Adjustment

Not used.

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19. Comment