# **Energy Balance**

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### 3. Statistical presentation

### 3.1. Data description

The energy balance is statistical accounting of the production, trade, transformation and final consumption of energy resources. Energy balance of Georgia complies to the International Energy Agency (IEA) and Eurostat standards, and follows the requirements of the Regulation (EC) No 1099/2008 of the European Parliament and of the Council of 22 October 2008 on energy statistics. The energy balance covers the following indicators of energy resources:

- Production;
- Import;
- Export;
- International marine bunkers;
- •International aviation bunkers:
- Changes in stocks;
- 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: <a href="https://www.geostat.ge/media/20893/1-NACE">https://www.geostat.ge/media/20893/1-NACE</a> rev.2.pdf

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

 $\underline{https://www.geostat.ge/media/52764/International-Recommandations-for-Energy-Statistics.pdf}$ 

### 3.3. Sector coverage

Producers, distributors, importers/exporters of the energy resources and groups of energy final consumers are the research subjects of energy statistics.

# 3.4. Statistical concepts and definitions

For energy statistics definitions, concepts and methodology are harmonized at international level. The methodology is provided 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. Energy could be primary or 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 is derived from transformation of primary or secondary energy (petroleum products, electricity generated by thermal plants, etc.). Energy resources could also be split into renewables or non-renewables. 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 reflected in imports.

**Exports** – Comprise of the amount of energy leaving the national territory. Exports include both, domestic exports and re-exports of imported goods. Domestic exports include export of goods produced within the country, as well as those imported goods 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 when carrying freight or passengers. International Marine Bunkers do not cover the delivery of fuels for domestic sails and fishing as they are accounted for 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** – Include the amount of fuel delivered to civil aircrafts for consumption during international flights transporting freight or passengers. International Aviation Bunkers do not cover the delivery of fuels for domestic flights as they are accounted for 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.

#### Calculation formula for each energy commodity:

Changes in Stock - Difference between opening and closing stock levels of the reporting period.

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

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 transformation/processing of primary energy.

**Energy Sector Own Use** – Energy consumed by transformation industries for heating, pumping, traction, lighting and other purposes. For example, own use of energy in coal mines, consumption in power plants, and energy used for oil and gas extraction.

Losses – Losses in electricity and natural gas transmission and distribution system, losses in the coal mine, etc.

**Final Consumption** – Energy consumption by consumers' groups (Industry, Transport, Private and Public Services, Households, Agriculture, Forestry and Fishing, and Other sectors). Non-energy use is also included.

### 3.5. Statistical unit

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

#### 3.6. Statistical population

The survey covers 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, gwh, mln. cubic m, thousand cubic m.); Energy units (terajoule, thousand tons of oil equivalent (thousand TOE)).

#### Reference period

Calendar year.

# 6. Institutional mandate

### 6.1. Legal acts and other agreements

The Law of Georgia on Official Statistics;

 $\underline{https://www.geostat.ge/media/56202/The-Law-of-Georgia-on-Official-Statistics.pdf}$ 

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

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## 7. Confidentiality

### 7.1. Confidentiality – policy

- 1. The Law of Georgia on Official Statistics:
  - According to the article 5 of the law Statistical confidentiality and exclusive use for statistical purposes individual data collected or received by the producer of official statistics, relating to natural or legal persons, must be strictly confidential and used only for statistical purposes.
  - According to the article 34 (Observing Confidentiality of Statistical Data) of the law 1. Data collected, processed, and stored to produce official statistics are confidential if they enable the direct or indirect identification of a statistical unit. In addition, aggregated data are subject to statistical confidentiality: a) Aggregates composed of 1 to 3 units, when the unit is a natural or legal person if one of these units could be identified indirectly, thereby disclosing individual data about this unit. Aggregates composed of more than 3 units may be declared confidential by the Executive Director if required to ensure statistical confidentiality; b) Information declares as a state secret on the basis of the "Law of Georgia on State Secrets". 2. Confidential data shall be used exclusively for the purposes of producing statistics in accordance with this law. 3. Statistical data about the administrative body cannot be considered confidential information, except for the information determined by the Law of Georgia "On State Secrets". 4. Individual data obtained from publicly available sources, which are defined as public information in accordance with the legislation of Georgia, shall not be considered confidential information. 5. Confidential (individual) data may be published if there is written consent from the statistical unit regarding the publication of such data. 6. It is not allowed to disseminate and distribute confidential data or use it for non-statistical purposes.
  - According to the article 38 (Confidentiality commitments) of the law the confidential statistical data collected and processed for statistical purposes shall not be used or disseminated either for personal, academic, research or any other activities, by the employees of the producers of Official Statistics.

 $\underline{https://www.geostat.ge/media/56202/The-Law-of-Georgia-on-Official-Statistics.pdf}$ 

- 2. Data Confidentiality Policy at Geostat
  - https://www.geostat.ge/media/20860/Data-Confidentiality-Policy-at-Geostat En.pdf
- 3. Procedure for providing access to confidential data for research purposes <a href="https://www.geostat.ge/media/61533/Rule-on-Access-to-Confidential-Data-for-Scientific-and-Research-Purposes....pdf">https://www.geostat.ge/media/61533/Rule-on-Access-to-Confidential-Data-for-Scientific-and-Research-Purposes....pdf</a>
- 4. The Law of Georgia on Personal Data Protection <a href="https://matsne.gov.ge/en/document/view/1561437?publication=9">https://matsne.gov.ge/en/document/view/1561437?publication=9</a>

# 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

Annual.

### 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

Procedure for providing access to confidential data for research purposes is available on the Geostat website:

https://www.geostat.ge/media/61533/Rule-on-Access-to-Confidential-Data-for-Scientific-and-Research-Purposes....pdf

### 10.5. Other

According to the Law of Georgia on Official Statistics within the framework of the Annual Statistical Work Programme, Geostat shall provide all users with the statistical data in electronic form free of charge.

### 10.6. Documentation on methodology

**Energy Statistics Manual:** 

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

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

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### 11. Quality management

# 11.1. Quality assurance

To ensure the quality of the statistical processes and products Geostat follows Chapter 10 – Quality 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 (ESS 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, self-assessment 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.

Quality policy is available on the following link:

https://www.geostat.ge/media/44380/QP Geostat EN.pdf

#### 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 2023 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 is in line with the 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, while processing and forming the energy balance, the data is verified with administrative sources, as well as 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 next year of the reference year.

#### 14.2. Punctuality

The data is published in accordance with the date indicated in the statistical work programme. There has not been any violation of publishing dates.

### 15. Coherence and comparability

### 15.1. Comparability - geographical

The same methodology and approaches, which correspond to the international standards, are used for all regions of Georgia.

### 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

Approximately 4 500 enterprises are surveyed. Respective burden and budget is determined by an actual number of enterprises surveyed.

# 17. Data revision

# 17.1. Data revision - policy

Statistical data revision policy is available on the website of Geostat:

https://www.geostat.ge/media/59824/Data-Revision-Policy-and-Error Correction-at-Geostat Eng.pdf

### 17.2. Data revision – practice

There is no planned revision of data. 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 production, supply and consumption of energy resources.

### 18.2. Frequency of data collection

Annual.

### 18.3. Data collection

Mainly an online questionnaire is used. In order to form energy balance, customs declaration of the Revenue Service of the Ministry of Finance of Georgia and various administrative sources are used. In particular cases, an expert assessments 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 the staff of the relevant division of the Business Statistics Department.

# 18.5. Data compilation

Enterprises are sampled based on the random stratified sampling procedure. Data is weighted on annual basis. Data acquired from the surveid enterprises is weighted and then summarized in compliance with the requirements of the business statistics methodology.

### 18.6. Adjustment

Not applied.

### 19. Comment

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