

## Periodical Part

# The energy balance of the Republic of Moldova ; 2019

## Provided in Cooperation with:

National Bureau of Statistics of the Republic of Moldova, Chisinau

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# THE ENERGY BALANCE OF THE REPUBLIC OF MOLDOVA

STATISTICAL COMPILATION

2019



**THE ENERGY BALANCE  
OF THE REPUBLIC OF MOLDOVA**  
STATISTICAL COMPILATION

**2019**

**Chisinau, 2020**

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## FOREWORD

„The energy balance of the Republic of Moldova” is a large statistical collection, which presents the statistical indicators on the formation of primary and general resources of energy, distribution and final energy consumption on the main activities of the national economy during the period 2015-2019.

The collection is structured in 2 chapters and includes 18 tables. Basic methodological notes are displayed for the basic indicators of the balance in the collection.

The collection is based on the annual statistical surveys carried out by the National Bureau of Statistics on enterprises, organizations, administrative authorities, other state and private institutions with legal personality.

Data on the consumption of Biofuels and Waste in the residential sector (population) were ~~revised~~ estimated for 2015-2019. The calculation of the data was done with the support of the Energy Community and was based on the results obtained in the "[Research on Household Energy Consumption](#)" conducted by the NBS for the 2015 reference year.

The publication does not include the data from the territory on the left side of the river Nistru and mun.Bender.

This collection is published only in electronic version on the official [Website](#) of the NBS.

### Symbols used

- = not applicable
- 0 = negligible magnitude

In some cases, there may occur insignificant discrepancies between the totals and corresponding sums of the components, fact that could be explained by data approximations.

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## METHODOLOGICAL NOTES

### 1. LEGAL FRAMEWORK

The Republic of Moldova as a full state of the Energy Community has the obligation to calculate and disseminate accurate and updated data on the quantities, types, sources, production, supply, transformation and the consumption, to monitoring the impact and consequences of its policy in the energy field. The common framework for the production, transmission, evaluation and dissemination of comparable energy statistics under the Energy Community is given by Regulation (EC) No. 1099/2008 of the European Parliament and of the Council of October 22, 2008 on energy statistics, with further changes.

At the national level, [The calculation methodology of the monthly and annual statistical indicators regarding the energy sector and energy prices](#) has been approved by the *National Bureau of Statistics Board Decision No. 6/3 of December 23, 2014*.

### 2. COVERAGE AND DATA SOURCE

Data on energy products and their aggregates are collected from annual surveys as follows:

- specific statistical surveys addressed to producers and suppliers of electricity;
- specific surveys addressed to natural gas distributors;
- specific statistical surveys addressed to producers and traders of primary and transformed energy, distributors and final consumers;
- administrative sources.

Data collection is exhaustive for units producing electric and thermal energy also for the largest consumers of energy. In surveys, according to data for 2019 were included 19 650 statistical units.

Specific statistical surveys are addressed to all economic agents, whatever of their field of activity, according to a catalog prepared by NBS and in the basis of [Classification of Activities from national economy-2](#) CAEM-2. According to this classification, consumptions reported are grouped in:

- energy sector: *code 05, code 0892, code 06, code 0910, code 0721, code 19, code 35*;
- industry and construction: *code 0710, code 0729, code 081, code 089, code 0990, code 10-43 (except code 19, code 35)*;
- transport: *code 49, code 50, code 51*;
- agriculture: *code 01, code 02, code 03*;
- other economy branches: *Section E, Section G (code 52, code 53), Section I, Section J, Section K, Section L, Section M, Section N, Section O, Section P, Section Q, Section R, Section S, Section T, Section U*.

[Nomenclature of Goods](#), developed in accordance with the Harmonized Commodity Description and Coding System (HS-2007) and the Combined Nomenclature (CN). According to this nomenclature are classified imports and exports of energy products.

[Nomenclature of industrial products and services PRODMOLD \(list 2013\)](#). According to this nomenclature production (primary and transformed) of energy products is classified.

### 3. ENERGY PRODUCTS

| Energy product                                      | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1. Solid fossil fuels and manufactured gases</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Anthracite                                          | High rank coal used for industrial and residential applications. Generally, it has less than 10 % volatile matter and a high carbon content (about 90 % fixed carbon). Its gross calorific value is greater than 23 865 kJ/kg (5 700 kcal/kg), measured based on a mass of ash-free but moist coal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Coking coal                                         | Bituminous coal with a quality that allows the production of a coke suitable to support a blast furnace charge. Its gross calorific value is greater than 23 865 kJ/kg (5 700 kcal/kg) on an ash-free but moist basis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Other bituminous coal (steam coal)                  | Coal used for steam raising purposes and includes all bituminous coal that is neither included under coking coal nor anthracite. It is characterised by higher volatile matter than anthracite (more than 10 %) and lower carbon content (less than 90 % fixed carbon). Its gross calorific value is greater than 23 865 kJ/kg (5 700 kcal/kg) on an ash-free but moist basis. If bituminous coal is used in coke ovens it should be reported as coking coal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Sub-bituminous Coal                                 | Refers to non-agglomerating coal with a gross calorific value between 17 435 kJ/kg (4 165 kcal/kg) and 23 865 kJ/kg (5 700 kcal/kg) containing more than 31 % volatile matter on a dry mineral matter free basis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Lignite/brown coal                                  | Non-agglomerating coal with a gross calorific value less than 17 435 kJ/kg (4 165 kcal/kg) and greater than 31 % volatile matter on a dry mineral matter free basis.<br>Oil shale and tar sands produced and combusted directly should be reported in this category. Oil shale and tar sands used as inputs for other transformation processes should also be reported in this category.<br>This includes the portion of the oil shale or tar sands consumed in the transformation process. Shale oil and other products derived from liquefaction should be reported on the Annual Oil Questionnaire.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Coke oven coke                                      | The solid product obtained from carbonisation of coal, principally coking coal, at high temperature, it is low in moisture and volatile matter. Coke oven coke is used mainly in the iron and steel industry acting as energy source and chemical agent. Coke breeze and foundry coke are included in this category.<br>Semi-coke (a solid product obtained from carbonisation of coal at low temperature) should be included in this category. Semi-coke is used as a domestic fuel or by the transformation plant itself. This heading also includes coke, coke breeze and semi-coke made from lignite/brown coal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Patent fuel                                         | A composition fuel manufactured from hard coal fines with the addition of a binding agent. The amount of patent fuel produced may, therefore, be slightly higher than the actual amount of coal consumed in the transformation process.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Gasworks gas                                        | Covers all types of gases produced in public utility or private plants, whose main purpose is manufacture, transport and distribution of gas. It includes gas produced by carbonisation (including gas produced by coke ovens and transferred to gasworks gas), by total gasification with or without enrichment with oil products (LPG, residual fuel oil, etc.), and by reforming and simple mixing of gases and/or air, reported under the rows 'from other sources'. Under the transformation sector identify amounts of gasworks gas transferred to blended natural gas which will be distributed and consumed through the natural gas grid.<br>The production of other coal gases (i.e. coke oven gas, blast furnace gas and oxygen steel furnace gas) should be reported in the columns concerning such gases, and not as production of gasworks gas. The coal gases transferred to gasworks plants should then be reported (in their own column) in the transformation sector in the gasworks plants row. The total amount of gasworks gas resulting from transfers of other coal gases should appear in the production line for gasworks gas. |
| Coke oven gas                                       | Obtained as a by-product of the manufacture of coke oven coke for the production of iron and steel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Other gases recovered                               | It is a secondary product resulted from production of steel in oxygen furnaces, recovered on leaving from furnace. Gases are known as converter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |



| Energy product                       | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      | gas, LD gas or BOS gas. The amount of recovered fuel should be reported on a gross calorific value basis. It includes also not specified artificial gases which have not been mentioned above, such as fuel gases of solid carbonaceous origin recovered from chemical and manufacturing processes undefined otherwise.                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Peat                                 | <p>A combustible soft, porous or compressed, sedimentary deposit of plant origin with high water content (up to 90 % in the raw state), easily cut, of light to dark brown colour. Peat used for non-energy purposes is not included.</p> <p>This definition is without prejudice to the definition of renewable energy sources in Directive 2001/77/EC and to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.</p>                                                                                                                                                                                                                                                                                                        |
| <b>2. Natural gas</b>                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Natural gas                          | <p>This data collection applies to natural gas, which comprises gases occurring in underground deposits, whether liquefied or gaseous, consisting mainly of methane. It includes both ‘non-associated’ gas originating from fields producing hydrocarbons only in gaseous form, and ‘associated’ gas produced in association with crude oil as well as methane recovered from coal mines (colliery gas) or from coal seams (coal seam gas).</p> <p>It does not include gases created by anaerobic digestion of biomass (e.g. municipal or sewage gas) nor gasworks gas.</p>                                                                                                                                                                 |
| <b>3. Oil and petroleum products</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Crude oil                            | Crude oil is a mineral oil of natural origin comprising a mixture of hydrocarbons and associated impurities, such as sulphur. It exists in the liquid phase under normal surface temperature and pressure and its physical characteristics (density, viscosity, etc.) are highly variable. This category includes field or lease condensate recovered from associated and non-associated gas where it is commingled with the commercial crude oil stream.                                                                                                                                                                                                                                                                                   |
| NGL                                  | NGL are liquid or liquefied hydrocarbons recovered from natural gas in separation facilities or gas processing plants. Natural gas liquids include ethane, propane, butane (normal and iso-), (iso) pentane and pentanes plus (sometimes referred to as natural gasoline or plant condensate).                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Refinery feedstocks                  | A refinery feedstock is a processed oil destined for further processing (e.g. straight run fuel oil or vacuum gas oil) excluding blending. With further processing, it will be transformed into one or more components and/or finished products. This definition also covers returns from the petrochemical industry to the refining industry (e.g. pyrolysis gasoline, C4 fractions, gasoil and fuel oil fractions).                                                                                                                                                                                                                                                                                                                       |
| Additives/oxygenates                 | <p>Additives are non-hydrocarbon compounds added to or blended with a product to modify fuel properties (octane, cetane, cold properties, etc.):</p> <ul style="list-style-type: none"> <li>– oxygenates, such as alcohols (methanol, ethanol), ethers (such as MTBE (methyl tertiary butyl ether), ETBE (ethyl tertiary butyl ether), TAME (tertiary amyl methyl ether)),</li> <li>– esters (e.g. rapeseed or dimethylester, etc.),</li> <li>– chemical compounds (such as TML, TEL and detergents).</li> </ul> <p><i>Note:</i> quantities of additives/oxygenates (alcohols, ethers, esters and other chemical compounds) reported in this category should relate to the quantities destined for blending with fuels or for fuel use.</p> |
| Refinery gas (not liquefied)         | Refinery gas includes a mixture of non-condensable gases mainly consisting of hydrogen, methane, ethane and olefins obtained during distillation of crude oil or treatment of oil products (e.g. cracking) in refineries. This also includes gases which are returned from the petrochemical industry.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Ethane                               | A naturally gaseous straight-chain hydrocarbon (C <sub>2</sub> H <sub>6</sub> ) extracted from natural gas and refinery gas streams.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Motor gasoline                       | Motor gasoline consists of a mixture of light hydrocarbons distilling between 35 °C and 215 °C. It is used as a fuel for land based spark ignition engines. Motor gasoline may include additives, oxygenates and octane enhancers, including lead compounds such as TEL and TML.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| Energy product         | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | Includes motor gasoline blending components (excluding additives/oxygenates), e.g. alkylates, isomerate, reformat, cracked gasoline destined for use as finished motor gasoline.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Aviation gasoline      | Motor spirit prepared especially for aviation piston engines, with an octane number suited to the engine, a freezing point of - 60 °C and a distillation range usually within the limits of 30 °C and 180 °C.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Gasoline type jet fuel | Distillate used for aviation turbine power units. It has the same distillation characteristics between 150 °C and 300 °C (generally not above 250 °C) and flash point as kerosene. In addition, it has particular specifications (such as freezing point) which are established by the International Air Transport Association (IATA). Includes kerosene blending components.                                                                                                                                                                                                                                                              |
| Other kerosene         | Refined petroleum distillate used in sectors other than aircraft transport. It distils between 150 °C and 300 °C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Diesel oil             | Diesel oil is primarily a medium distillate distilling between 180 °C and 380 °C. Includes blending components. Several grades are available depending on uses.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Lubricants             | Hydrocarbons produced from distillate by-product; they are mainly used to reduce friction between bearing surfaces.<br>Includes all finished grades of lubricating oil, from spindle oil to cylinder oil, and those used in greases, motor oils and all grades of lubricating oil base stocks.                                                                                                                                                                                                                                                                                                                                             |
| Bitumen                | Solid, semi-solid or viscous hydrocarbon with a colloidal structure, being brown to black in colour, obtained as a residue in the distillation of crude oil, by vacuum distillation of oil residues from atmospheric distillation. Bitumen is often referred to as asphalt and is primarily used for construction of roads and for roofing material. Includes fluidised and cut back bitumen.                                                                                                                                                                                                                                              |
| Fuel oil               | All residual (heavy) fuel oils (including those obtained by blending). Kinematic viscosity is above 10 cSt at 80 °C. The flash point is always above 50 °C and density is always more than 0,90 kg/l.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Naphtha                | Naphtha is a feedstock destined for either the petrochemical industry (e.g. ethylene manufacture or aromatics production) or for gasoline production by reforming or isomerisation within the refinery.<br>Naphtha comprises material in the 30 °C and 210 °C distillation range or part of this range.                                                                                                                                                                                                                                                                                                                                    |
| Petroleum coke         | Black solid by-product, obtained mainly by cracking and carbonising petroleum derived feedstock, vacuum bottoms, tar and pitches in processes such as delayed coking or fluid coking. It consists mainly of carbon (90 to 95 %) and has a low ash content. It is used as a feedstock in coke ovens for the steel industry, for heating purposes, for electrode manufacture and for production of chemicals. The two most important qualities are 'green coke' and 'calcinated coke'.<br>Includes 'catalyst coke' deposited on the catalyst during refining processes; this coke is not recoverable and is usually burned as refinery fuel. |
| Other products         | All products not specifically mentioned above, for example: tar and sulphur.<br>Includes aromatics (e.g. BTX or benzene, toluene and xylene) and olefins (e.g. propylene) produced within refineries.                                                                                                                                                                                                                                                                                                                                                                                                                                      |

#### 4. Renewable energy and energy from waste

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Solid biomass                                   | Covers organic, non-fossil material of biological origin which may be used as fuel for heat production or electricity generation. It comprises:                                                                                                                                                                                                                                                                                                                                                                                                |
| Of which: wood, wood wastes, other solid wastes | Purpose-grown energy crops (poplar, willow etc.), a multitude of woody materials generated by an industrial process (wood/paper industry in particular) or provided directly by forestry and agriculture (firewood, wood chips, wood pellets, bark, sawdust, shavings, chips, black liquor etc.) as well as wastes such as straw, rice husks, nut shells, poultry litter, crushed grape dregs etc. Combustion is the preferred technology for these solid wastes. The quantity of fuel used should be reported on a net calorific value basis. |
| Liquid biofuels                                 | The quantities of liquid biofuels reported in this category should relate to the quantities of biofuel and not to the total volume of liquids into which the biofuels are blended. For the particular case of imports and exports of liquid biofuels, only trade of quantities that have not been blended with transport fuels is concerned (i.e.                                                                                                                                                                                              |

| Energy product                 | Definition                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | in their pure form).                                                                                                                                                                                                                                                                                                                                |
| Biogas                         | A gas composed principally of methane and carbon dioxide produced by anaerobic digestion of biomass.                                                                                                                                                                                                                                                |
| Hydro power                    | Potential and kinetic energy of water converted into electricity in hydroelectric plants. Pumped storage must be included. Production must be reported for plant sizes of < 1 MW, 1 to < 10 MW, $\geq$ 10 MW and from pumped storage.                                                                                                               |
| Solar energy                   | Solar radiation exploited for hot water production and electricity generation. This energy production is the heat available to the heat transfer medium, i.e. the incident solar energy less the optical and collectors' losses. Passive solar energy for the direct heating, cooling and lighting of dwellings or other buildings is not included. |
| Wind                           | Kinetic energy of wind exploited for electricity generation in wind turbines.                                                                                                                                                                                                                                                                       |
| <b>5. Electricity and heat</b> |                                                                                                                                                                                                                                                                                                                                                     |
| Electrical energy              | It means electrical energy from all sources of production by type of producers, installations, fuels.                                                                                                                                                                                                                                               |
| Thermal energy                 | Thermal energy destined for sale to third parties by type of producers, installations, fuels.                                                                                                                                                                                                                                                       |

#### 4. LIST OF AGGREGATED INDICATORS

| Name of aggregated indicator                    | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Primary energy production / national production | <p>This category includes production from the exploitation of existing energy sources in nature (in subsoil assets, forests, water courses, etc.) that can be used as such or after a preliminary processing (sorting, washing, cleaning, etc.) that does not change the structure of assortment, but improves its quality for use as fuel or as feedstock for producing other combustible products or noncombustible.</p> <p><i>Coal production</i> from underground and surface mines; recovered slurries, mixed minerals and other low-grade coal products, which cannot be classified according to type of coal. This includes coal recovered from waste piles and other waste receptacles;</p> <p><i>Natural gas production</i>: dry marketable gas, obtained within national boundaries, including offshore production. Production is measured after removal of impurities and NGL extraction and of sulphur. Extraction losses and quantities reinserted, discharged to air or burned are not included in this item.</p> <p>Here are included quantities used in the natural gas industry, in the process of extraction of natural gas, into pipelines and in natural gas processing plants and natural gas obtained with crude oil; natural gas from fields producing hydrocarbons only in gaseous and methane produced in coal mines or extracted from coal layers, brought to the surface and consumed of collieries or transmitted by pipeline to consumers;</p> <p><i>Crude oil production</i> (including liquids products from natural gas extraction);</p> <p><i>Electricity production</i>: hydroelectric and wind energy production; is reported gross output (production measured at generator terminals), solar photovoltaic energy;</p> <p><i>Heat production</i>: heat production obtained from nuclear reactors, geothermal energy, solar thermal energy;</p> <p><i>Biomass production</i>: firewood, combustible products derived from activities other than energy production, such as wood processing cellulose and paper production, agriculture, etc;</p> <p><i>Production of other fuels</i>: biogas, non-renewable industrial waste, renewable municipal waste and biofuels.</p> |
| Import/export                                   | <p>Unless provisions contrary, imports "refers to the country of initial origin (the country in which the energy product was produced) for use in the country and,, exports" to the country of final consumption of energy product . Are considered as imported or exported quantities that have passed or not customs, who have passed the political boundaries of a country.</p> <p>For electric energy are considered as imported or exported quantities of electricity, quantities that have passed or not customs, who have passed the political boundaries of a country. If the amount of electric energy is transited through a country, it should be registered as both import and export.</p> <p>For petroleum products, this category includes quantities of crude oil and products imported or exported in</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Name of aggregated indicator                      | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                   | <p>accordance with processing agreements (i.e. refining for account). Crude oil and NGL should be registered as coming from the origin country; in the case of refinery feedstock's and final products should be taken into account by the last country of origin. This includes any gas liquids (i.e. LPG) extracted during the regasification of imported liquefied natural gas and imported or exported petroleum products directly by the petrochemical industry.</p> <p>Re-exports of oil imported for processing within bonded areas should be included as an export of product from the processing country to the country of final destination.</p>                                                                                                     |
| Stock at 1 January/ Stock at 31 December          | <p>Stock at the beginning of the reference period include stocks of existing primary and transformed energy stock at producers, distributors and consumers and these left in custody to the economic agents.</p> <p>Stock at the end of the reference period include the quantities of the fuels motor fuels existing at producers, distributors and consumers at the end of the reference period, regardless of their source.</p> <p>Stocks represents all stocks on national territory, including stocks held by governments, by major consumers or of organizations dealing with stock possession, stocks from incoming ocean vessels, stocks held in bonded areas and stocks held for others in accordance or not with bilateral government agreement.</p> |
| Stock variation                                   | The difference between stocks of 1 January and those of 31 December.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Bunkering                                         | Includes quantities of fuels delivered to marine ships and aircraft engaged in international voyages, regardless of their flag or nationality of the airline company. Are not included the quantities consumed by ships sailing in national waters. Quantities of fuels consumed by fishing vessels are included in consumption in agriculture.                                                                                                                                                                                                                                                                                                                                                                                                                |
| The calculated gross domestic consumption         | Total Resources + Import - Export - Bunkering $\pm$ stock variation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Total transformation Sector - inputs              | <p>Quantities of fuels used for primary or secondary energy transformation, for example:</p> <ul style="list-style-type: none"> <li>- coal in electric energy, coke oven gas in electric energy or used for the transformation in derived energy products (eg coking coal in coke);</li> <li>- natural gas in electric energy or used for the transformation in derived energy products (eg natural gas in methanol);</li> </ul> <p>Quantities of renewable energy and wastes used for the conversion of primary forms of energy to secondary forms (eg landfill gases to electric energy or used for the transformation to derived energy products (eg biogas used for blended natural gas); Quantities of oil entered in the refineries;</p>                 |
| - in stations for producing thermoelectric energy | Are included total quantities of fuels consumed for producing electric energy whatever of type of the producing station, both in the public sector (which includes economic agents of whose main activity is the producing electricity regardless of their form of ownership) and to self-producers (comprising economic agents, whatever their form of ownership, of whose main occupation is                                                                                                                                                                                                                                                                                                                                                                 |

| Name of aggregated indicator               | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                            | other than energy production and electricity producing mainly for domestic needs, the surplus being sold to third parties). Self-producers represents electric station in mining, food industry, refineries, non-metal materials, metallurgy, chemistry, mechanical engineering of the railways and other industries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| - in stations for producing thermal energy | <p>Are included total quantities of fuels consumed for producing thermal energy whatever of type of the producing station, in the public sector (which includes economic agents of whose main activity is the producing thermal energy regardless of their form of ownership) and for producing thermal energy by self-producers sold to third parties.</p> <p>Are not included quantities of fuels consumed in its own industrial activity for heated by direct combustion heaters and the heat consumed in own residential buildings, which are recorded on household consumption.</p> <p>Also not included own consumptions of the station, those being declared consumptions in energy sector.</p> <p>Consumptions for thermal energy produced in the means of transport are not summarized, being included in the consumption of transport.</p> |
| - in briquetting installations             | <p>Includes quantities of coal and binder consumed for the production of charcoal briquettes.</p> <p>Excluded are quantities used for heating and for operation of equipment that should not be registered here, but registered as consumption in the energy sector.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| - in coke ovens                            | <p>Includes quantities of coking coal consumed for the production of coke, semi-coke and of coke oven gas. Excluded are quantities used for heating and for operation of equipment that should not be registered here, but registered as consumption in the energy sector.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| - in blast furnaces                        | <p>Includes fuel quantities used in furnaces (coking coal and / or bituminous coal, with generic name as pulverized coal injection, metallurgical coke) for production of blast furnace gas in the process of reduction of the iron ore. These amounts are subtracted from consumption in metallurgy, to avoid double recordings.</p> <p>Excluded are quantities used for heating and for operation of equipment that should not be registered here, but registered as consumption in the energy sector.</p>                                                                                                                                                                                                                                                                                                                                         |
| - in oil refineries                        | <p>Includes quantities of crude oil, gasoline and ethane from extraction scaffolds used for processing and obtaining derivative products (combustible and noncombustible products) namely: gasoline, petroleum, white spirit, diesel and aromatic extract, oil, mineral oil, petroleum coke, petroleum bitumen, paraffin waxes, greases, waxes, liquefied petroleum gas, refinery gases including propylene from refineries and other petroleum products. Are included processed oil quantities in the activity of "processing". Does not include returns from petrochemical and blanks.</p> <p>Excluded are quantities used for heating and for operation of equipment that should not be registered</p>                                                                                                                                            |

| Name of aggregated indicator                                                                                   | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                | here, but registered as consumption in the energy sector.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| - in other domains                                                                                             | Includes quantities of coal, firewood and wood waste consumed for producing generator gas and for producing charcoal.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Total energy sector - output from transformation inclusive:                                                    | Outputs from transformation represents energy production resulted from the transformation activity: products derived from coal, refined petroleum products, derived gases, thermoelectric energy and thermal energy. Productions included in this sector include own consumption of transformation installations.                                                                                                                                                                                                                                                                                                                                                                                    |
| - from stations for producing thermoelectric energy                                                            | The indicator includes gross thermoelectric energy production (measured at the generator terminals), inclusive that produced by mobile generator sets, regardless of the type of equipment manufacturing (condensing groups or heating groups), both in the public sector as well of the self-producers. To determine the net production, from gross production is subtracted own consumption of station.                                                                                                                                                                                                                                                                                            |
| - from stations for producing thermal energy                                                                   | The indicator contains production of thermal energy achieved in stations whose main activity is producing thermal energy as well as thermal energy produced and sold by the self-producers.<br>This includes thermal energy used by the auxiliary's installation of station which uses a hot fluid (space heating, liquid fuel heating etc.) and losses from the heat exchanges of the installation / network, as well as heat from chemical processes used as primary energy form, regardless of the type of producing station.<br>This includes and the amount of thermal energy (hot steam) used for producing thermal energy.<br>Not included thermal energy used for producing electric energy. |
| - from briquetting installations                                                                               | Represents production of coal briquettes, regardless of the assortment of coal used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| - from coke ovens                                                                                              | Represents fuel production resulting from the processing of coking of hard coal, namely: coke, semi coke, coke oven gas, coke oven pitch, etc.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| - from furnaces                                                                                                | Represents production of blast furnace gas obtained by transforming coke in the process of reducing iron ore from blast furnaces;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| - from oil refineries                                                                                          | Represents gross production of refined petroleum products.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| - from other domains                                                                                           | Includes production of other fuels categories other than those mentioned (production of gases of gasogen and of the charcoal).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Transfer                                                                                                       | Represents quantities of products of whose classification has changed either because their specifications were changed, either because these were mixed together to form another product..<br>A negative value for one product should be compensated by one (or more) positive value for one or more products and vice versa, the total net effect should be zero.                                                                                                                                                                                                                                                                                                                                   |
| Consumption in the energy sector (for the functioning of generating installations and ensuring basic activity) | This indicator includes quantities of energy carriers consumed by primary energy producers or converted for operation of their installations.<br>Includes electric energy consumption of aggregates for producing electric and thermic energy, of domestic                                                                                                                                                                                                                                                                                                                                                                                                                                           |

| Name of aggregated indicator                                                             | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                          | <p>services (pumps, fans, coal mills, etc.), technological lighting and for various heating devices (relays, contactors), electric energy consumption in the transformers raising voltage in electric stations.</p> <p>Also, includes electric energy consumption of aggregates for producing electric energy, of internal services of station and for heating fuel depots. Not included thermic energy used for producing electric energy.</p> <p>Includes consumption of renewables and waste used by the energy industry to support the transformation activity. For example, renewables and wastes used for heating, lighting or operating pumps or of compressors.</p> <p>Are summarized quantities of energy products used as energy in refineries and quantities consumed as fuel in the oil extraction process and of natural gas and in installations of processing natural gas.</p> <p>Are not taken into account the quantities of fuels transformed into another energy form (which should be registered at the transformation sector) or those used to support the exploitation of the pipeline oil, gas and coal (to be reported in the Transport) and losses of the pipes (that should be reported in distribution losses).</p> <p>This sector also includes the production of chemical substances used in atomic fission and fusion and the products of these processes.</p> |
| Extraction of superior and inferior coal                                                 | <p>CAEM-2 code 05 - Extraction of superior and inferior coal;</p> <p>CAEM-2 code 0892 - Extraction and agglomeration of peat.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Extraction of crude petroleum, natural gas and services related to extraction            | <p>CAEM-2 code 06 - Extraction of crude petroleum, natural gas (excluding prospecting);</p> <p>CAEM-2 code 0910 – Activities of related services of oil and natural gas extraction</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Extraction of uranium and thorium ores                                                   | CAEM-2 code 0721 - Extraction of uranium and thorium ores                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Manufacture of coke products and of products from crude oil processing                   | CAEM-2 code 19 - Manufacture of coke products and of products from crude oil processing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Production and supply of electric, thermic energy, gases, hot water and air conditioning | CAEM-2 code 35 - Production and supply of electric, thermic energy, gases, hot water and air conditioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Losses                                                                                   | <p>Are comprised:</p> <ul style="list-style-type: none"> <li>- at electrical energy: technological consumption in transport installations, transformation and distribution to the point of separation between suppliers and consumers. Technological consumption from the point of separation between suppliers and consumers and to the receivers is comprised in technological consumption in analyzed branch (industry, construction, etc.).</li> <li>- at thermal energy: the amount of thermal energy from the spent steam and the condensate returned in steam boilers; thermal energy in the form of hot water not returned to the source of producing hot water, exclusively hot water used in mixture exchangers. Also included quantities of thermal energy lost through the insulation of systems.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |



| Name of aggregated indicator                                 | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                              | - at fuels: quantities lost in transport, handling and storage at producers, distributors and consumers by: leaking into the atmosphere, at burning torch; leakages of transmission and distribution networks; leakages from reservoirs and other manipulations; degradation by infiltration: quantitative and qualitative losses of solid fuels in deposits.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Available for final consumption (calculated)                 | Available for final consumption = domestic consumption - inputs in transformation + outputs from transformation ± transfer - (energy sector consumption + losses) + final non-energy consumption.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Nonenergetic                                                 | Comprise quantities of energy carriers used for purposes other than those energetic, namely as: consumption of natural gas and petroleum products to obtain chemicals; quantities of natural gas used for injection into resource: crude oil for treatment drilling fluids; products used for lubrication, washing and as insulating materials.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Final energy consumption (gross consumption observed), total | <p>Is determined by aggregating the quantities of energy carriers used by final consumers in economic activity carried out during the reference period.</p> <p>Comprise quantities of primary and transformed energy carriers used in consumer installations, after which no longer takes place any processing and energy transformation.</p> <p>However, in the case of thermal stations and of cogeneration stations of self-producers, are included here only quantities of fuels consumed for producing thermal energy used by them. Quantities of fuels consumed for producing thermal energy sold and for producing electric energy, should be registered in the relevant rubric from the transformation sector.</p> <p>Comprise consumption for lighting; heating and ventilation, water supply, intended for the production, exclusively those for administrative buildings which are classified under "Other branches of the economy."</p> <p>Distribution of final energy consumption is made according CAEM-2. as follows:</p> |
| In industry and construction, total                          | It refers to all activities classified industrial and inclusive construction, exclusively the energy sector consumption.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| from which:<br>- mining industry                             | CAEM-2 code 081 - Extraction of stone, sand and clay;<br>CAEM-2 code 089 - Other mining activities (excluding code 0892);<br>CAEM-2 code 09 - Mining support service activities;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| - metallurgical industry                                     | CAEM-2 code 24 - Metallurgical industry                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| - chemical and petrochemical industry                        | CAEM-2 code 20 - Manufacture of chemicals and chemical products;<br>CAEM-2 code 21 - Manufacture of basic pharmaceutical products and pharmaceutical preparations;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| - nonmetallic minerals                                       | CAEM-2 code 23 - Manufacture of other products from non-metallic mineral                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| - transport equipment                                        | CAEM-2 code 29 - Manufacture of motor vehicles, trailers and semi-trailers;<br>CAEM-2 code 30 - Manufacture of other transport means                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Name of aggregated indicator               | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| - Machine building industry                | CAEM-2 code 25 - The industry of metallic constructions and of metal products, except machinery and equipment;<br>CAEM-2 code 26 - Manufacture of computer, of electronic products and optimal;<br>CAEM-2 code 27 - Manufacture of electrical equipment;<br>CAEM-2 code 28 - Manufacture of machinery and instruments equipment n.c.a.;<br>CAEM-2 code 33- Preparation, maintenance and installation of machinery and equipment                                                                                                                                                                                            |
| - food, beverages, tobacco industry        | CAEM-2 code 10 - Food industry;<br>CAEM-2 code 11 - Manufacture of beverages;<br>CAEM-2 code 12 - Manufacture of tobacco products;                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| - Pulp, Paper and printing activities      | CAEM-2 code 17 - Manufacture of paper and paper products;<br>CAEM-2 code 18 - Printing and reproduction on recorded media                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| - wood processing and furniture production | CAEM-2 code 16 - Wood processing, manufacture of wood and cork products, except furniture; manufacture of articles of straw and other plaiting materials                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| - Industry of textile and leather products | CAEM-2 code 13 - Manufacture of textile products;<br>CAEM-2 code 14 - Manufacture of Clothing articles;<br>CAEM-2 code 15 - Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear                                                                                                                                                                                                                                                                                                                                                                                              |
| - constructions                            | CAEM-2 code 41 - Construction of buildings;<br>CAEM-2 code 42 - Civil constructions works;<br>CAEM-2 code 43 - Special construction works                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| - Other industrial activities              | CAEM-2 code 22 - Manufacture of rubber and plastic products<br>CAEM-2 code 31 - Manufacture of furniture<br>CAEM-2 code 32 - Other industrial activities n.c.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| - transports                               | Comprises consumptions in transport activity (road, rail, air, sea and pipeline), inclusive internal transportation (for economic agents with main activity other than transport).<br>Includes consumption of fuel used by the population for their own means of transport.<br>Not included consumption of marine vessels which sailing in international waters, this is included in "marine bunkers".<br>Consumption of fishing vessels is included in "Fishing and aquaculture".<br>CAEM-2 code 49 - Land transport and transport via pipelines;<br>CAEM-2 code 50 - Water transport;<br>CAEM-2 code 51 - Air transport; |
| - residential sector (population)          | Comprises :<br>- to electric energy: quantity consumed for lighting and other household uses, inclusive for living spaces from the ownership and management of economic agents.<br>- to thermal energy: quantity of thermal energy delivered to the population for heating and domestic hot water, both by the public sector as well as by self-producers.<br>- to fuels: quantities effective delivered to population for direct flame consumption for heating and cooking and for producing thermal energy in micro stations of real estate. This also includes quantities of coal received by miners as allowances.     |

| Name of aggregated indicator   | Definition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| - Agriculture                  | <p>It comprises energy consumption in registered in agriculture, forestry, logging and hunting economy and pisciculture and fishing. It also includes the energy consumption of fishing vessels.</p> <p>CAEM-2 code 01- Agriculture, hunting and related services</p> <p>CAEM-2 code 02 - Silviculture forest harvesting</p> <p>CAEM-2 code 03 - Fishing and aquaculture</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| - Other sectors of the economy | <p>It comprises energy consumption reported by economic agents as consumed in other activities than those mentioned above, namely:</p> <p>CAEM-2 Section E - Water supply; sewerage, waste management and remediation activities</p> <p>CAEM-2 Section G - Wholesale and retail trade; repair of motor vehicles and motorcycles,</p> <p>CAEM-2 code 52 - Storage and support activities for transportation</p> <p>CAEM-2 code 53 - Postal and courier activities,</p> <p>CAEM-2 Section I - Accommodation and public alimentation activities,</p> <p>CAEM-2 Section J - Information and communication,</p> <p>CAEM-2 Section K - Financial and insurance activities,</p> <p>CAEM-2 Section L - Real estate transactions,</p> <p>CAEM-2 Section M - Professional, scientific and technical activities,</p> <p>CAEM-2 Section N - Activities of administrative services and activities of support services.</p> <p>CAEM-2 Section 0 - Public administration and defense; compulsory social security,</p> <p>CAEM-2 Section P - Education ,</p> <p>CAEM-2 Section Q - Health &amp; Social Assistance,</p> <p>CAEM-2 Section R - Art, recreational and leisure activities,</p> <p>CAEM-2 Section S - Other service activities,</p> <p>CAEM-2 Section T - Activities of private households as an employer of domestic personnel; activities of private households for producing goods and services for personal consumption,</p> <p>CAEM-2 Section U - Activities of Extra-territorial organizations and bodies</p> <p>Also included is electricity used for street lighting, respectively for lighting of streets, squares, parks and public gardens, monuments and public buildings, road signs bright, exclusively firms and advertisements.</p> |
| Statistical differences        | <p>Is calculated as the difference between "Available for final consumption" - Of which was subtracted non-energy consumption - and "final energy consumption".</p> <p>Statistical differences comprising changes in stocks unregistered statistically, energy consumption for military purposes (excluding those for industrial production, comprised in industrial activities) and the differences generated by the statistical investigation system: while energy producers are registered exhaustive, consumers are investigated based on a representative sample, being admitted a margin of error.</p> <p>Statistical differences may be positive or negative as observed consumption is lower or higher than the funds available in the reference period.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## 1.1. THE ENERGY BALANCE for 2015

thousands of tonnes of oil equivalent

| SUPPLY AND CONSUMPTION                                      | Total products | Coal       | Natural gas | Oil products | Biofuels and waste | Electricity | Heat       |
|-------------------------------------------------------------|----------------|------------|-------------|--------------|--------------------|-------------|------------|
| Primary Production                                          | 655            | -          | 0           | 7            | 644                | 4           | -          |
| From other sources                                          | 283            | -          | -           | -            | -                  | 283         | -          |
| Imports                                                     | 1766           | 98         | 815         | 851          | 0                  | 2           | -          |
| Exports                                                     | 16             | -          | -           | 14           | 2                  | -           | -          |
| International bunkers                                       | -              | -          | -           | -            | -                  | -           | -          |
| Stock changes                                               | -2             | 4          | 1           | -15          | 8                  | -           | -          |
| <b>GROSS CONSUMPTION</b>                                    | <b>2686</b>    | <b>102</b> | <b>816</b>  | <b>829</b>   | <b>650</b>         | <b>289</b>  | <b>-</b>   |
| <b>TRANSFORMATION, INPUT</b>                                | <b>415</b>     | <b>2</b>   | <b>365</b>  | <b>23</b>    | <b>21</b>          | <b>4</b>    | <b>-</b>   |
| Electricity plants                                          | 4              | -          | -           | 0            | -                  | 4           | -          |
| Main activity producer combined heat and power (CHP) plants | 279            | -          | 279         | -            | -                  | -           | -          |
| Autoproducer combined heat and power (CHP) plants           | 31             | -          | 14          | 7            | 10                 | -           | -          |
| Main activity producer heat plants                          | 39             | -          | 39          | -            | -                  | -           | -          |
| Autoproducer heat plants                                    | 44             | 2          | 33          | 0            | 9                  | -           | -          |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 16             | -          | -           | 16           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 2              | -          | -           | -            | 2                  | -           | -          |
| Not elsewhere specified - transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>331</b>     | <b>-</b>   | <b>-</b>    | <b>11</b>    | <b>-</b>           | <b>81</b>   | <b>239</b> |
| Electricity plants                                          | 5              | -          | -           | -            | -                  | 5           | -          |
| Main activity producer combined heat and power (CHP) plants | 216            | -          | -           | -            | -                  | 73          | 143        |
| Autoproducer combined heat and power (CHP) plants           | 18             | -          | -           | -            | -                  | 3           | 15         |
| Main activity producer heat plants                          | 43             | -          | -           | -            | -                  | -           | 43         |
| Autoproducer heat plants                                    | 38             | -          | -           | -            | -                  | -           | 38         |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 11             | -          | -           | 11           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 0              | -          | -           | -            | 0                  | -           | -          |
| Not elsewhere specified — transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>Energy sector</b>                                        | <b>18</b>      | <b>-</b>   | <b>-</b>    | <b>-</b>     | <b>-</b>           | <b>16</b>   | <b>2</b>   |
| <b>LOSSES</b>                                               | <b>129</b>     | <b>0</b>   | <b>58</b>   | <b>3</b>     | <b>0</b>           | <b>33</b>   | <b>35</b>  |

thousands of tonnes of oil equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | <b>Coal</b> | <b>Natural gas</b> | <b>Oil products</b> | <b>Biofuels and waste</b> | <b>Electricity</b> | <b>Heat</b> |
|---------------------------------|-----------------------|-------------|--------------------|---------------------|---------------------------|--------------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>2455</b>           | <b>100</b>  | <b>393</b>         | <b>814</b>          | <b>629</b>                | <b>317</b>         | <b>202</b>  |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>2410</b>           | <b>100</b>  | <b>393</b>         | <b>778</b>          | <b>620</b>                | <b>317</b>         | <b>202</b>  |
| <b>INDUSTRY</b>                 | <b>209</b>            | <b>40</b>   | <b>60</b>          | <b>4</b>            | <b>1</b>                  | <b>65</b>          | <b>39</b>   |
| Iron and steel                  | 0                     | -           | -                  | -                   | -                         | 0                  | -           |
| Chemical and petrochem.         | 5                     | -           | 1                  | -                   | -                         | 4                  | -           |
| Non-metallic minerals           | 88                    | 39          | 35                 | -                   | -                         | 14                 | 0           |
| Machinery                       | 4                     | 0           | 0                  | 0                   | -                         | 4                  | 0           |
| Transport equipment             | 0                     | -           | -                  | -                   | 0                         | 0                  | -           |
| Mining and quarrying            | 2                     | -           | -                  | 1                   | -                         | 1                  | -           |
| Food and tobacco                | 94                    | 1           | 21                 | -                   | 1                         | 34                 | 37          |
| Paper, pulp and print           | 1                     | -           | 1                  | -                   | -                         | -                  | -           |
| Wood and wood products          | 1                     | -           | -                  | -                   | -                         | 1                  | 0           |
| Construction                    | 4                     | -           | 1                  | 3                   | -                         | -                  | -           |
| Textile and leather             | 6                     | -           | 1                  | -                   | -                         | 3                  | 2           |
| Not elsewhere specified         | 4                     | -           | -                  | -                   | -                         | 4                  | -           |
| <b>TRANSPORT</b>                | <b>662</b>            | <b>-</b>    | <b>20</b>          | <b>637</b>          | <b>-</b>                  | <b>5</b>           | <b>-</b>    |
| Domestic aviation               | 25                    | -           | -                  | 25                  | -                         | -                  | -           |
| Road                            | 621                   | -           | 13                 | 604                 | -                         | 4                  | -           |
| Rail                            | 6                     | -           | -                  | 6                   | -                         | -                  | -           |
| Pipeline transport              | 8                     | -           | 7                  | -                   | -                         | 1                  | -           |
| Domestic navigation             | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| Non-specified                   | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| <b>OTHER</b>                    | <b>1539</b>           | <b>60</b>   | <b>313</b>         | <b>137</b>          | <b>619</b>                | <b>247</b>         | <b>163</b>  |
| Residential                     | 1205                  | 42          | 226                | 66                  | 609                       | 144                | 118         |
| Comm. and public services       | 260                   | 17          | 85                 | 5                   | 9                         | 99                 | 45          |
| Agriculture                     | 74                    | 1           | 2                  | 66                  | 1                         | 4                  | -           |
| <b>NON-ENERGY USE</b>           | <b>45</b>             | <b>-</b>    | <b>-</b>           | <b>36</b>           | <b>9</b>                  | <b>-</b>           | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>           | <b>-</b>            | <b>-</b>                  | <b>-</b>           | <b>-</b>    |

## 1.2. THE ENERGY BALANCE for 2015

| TeraJoule                                                   |                |             |              |              |                    |              |              |
|-------------------------------------------------------------|----------------|-------------|--------------|--------------|--------------------|--------------|--------------|
| SUPPLY AND CONSUMPTION                                      | Total products | Coal        | Natural gas  | Oil products | Biofuels and waste | Electricity  | Heat         |
| Primary Production                                          | 27482          | -           | 3            | 285          | 27001              | 193          | -            |
| From other sources                                          | 11879          | -           | -            | -            | -                  | 11879        | -            |
| Imports                                                     | 74076          | 4114        | 34146        | 35712        | 42                 | 62           | -            |
| Exports                                                     | 726            | -           | -            | 627          | 99                 | -            | -            |
| International bunkers                                       | -              | -           | -            | -            | -                  | -            | -            |
| Stock changes                                               | -59            | 174         | 48           | -602         | 321                | -            | -            |
| <b>GROSS CONSUMPTION</b>                                    | <b>112652</b>  | <b>4288</b> | <b>34197</b> | <b>34768</b> | <b>27265</b>       | <b>12134</b> | <b>-</b>     |
| <b>TRANSFORMATION, INPUT</b>                                | <b>17380</b>   | <b>70</b>   | <b>15309</b> | <b>946</b>   | <b>862</b>         | <b>193</b>   | <b>-</b>     |
| Electricity plants                                          | 214            | -           | 1            | 6            | 14                 | 193          | -            |
| Main activity producer combined heat and power (CHP) plants | 11286          | -           | 11286        | -            | -                  | -            | -            |
| Autoproducer combined heat and power (CHP) plants           | 1236           | -           | 587          | 262          | 387                | -            | -            |
| Main activity producer heat plants                          | 2040           | -           | 2040         | -            | -                  | -            | -            |
| Autoproducer heat plants                                    | 1872           | 70          | 1395         | 18           | 389                | -            | -            |
| Oil refineries                                              | -              | -           | -            | -            | -                  | -            | -            |
| Petrochemical plants                                        | 660            | -           | -            | 660          | -                  | -            | -            |
| Liquefaction plants                                         | -              | -           | -            | -            | -                  | -            | -            |
| Charcoal production plants                                  | 72             | -           | -            | -            | 72                 | -            | -            |
| Not elsewhere specified - transformation                    | -              | -           | -            | -            | -                  | -            | -            |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>14122</b>   | <b>-</b>    | <b>-</b>     | <b>483</b>   | <b>13</b>          | <b>3584</b>  | <b>10042</b> |
| Electricity plants                                          | 199            | -           | -            | -            | -                  | 199          | -            |
| Main activity producer combined heat and power (CHP) plants | 9039           | -           | -            | -            | -                  | 3046         | 5993         |
| Autoproducer combined heat and power (CHP) plants           | 789            | -           | -            | -            | -                  | 140          | 649          |
| Main activity producer heat plants                          | 1805           | -           | -            | -            | -                  | -            | 1805         |
| Autoproducer heat plants                                    | 1595           | -           | -            | -            | -                  | -            | 1595         |
| Oil refineries                                              | -              | -           | -            | -            | -                  | -            | -            |
| Petrochemical plants                                        | 483            | -           | -            | 483          | -                  | -            | -            |
| Liquefaction plants                                         | -              | -           | -            | -            | -                  | -            | -            |
| Charcoal production plants                                  | 13             | -           | -            | -            | 13                 | -            | -            |
| Not elsewhere specified — transformation                    | -              | -           | -            | -            | -                  | -            | -            |
| <b>Energy sector</b>                                        | <b>721</b>     | <b>-</b>    | <b>-</b>     | <b>2</b>     | <b>-</b>           | <b>647</b>   | <b>72</b>    |
| <b>LOSSES</b>                                               | <b>5531</b>    | <b>2</b>    | <b>2434</b>  | <b>151</b>   | <b>7</b>           | <b>1437</b>  | <b>1500</b>  |

| TeraJoule                       |                |             |              |              |                    |              |             |
|---------------------------------|----------------|-------------|--------------|--------------|--------------------|--------------|-------------|
| SUPPLY AND CONSUMPTION          | Total products | Coal        | Natural gas  | Oil products | Biofuels and waste | Electricity  | Heat        |
| <b>FINAL CONSUMPTION</b>        | <b>103142</b>  | <b>4216</b> | <b>16454</b> | <b>34152</b> | <b>26409</b>       | <b>13441</b> | <b>8470</b> |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>101231</b>  | <b>4216</b> | <b>16454</b> | <b>32602</b> | <b>26048</b>       | <b>13441</b> | <b>8470</b> |
| <b>INDUSTRY</b>                 | <b>9043</b>    | <b>1705</b> | <b>2506</b>  | <b>298</b>   | <b>62</b>          | <b>2782</b>  | <b>1690</b> |
| Iron and steel                  | 8              | -           | -            | -            | -                  | 8            | -           |
| Chemical and petrochem.         | 214            | -           | 28           | 6            | 4                  | 161          | 15          |
| Non-metallic minerals           | 3715           | 1648        | 1469         | 29           | -                  | 568          | 1           |
| Machinery                       | 180            | 1           | 6            | 2            | -                  | 170          | 1           |
| Transport equipment             | 3              | -           | -            | -            | 1                  | 2            | -           |
| Mining and quarrying            | 119            | -           | -            | 61           | -                  | 58           | -           |
| Food and tobacco                | 4014           | 56          | 869          | 41           | 43                 | 1427         | 1578        |
| Paper, pulp and print           | 108            | -           | 55           | -            | -                  | 32           | 21          |
| Wood and wood products          | 54             | -           | -            | 5            | 13                 | 36           | -           |
| Construction                    | 201            | -           | 37           | 143          | -                  | 20           | 1           |
| Textile and leather             | 232            | -           | 32           | 2            | 1                  | 129          | 68          |
| Not elsewhere specified         | 195            | -           | 10           | 9            | -                  | 171          | 5           |
| <b>TRANSPORT</b>                | <b>28133</b>   | <b>-</b>    | <b>873</b>   | <b>27084</b> | <b>-</b>           | <b>176</b>   | <b>-</b>    |
| Domestic aviation               | 1008           | -           | -            | 1008         | -                  | -            | -           |
| Road                            | 26454          | -           | 576          | 25724        | -                  | 154          | -           |
| Rail                            | 258            | -           | -            | 258          | -                  | -            | -           |
| Pipeline transport              | 319            | -           | 297          | -            | -                  | 22           | -           |
| Domestic navigation             | 28             | -           | -            | 28           | -                  | -            | -           |
| Non-specified                   | 66             | -           | -            | 66           | -                  | -            | -           |
| <b>OTHER</b>                    | <b>64055</b>   | <b>2511</b> | <b>13075</b> | <b>5220</b>  | <b>25986</b>       | <b>10483</b> | <b>6780</b> |
| Residential                     | 50114          | 1733        | 9442         | 2312         | 25574              | 6118         | 4935        |
| Comm. and public services       | 10952          | 749         | 3544         | 234          | 383                | 4198         | 1844        |
| Agriculture                     | 2989           | 29          | 89           | 2674         | 29                 | 167          | 1           |
| <b>NON-ENERGY USE</b>           | <b>1911</b>    | <b>-</b>    | <b>-</b>     | <b>1550</b>  | <b>361</b>         | <b>-</b>     | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>       | <b>-</b>    | <b>-</b>     | <b>-</b>     | <b>-</b>           | <b>-</b>     | <b>-</b>    |

### 1.3. THE ENERGY BALANCE for 2015

thousands of tonnes of coal equivalent

| SUPPLY AND CONSUMPTION                                      | Total products | Coal       | Natural gas | Oil products | Biofuels and waste | Electricity | Heat       |
|-------------------------------------------------------------|----------------|------------|-------------|--------------|--------------------|-------------|------------|
| Primary Production                                          | 934            | -          | 0           | 10           | 918                | 6           | -          |
| From other sources                                          | 405            | -          | -           | -            | -                  | 405         | -          |
| Imports                                                     | 2522           | 140        | 1164        | 1216         | -                  | 2           | -          |
| Exports                                                     | 24             | -          | -           | 21           | 3                  | -           | -          |
| International bunkers                                       | -              | -          | -           | -            | -                  | -           | -          |
| Stock changes                                               | -5             | 6          | 1           | -23          | 11                 | -           | -          |
| <b>GROSS CONSUMPTION</b>                                    | <b>3832</b>    | <b>146</b> | <b>1165</b> | <b>1182</b>  | <b>926</b>         | <b>413</b>  | <b>-</b>   |
| <b>TRANSFORMATION, INPUT</b>                                | <b>590</b>     | <b>2</b>   | <b>522</b>  | <b>31</b>    | <b>29</b>          | <b>6</b>    | <b>-</b>   |
| Electricity plants                                          | 6              | -          | -           | 0            | -                  | 6           | -          |
| Main activity producer combined heat and power (CHP) plants | 398            | -          | 398         | -            | -                  | -           | -          |
| Autoproducer combined heat and power (CHP) plants           | 43             | -          | 20          | 9            | 14                 | -           | -          |
| Main activity producer heat plants                          | 56             | -          | 56          | -            | -                  | -           | -          |
| Autoproducer heat plants                                    | 63             | 2          | 48          | -            | 13                 | -           | -          |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 22             | -          | -           | 22           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 2              | -          | -           | -            | 2                  | -           | -          |
| Not elsewhere specified - transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>474</b>     | <b>-</b>   | <b>-</b>    | <b>16</b>    | <b>1</b>           | <b>115</b>  | <b>342</b> |
| Electricity plants                                          | 6              | -          | -           | -            | -                  | 6           | -          |
| Main activity producer combined heat and power (CHP) plants | 308            | -          | -           | -            | -                  | 104         | 204        |
| Autoproducer combined heat and power (CHP) plants           | 27             | -          | -           | -            | -                  | 5           | 22         |
| Main activity producer heat plants                          | 62             | -          | -           | -            | -                  | -           | 62         |
| Autoproducer heat plants                                    | 54             | -          | -           | -            | -                  | -           | 54         |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 16             | -          | -           | 16           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 1              | -          | -           | -            | 1                  | -           | -          |
| Not elsewhere specified — transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>Energy sector</b>                                        | <b>24</b>      | <b>-</b>   | <b>-</b>    | <b>-</b>     | <b>-</b>           | <b>22</b>   | <b>2</b>   |
| <b>LOSSES</b>                                               | <b>188</b>     | <b>-</b>   | <b>83</b>   | <b>5</b>     | <b>0</b>           | <b>49</b>   | <b>51</b>  |



thousands of tonnes of coal equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | <b>Coal</b> | <b>Natural gas</b> | <b>Oil products</b> | <b>Biofuels and waste</b> | <b>Electricity</b> | <b>Heat</b> |
|---------------------------------|-----------------------|-------------|--------------------|---------------------|---------------------------|--------------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>3504</b>           | <b>144</b>  | <b>560</b>         | <b>1162</b>         | <b>898</b>                | <b>451</b>         | <b>289</b>  |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>3441</b>           | <b>144</b>  | <b>560</b>         | <b>1110</b>         | <b>887</b>                | <b>451</b>         | <b>289</b>  |
| <b>INDUSTRY</b>                 | <b>305</b>            | <b>57</b>   | <b>85</b>          | <b>9</b>            | <b>2</b>                  | <b>94</b>          | <b>58</b>   |
| Iron and steel                  | 0                     | -           | -                  | -                   | -                         | 0                  | -           |
| Chemical and petrochem.         | 7                     | -           | 1                  | -                   | -                         | 5                  | 1           |
| Non-metallic minerals           | 124                   | 55          | 50                 | -                   | -                         | 19                 | -           |
| Machinery                       | 6                     | 0           | 0                  | 0                   | -                         | 6                  | -           |
| Transport equipment             | 0                     | -           | -                  | -                   | 0                         | -                  | -           |
| Mining and quarrying            | 4                     | -           | -                  | 2                   | -                         | 2                  | -           |
| Food and tobacco                | 138                   | 2           | 30                 | 2                   | 2                         | 48                 | 54          |
| Paper, pulp and print           | 4                     | -           | 2                  | -                   | -                         | 1                  | 1           |
| Wood and wood products          | 1                     | 0           | -                  | -                   | -                         | 1                  | 0           |
| Construction                    | 7                     | -           | 1                  | 5                   | -                         | 1                  | -           |
| Textile and leather             | 8                     | -           | 1                  | -                   | -                         | 5                  | 2           |
| Not elsewhere specified         | 6                     | -           | -                  | -                   | -                         | 6                  | -           |
| <b>TRANSPORT</b>                | <b>943</b>            | <b>-</b>    | <b>28</b>          | <b>909</b>          | <b>-</b>                  | <b>6</b>           | <b>-</b>    |
| Domestic aviation               | 34                    | -           | -                  | 34                  | -                         | -                  | -           |
| Road                            | 888                   | -           | 20                 | 863                 | -                         | 5                  | -           |
| Rail                            | 9                     | -           | -                  | 9                   | -                         | -                  | -           |
| Pipeline transport              | 9                     | -           | 8                  | -                   | -                         | 1                  | -           |
| Domestic navigation             | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| Non-specified                   | 2                     | -           | -                  | 2                   | -                         | -                  | -           |
| <b>OTHER</b>                    | <b>2193</b>           | <b>87</b>   | <b>447</b>         | <b>192</b>          | <b>885</b>                | <b>351</b>         | <b>231</b>  |
| Residential                     | 1722                  | 60          | 323                | 94                  | 871                       | 205                | 169         |
| Comm. and public services       | 368                   | 26          | 121                | 7                   | 12                        | 140                | 62          |
| Agriculture                     | 103                   | 1           | 3                  | 91                  | 2                         | 6                  | -           |
| <b>NON-ENERGY USE</b>           | <b>63</b>             | <b>-</b>    | <b>-</b>           | <b>52</b>           | <b>11</b>                 | <b>-</b>           | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>           | <b>-</b>            | <b>-</b>                  | <b>-</b>           | <b>-</b>    |

#### 1.4. THE ENERGY BALANCE for 2016

thousands of tonnes of oil equivalent

| SUPPLY AND CONSUMPTION                                      | Total products | Coal      | Natural gas | Oil products | Biofuels and waste | Electricity | Heat       |
|-------------------------------------------------------------|----------------|-----------|-------------|--------------|--------------------|-------------|------------|
| Primary Production                                          | 709            | -         | 0           | 7            | 698                | 4           | -          |
| From other sources                                          | 286            | -         | -           | -            | -                  | 286         | -          |
| Imports                                                     | 1818           | 60        | 838         | 920          | 0                  | 0           | -          |
| Exports                                                     | 15             | -         | -           | 15           | -                  | 0           | -          |
| International bunkers                                       | -              | -         | -           | -            | -                  | -           | -          |
| Stock changes                                               | -2             | 15        | -1          | -16          | 0                  | -           | -          |
| <b>GROSS CONSUMPTION</b>                                    | <b>2796</b>    | <b>75</b> | <b>837</b>  | <b>896</b>   | <b>698</b>         | <b>290</b>  | <b>-</b>   |
| <b>TRANSFORMATION, INPUT</b>                                | <b>424</b>     | <b>1</b>  | <b>369</b>  | <b>30</b>    | <b>20</b>          | <b>4</b>    | <b>-</b>   |
| Electricity plants                                          | 4              | -         | -           | 0            | -                  | 4           | -          |
| Main activity producer combined heat and power (CHP) plants | 279            | -         | 279         | -            | -                  | -           | -          |
| Autoproducer combined heat and power (CHP) plants           | 32             | -         | 12          | 11           | 9                  | -           | -          |
| Main activity producer heat plants                          | 44             | -         | 43          | -            | 1                  | -           | -          |
| Autoproducer heat plants                                    | 46             | 1         | 35          | 1            | 9                  | -           | -          |
| Oil refineries                                              | 0              | -         | -           | 0            | -                  | -           | -          |
| Petrochemical plants                                        | 18             | -         | -           | 18           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -         | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 1              | -         | -           | -            | 1                  | -           | -          |
| Not elsewhere specified - transformation                    | -              | -         | -           | -            | -                  | -           | -          |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>346</b>     | <b>-</b>  | <b>-</b>    | <b>15</b>    | <b>-</b>           | <b>78</b>   | <b>253</b> |
| Electricity plants                                          | 4              | -         | -           | -            | -                  | 4           | -          |
| Main activity producer combined heat and power (CHP) plants | 217            | -         | -           | -            | -                  | 70          | 147        |
| Autoproducer combined heat and power (CHP) plants           | 22             | -         | -           | -            | -                  | 4           | 18         |
| Main activity producer heat plants                          | 47             | -         | -           | -            | -                  | -           | 47         |
| Autoproducer heat plants                                    | 41             | -         | -           | -            | -                  | -           | 41         |
| Oil refineries                                              | -              | -         | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 15             | -         | -           | 15           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -         | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 0              | -         | -           | -            | 0                  | -           | -          |
| Not elsewhere specified — transformation                    | -              | -         | -           | -            | -                  | -           | -          |
| <b>Energy sector</b>                                        | <b>19</b>      | <b>-</b>  | <b>-</b>    | <b>-</b>     | <b>-</b>           | <b>16</b>   | <b>3</b>   |
| <b>LOSSES</b>                                               | <b>128</b>     | <b>0</b>  | <b>50</b>   | <b>4</b>     | <b>0</b>           | <b>37</b>   | <b>37</b>  |

thousands of tonnes of oil equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | <b>Coal</b> | <b>Natural gas</b> | <b>Oil products</b> | <b>Biofuels and waste</b> | <b>Electricity</b> | <b>Heat</b> |
|---------------------------------|-----------------------|-------------|--------------------|---------------------|---------------------------|--------------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>2571</b>           | <b>74</b>   | <b>418</b>         | <b>877</b>          | <b>678</b>                | <b>311</b>         | <b>213</b>  |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>2525</b>           | <b>74</b>   | <b>418</b>         | <b>840</b>          | <b>669</b>                | <b>311</b>         | <b>213</b>  |
| <b>INDUSTRY</b>                 | <b>203</b>            | <b>24</b>   | <b>61</b>          | <b>9</b>            | <b>1</b>                  | <b>64</b>          | <b>44</b>   |
| Iron and steel                  | 0                     | -           | -                  | -                   | -                         | 0                  | -           |
| Chemical and petrochem.         | 5                     | -           | 1                  | -                   | -                         | 4                  | -           |
| Non-metallic minerals           | 69                    | 22          | 33                 | 3                   | -                         | 11                 | 0           |
| Machinery                       | 4                     | 0           | 0                  | 0                   | -                         | 4                  | 0           |
| Transport equipment             | 0                     | -           | -                  | -                   | 0                         | 0                  | -           |
| Mining and quarrying            | 2                     | -           | -                  | 1                   | -                         | 1                  | -           |
| Food and tobacco                | 103                   | 2           | 22                 | 2                   | 1                         | 34                 | 42          |
| Paper, pulp and print           | 1                     | -           | 1                  | -                   | -                         | 0                  | 0           |
| Wood and wood products          | 2                     | -           | 1                  | -                   | 0                         | 1                  | 0           |
| Construction                    | 5                     | -           | 1                  | 3                   | 0                         | 1                  | 0           |
| Textile and leather             | 7                     | -           | 1                  | -                   | 0                         | 4                  | 2           |
| Not elsewhere specified         | 5                     | -           | 1                  | -                   | 0                         | 4                  | -           |
| <b>TRANSPORT</b>                | <b>717</b>            | <b>-</b>    | <b>25</b>          | <b>686</b>          | <b>-</b>                  | <b>6</b>           | <b>-</b>    |
| Domestic aviation               | 33                    | -           | -                  | 33                  | -                         | -                  | -           |
| Road                            | 661                   | -           | 19                 | 638                 | -                         | 4                  | -           |
| Rail                            | 13                    | -           | -                  | 13                  | -                         | -                  | -           |
| Pipeline transport              | 8                     | -           | 6                  | -                   | -                         | 2                  | -           |
| Domestic navigation             | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| Non-specified                   | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| <b>OTHER</b>                    | <b>1605</b>           | <b>50</b>   | <b>332</b>         | <b>145</b>          | <b>668</b>                | <b>241</b>         | <b>169</b>  |
| Residential                     | 1257                  | 31          | 236                | 69                  | 658                       | 140                | 123         |
| Comm. and public services       | 268                   | 18          | 94                 | 4                   | 9                         | 97                 | 46          |
| Agriculture                     | 80                    | 1           | 2                  | 72                  | 1                         | 4                  | 0           |
| <b>NON-ENERGY USE</b>           | <b>46</b>             | <b>-</b>    | <b>-</b>           | <b>37</b>           | <b>9</b>                  | <b>-</b>           | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>           | <b>-</b>            | <b>-</b>                  | <b>-</b>           | <b>-</b>    |

## 1.5. THE ENERGY BALANCE for 2016

| TeraJoule                                                   |                |             |              |              |                    |              |              |
|-------------------------------------------------------------|----------------|-------------|--------------|--------------|--------------------|--------------|--------------|
| SUPPLY AND CONSUMPTION                                      | Total products | Coal        | Natural gas  | Oil products | Biofuels and waste | Electricity  | Heat         |
| Primary Production                                          | 29584          | -           | 4            | 273          | 29149              | 158          | -            |
| From other sources                                          | 11967          | -           | -            | -            | -                  | 11967        | -            |
| Imports                                                     | 76320          | 2519        | 35159        | 38623        | 6                  | 13           | -            |
| Exports                                                     | 634            | -           | -            | 629          | 5                  | 0            | -            |
| International bunkers                                       | -              | -           | -            | -            | -                  | -            | -            |
| Stock changes                                               | -75            | 621         | -58          | -702         | 64                 | -            | -            |
| <b>GROSS CONSUMPTION</b>                                    | <b>117162</b>  | <b>3140</b> | <b>35105</b> | <b>37565</b> | <b>29214</b>       | <b>12138</b> | <b>-</b>     |
| <b>TRANSFORMATION, INPUT</b>                                | <b>17732</b>   | <b>74</b>   | <b>15480</b> | <b>1208</b>  | <b>812</b>         | <b>158</b>   | <b>-</b>     |
| Electricity plants                                          | 168            | -           | -            | 8            | 2                  | 158          | -            |
| Main activity producer combined heat and power (CHP) plants | 11278          | 5           | 11273        | -            | -                  | -            | -            |
| Autoproducer combined heat and power (CHP) plants           | 1222           | -           | 387          | 476          | 359                | -            | -            |
| Main activity producer heat plants                          | 2276           | -           | 2254         | -            | 22                 | -            | -            |
| Autoproducer heat plants                                    | 2049           | 69          | 1566         | 44           | 370                | -            | -            |
| Oil refineries                                              | -              | -           | -            | -            | -                  | -            | -            |
| Petrochemical plants                                        | 680            | -           | -            | 680          | -                  | -            | -            |
| Liquefaction plants                                         | -              | -           | -            | -            | -                  | -            | -            |
| Charcoal production plants                                  | 59             | -           | -            | -            | 59                 | -            | -            |
| Not elsewhere specified - transformation                    | -              | -           | -            | -            | -                  | -            | -            |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>14495</b>   | <b>-</b>    | <b>-</b>     | <b>607</b>   | <b>16</b>          | <b>3266</b>  | <b>10606</b> |
| Electricity plants                                          | 161            | -           | -            | -            | -                  | 161          | -            |
| Main activity producer combined heat and power (CHP) plants | 9134           | -           | -            | -            | -                  | 2954         | 6180         |
| Autoproducer combined heat and power (CHP) plants           | 887            | -           | -            | -            | -                  | 151          | 736          |
| Main activity producer heat plants                          | 1981           | -           | -            | -            | -                  | -            | 1981         |
| Autoproducer heat plants                                    | 1709           | -           | -            | -            | -                  | -            | 1709         |
| Oil refineries                                              | -              | -           | -            | -            | -                  | -            | -            |
| Petrochemical plants                                        | 607            | -           | -            | 607          | -                  | -            | -            |
| Liquefaction plants                                         | -              | -           | -            | -            | -                  | -            | -            |
| Charcoal production plants                                  | 16             | -           | -            | -            | 16                 | -            | -            |
| Not elsewhere specified — transformation                    | -              | -           | -            | -            | -                  | -            | -            |
| <b>Energy sector</b>                                        | <b>730</b>     | <b>-</b>    | <b>-</b>     | <b>1</b>     | <b>-</b>           | <b>653</b>   | <b>76</b>    |
| <b>LOSSES</b>                                               | <b>5405</b>    | <b>7</b>    | <b>2115</b>  | <b>172</b>   | <b>1</b>           | <b>1543</b>  | <b>1567</b>  |

| TeraJoule                       |                |             |              |              |                    |              |             |
|---------------------------------|----------------|-------------|--------------|--------------|--------------------|--------------|-------------|
| SUPPLY AND CONSUMPTION          | Total products | Coal        | Natural gas  | Oil products | Biofuels and waste | Electricity  | Heat        |
| <b>FINAL CONSUMPTION</b>        | <b>107790</b>  | <b>3059</b> | <b>17510</b> | <b>36791</b> | <b>28417</b>       | <b>13050</b> | <b>8963</b> |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>105941</b>  | <b>3054</b> | <b>17510</b> | <b>35256</b> | <b>28108</b>       | <b>13050</b> | <b>8963</b> |
| <b>INDUSTRY</b>                 | <b>8598</b>    | <b>983</b>  | <b>2510</b>  | <b>476</b>   | <b>38</b>          | <b>2703</b>  | <b>1888</b> |
| Iron and steel                  | 7              | -           | -            | -            | -                  | 7            | -           |
| Chemical and petrochem.         | 221            | -           | 28           | 11           | 0                  | 163          | 19          |
| Non-metallic minerals           | 2945           | 916         | 1382         | 163          | 0                  | 481          | 3           |
| Machinery                       | 192            | 2           | 17           | 3            | 0                  | 166          | 4           |
| Transport equipment             | 12             | -           | 1            | -            | 1                  | 10           | -           |
| Mining and quarrying            | 78             | -           | -            | 33           | -                  | 45           | -           |
| Food and tobacco                | 4277           | 63          | 909          | 90           | 28                 | 1426         | 1761        |
| Paper, pulp and print           | 108            | -           | 49           | 0            | -                  | 33           | 26          |
| Wood and wood products          | 55             | -           | 0            | 14           | 5                  | 36           | -           |
| Construction                    | 187            | -           | 18           | 143          | 2                  | 23           | 1           |
| Textile and leather             | 243            | 1           | 33           | 3            | 1                  | 137          | 68          |
| Not elsewhere specified         | 273            | 1           | 73           | 16           | 1                  | 176          | 6           |
| <b>TRANSPORT</b>                | <b>29991</b>   | <b>-</b>    | <b>1067</b>  | <b>28699</b> | <b>-</b>           | <b>225</b>   | <b>-</b>    |
| Domestic aviation               | 1410           | -           | -            | 1410         | -                  | -            | -           |
| Road                            | 27640          | -           | 810          | 26678        | -                  | 152          | -           |
| Rail                            | 542            | -           | -            | 542          | -                  | -            | -           |
| Pipeline transport              | 330            | -           | 257          | -            | -                  | 73           | -           |
| Domestic navigation             | 21             | -           | -            | 21           | -                  | -            | -           |
| Non-specified                   | 48             | -           | -            | 48           | -                  | -            | -           |
| <b>OTHER</b>                    | <b>67352</b>   | <b>2071</b> | <b>13933</b> | <b>6081</b>  | <b>28070</b>       | <b>10122</b> | <b>7075</b> |
| Residential                     | 52724          | 1282        | 9899         | 2912         | 27597              | 5887         | 5147        |
| Comm. and public services       | 11250          | 761         | 3948         | 126          | 425                | 4064         | 1926        |
| Agriculture                     | 3378           | 28          | 86           | 3043         | 48                 | 171          | 2           |
| <b>NON-ENERGY USE</b>           | <b>1849</b>    | <b>5</b>    | <b>-</b>     | <b>1535</b>  | <b>309</b>         | <b>-</b>     | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>       | <b>-</b>    | <b>-</b>     | <b>-</b>     | <b>-</b>           | <b>-</b>     | <b>-</b>    |

## 1.6. THE ENERGY BALANCE for 2016

thousands of tonnes of coal equivalent

| SUPPLY AND CONSUMPTION                                      | Total products | Coal       | Natural gas | Oil products | Biofuels and waste | Electricity | Heat       |
|-------------------------------------------------------------|----------------|------------|-------------|--------------|--------------------|-------------|------------|
| Primary Production                                          | 1010           | -          | 0           | 9            | 996                | 5           | -          |
| From other sources                                          | 408            | -          | -           | -            | -                  | 408         | -          |
| Imports                                                     | 2597           | 85         | 1198        | 1314         | 0                  | 0           | -          |
| Exports                                                     | 22             | -          | -           | 22           | 0                  | 0           | -          |
| International bunkers                                       | -              | -          | -           | -            | -                  | -           | -          |
| Stock changes                                               | -4             | 22         | -2          | -25          | 1                  | -           | -          |
| <b>GROSS CONSUMPTION</b>                                    | <b>3989</b>    | <b>107</b> | <b>1196</b> | <b>1276</b>  | <b>997</b>         | <b>413</b>  | <b>-</b>   |
| <b>TRANSFORMATION, INPUT</b>                                | <b>604</b>     | <b>2</b>   | <b>528</b>  | <b>41</b>    | <b>28</b>          | <b>5</b>    | <b>-</b>   |
| Electricity plants                                          | 5              | -          | -           | 0            | 0                  | 5           | -          |
| Main activity producer combined heat and power (CHP) plants | 399            | -          | 399         | -            | -                  | -           | -          |
| Autoproducer combined heat and power (CHP) plants           | 45             | -          | 17          | 16           | 12                 | -           | -          |
| Main activity producer heat plants                          | 63             | -          | 62          | -            | 1                  | -           | -          |
| Autoproducer heat plants                                    | 66             | 2          | 50          | 1            | 13                 | -           | -          |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 26             | -          | -           | 26           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 2              | -          | -           | -            | 2                  | -           | -          |
| Not elsewhere specified - transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>495</b>     | <b>-</b>   | <b>-</b>    | <b>22</b>    | <b>1</b>           | <b>111</b>  | <b>361</b> |
| Electricity plants                                          | 5              | -          | -           | -            | -                  | 5           | -          |
| Main activity producer combined heat and power (CHP) plants | 312            | -          | -           | -            | -                  | 101         | 211        |
| Autoproducer combined heat and power (CHP) plants           | 30             | -          | -           | -            | -                  | 5           | 25         |
| Main activity producer heat plants                          | 67             | -          | -           | -            | -                  | -           | 67         |
| Autoproducer heat plants                                    | 58             | -          | -           | -            | -                  | -           | 58         |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 22             | -          | -           | 22           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 1              | -          | -           | -            | 1                  | -           | -          |
| Not elsewhere specified — transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>Energy sector</b>                                        | <b>25</b>      | <b>-</b>   | <b>-</b>    | <b>-</b>     | <b>-</b>           | <b>22</b>   | <b>3</b>   |
| <b>LOSSES</b>                                               | <b>182</b>     | <b>-</b>   | <b>72</b>   | <b>4</b>     | <b>0</b>           | <b>53</b>   | <b>53</b>  |

thousands of tonnes of coal equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | <b>Coal</b> | <b>Natural gas</b> | <b>Oil products</b> | <b>Biofuels and waste</b> | <b>Electricity</b> | <b>Heat</b> |
|---------------------------------|-----------------------|-------------|--------------------|---------------------|---------------------------|--------------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>3673</b>           | <b>105</b>  | <b>596</b>         | <b>1253</b>         | <b>970</b>                | <b>444</b>         | <b>305</b>  |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>3608</b>           | <b>105</b>  | <b>596</b>         | <b>1201</b>         | <b>957</b>                | <b>444</b>         | <b>305</b>  |
| <b>INDUSTRY</b>                 | <b>290</b>            | <b>35</b>   | <b>85</b>          | <b>14</b>           | <b>1</b>                  | <b>92</b>          | <b>63</b>   |
| Iron and steel                  | 0                     | -           | -                  | -                   | -                         | 0                  | -           |
| Chemical and petrochem.         | 6                     | -           | 1                  | -                   | -                         | 5                  | 0           |
| Non-metallic minerals           | 101                   | 33          | 47                 | 5                   | -                         | 16                 | -           |
| Machinery                       | 6                     | 0           | 0                  | 0                   | -                         | 6                  | -           |
| Transport equipment             | 0                     | -           | -                  | -                   | 0                         | -                  | -           |
| Mining and quarrying            | 4                     | -           | -                  | 2                   | -                         | 2                  | -           |
| Food and tobacco                | 146                   | 2           | 31                 | 3                   | 1                         | 49                 | 60          |
| Paper, pulp and print           | 4                     | -           | 2                  | -                   | -                         | 1                  | 1           |
| Wood and wood products          | 1                     | 0           | -                  | -                   | -                         | 1                  | 0           |
| Construction                    | 6                     | -           | 1                  | 4                   | -                         | 1                  | -           |
| Textile and leather             | 8                     | -           | 1                  | -                   | -                         | 5                  | 2           |
| Not elsewhere specified         | 8                     | -           | 2                  | -                   | -                         | 6                  | -           |
| <b>TRANSPORT</b>                | <b>1023</b>           | <b>-</b>    | <b>36</b>          | <b>980</b>          | <b>-</b>                  | <b>7</b>           | <b>-</b>    |
| Domestic aviation               | 48                    | -           | -                  | 48                  | -                         | -                  | -           |
| Road                            | 942                   | -           | 27                 | 910                 | -                         | 5                  | -           |
| Rail                            | 19                    | -           | -                  | 19                  | -                         | -                  | -           |
| Pipeline transport              | 11                    | -           | 9                  | -                   | -                         | 2                  | -           |
| Domestic navigation             | 2                     | -           | -                  | 2                   | -                         | -                  | -           |
| Non-specified                   | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| <b>OTHER</b>                    | <b>2295</b>           | <b>70</b>   | <b>475</b>         | <b>207</b>          | <b>956</b>                | <b>345</b>         | <b>242</b>  |
| Residential                     | 1797                  | 44          | 337                | 99                  | 940                       | 201                | 176         |
| Comm. and public services       | 384                   | 25          | 135                | 5                   | 15                        | 138                | 66          |
| Agriculture                     | 114                   | 1           | 3                  | 103                 | 1                         | 6                  | -           |
| <b>NON-ENERGY USE</b>           | <b>65</b>             | <b>-</b>    | <b>-</b>           | <b>52</b>           | <b>13</b>                 | <b>-</b>           | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>           | <b>-</b>            | <b>-</b>                  | <b>-</b>           | <b>-</b>    |

## 1.7. THE ENERGY BALANCE for 2017

thousands of tonnes of oil equivalent

| SUPPLY AND CONSUMPTION                                      | Total products | Coal       | Natural gas | Oil products | Biofuels and waste | Electricity | Heat       |
|-------------------------------------------------------------|----------------|------------|-------------|--------------|--------------------|-------------|------------|
| Primary Production                                          | 770            | -          | 0           | 5            | 760                | 5           | -          |
| From other sources                                          | 195            | -          | -           | -            | -                  | 195         | -          |
| Imports                                                     | 2012           | 120        | 835         | 958          | 2                  | 97          | -          |
| Exports                                                     | 34             | 0          | -           | 34           | 0                  | 0           | -          |
| International bunkers                                       | -              | -          | -           | -            | -                  | -           | -          |
| Stock changes                                               | 4              | 15         | -1          | -8           | -2                 | -           | -          |
| <b>GROSS CONSUMPTION</b>                                    | <b>2939</b>    | <b>105</b> | <b>836</b>  | <b>937</b>   | <b>764</b>         | <b>297</b>  | <b>-</b>   |
| <b>TRANSFORMATION, INPUT</b>                                | <b>411</b>     | <b>2</b>   | <b>360</b>  | <b>24</b>    | <b>20</b>          | <b>5</b>    | <b>-</b>   |
| Electricity plants                                          | 7              | -          | -           | -            | 2                  | 5           | -          |
| Main activity producer combined heat and power (CHP) plants | 260            | -          | 260         | -            | -                  | -           | -          |
| Autoproducer combined heat and power (CHP) plants           | 29             | -          | 15          | 9            | 5                  | -           | -          |
| Main activity producer heat plants                          | 50             | 0          | 49          | -            | 1                  | -           | -          |
| Autoproducer heat plants                                    | 49             | 2          | 36          | 1            | 10                 | -           | -          |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 14             | -          | -           | 14           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 2              | -          | -           | -            | 2                  | -           | -          |
| Not elsewhere specified - transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>336</b>     | <b>-</b>   | <b>-</b>    | <b>14</b>    | <b>0</b>           | <b>77</b>   | <b>245</b> |
| Electricity plants                                          | 5              | -          | -           | -            | -                  | 5           | -          |
| Main activity producer combined heat and power (CHP) plants | 213            | -          | -           | -            | -                  | 68          | 145        |
| Autoproducer combined heat and power (CHP) plants           | 24             | -          | -           | -            | -                  | 4           | 20         |
| Main activity producer heat plants                          | 42             | -          | -           | -            | -                  | -           | 42         |
| Autoproducer heat plants                                    | 38             | -          | -           | -            | -                  | -           | 38         |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 14             | -          | -           | 14           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 0              | -          | -           | -            | 0                  | -           | -          |
| Not elsewhere specified — transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>Energy sector</b>                                        | <b>17</b>      | <b>-</b>   | <b>-</b>    | <b>-</b>     | <b>-</b>           | <b>15</b>   | <b>2</b>   |
| <b>LOSSES</b>                                               | <b>128</b>     | <b>0</b>   | <b>49</b>   | <b>2</b>     | <b>0</b>           | <b>37</b>   | <b>40</b>  |



thousands of tonnes of oil equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | <b>Coal</b> | <b>Natural gas</b> | <b>Oil products</b> | <b>Biofuels and waste</b> | <b>Electricity</b> | <b>Heat</b> |
|---------------------------------|-----------------------|-------------|--------------------|---------------------|---------------------------|--------------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>2719</b>           | <b>103</b>  | <b>427</b>         | <b>925</b>          | <b>744</b>                | <b>317</b>         | <b>203</b>  |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>2671</b>           | <b>102</b>  | <b>427</b>         | <b>889</b>          | <b>733</b>                | <b>317</b>         | <b>203</b>  |
| <b>INDUSTRY</b>                 | <b>218</b>            | <b>30</b>   | <b>59</b>          | <b>18</b>           | <b>0</b>                  | <b>65</b>          | <b>46</b>   |
| Iron and steel                  | 0                     | -           | 0                  | -                   | -                         | 0                  | -           |
| Chemical and petrochem.         | 6                     | -           | 1                  | -                   | -                         | 4                  | 1           |
| Non-metallic minerals           | 83                    | 29          | 31                 | 12                  | 0                         | 11                 | 0           |
| Machinery                       | 4                     | -           | -                  | -                   | -                         | 4                  | -           |
| Transport equipment             | -                     | -           | -                  | -                   | -                         | -                  | -           |
| Mining and quarrying            | 2                     | -           | -                  | 1                   | -                         | 1                  | -           |
| Food and tobacco                | 103                   | 1           | 24                 | 1                   | -                         | 34                 | 43          |
| Paper, pulp and print           | 2                     | -           | 1                  | -                   | -                         | 1                  | -           |
| Wood and wood products          | 1                     | -           | 0                  | -                   | 0                         | 1                  | -           |
| Construction                    | 6                     | -           | 1                  | 4                   | 0                         | 1                  | 0           |
| Textile and leather             | 7                     | -           | 0                  | -                   | -                         | 5                  | 2           |
| Not elsewhere specified         | 4                     | -           | 1                  | -                   | -                         | 3                  | -           |
| <b>TRANSPORT</b>                | <b>734</b>            | <b>-</b>    | <b>24</b>          | <b>703</b>          | <b>-</b>                  | <b>7</b>           | <b>-</b>    |
| Domestic aviation               | 47                    | -           | -                  | 47                  | -                         | -                  | -           |
| Road                            | 665                   | -           | 17                 | 644                 | -                         | 4                  | -           |
| Rail                            | 10                    | -           | -                  | 10                  | -                         | -                  | -           |
| Pipeline transport              | 10                    | -           | 7                  | -                   | -                         | 3                  | -           |
| Domestic navigation             | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| Non-specified                   | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| <b>OTHER</b>                    | <b>1719</b>           | <b>72</b>   | <b>344</b>         | <b>168</b>          | <b>733</b>                | <b>245</b>         | <b>157</b>  |
| Residential                     | 1346                  | 54          | 250                | 66                  | 720                       | 141                | 115         |
| Comm. and public services       | 266                   | 17          | 92                 | 3                   | 12                        | 100                | 42          |
| Agriculture                     | 107                   | 1           | 2                  | 99                  | 1                         | 4                  | 0           |
| <b>NON-ENERGY USE</b>           | <b>48</b>             | <b>1</b>    | <b>-</b>           | <b>36</b>           | <b>11</b>                 | <b>-</b>           | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>           | <b>-</b>            | <b>-</b>                  | <b>-</b>           | <b>-</b>    |

## 1.8. THE ENERGY BALANCE for 2017

| TeraJoule                                                   |                |             |              |              |                    |              |              |
|-------------------------------------------------------------|----------------|-------------|--------------|--------------|--------------------|--------------|--------------|
| SUPPLY AND CONSUMPTION                                      | Total products | Coal        | Natural gas  | Oil products | Biofuels and waste | Electricity  | Heat         |
| Primary Production                                          | 32315          | -           | 4            | 222          | 31885              | 204          | -            |
| From other sources                                          | 8208           | -           | -            | -            | -                  | 8208         | -            |
| Imports                                                     | 84351          | 5017        | 35006        | 40157        | 85                 | 4086         | -            |
| Exports                                                     | 1403           | 1           | -            | 1401         | 1                  | 0            | -            |
| International bunkers                                       | -              | -           | -            | -            | -                  | -            | -            |
| Stock changes                                               | 236            | 625         | -52          | -315         | -22                | -            | -            |
| <b>GROSS CONSUMPTION</b>                                    | <b>123235</b>  | <b>4391</b> | <b>35062</b> | <b>39293</b> | <b>31991</b>       | <b>12498</b> | <b>-</b>     |
| <b>TRANSFORMATION, INPUT</b>                                | <b>17165</b>   | <b>74</b>   | <b>15039</b> | <b>1117</b>  | <b>731</b>         | <b>204</b>   | <b>-</b>     |
| Electricity plants                                          | 299            | -           | -            | 11           | 84                 | 204          | -            |
| Main activity producer combined heat and power (CHP) plants | 10883          | -           | 10883        | -            | -                  | -            | -            |
| Autoproducer combined heat and power (CHP) plants           | 1238           | -           | 628          | 412          | 198                | -            | -            |
| Main activity producer heat plants                          | 2042           | 5           | 2014         | -            | 23                 | -            | -            |
| Autoproducer heat plants                                    | 1975           | 69          | 1514         | 27           | 365                | -            | -            |
| Oil refineries                                              | -              | -           | -            | -            | -                  | -            | -            |
| Petrochemical plants                                        | 667            | -           | -            | 667          | -                  | -            | -            |
| Liquefaction plants                                         | -              | -           | -            | -            | -                  | -            | -            |
| Charcoal production plants                                  | 61             | -           | -            | -            | 61                 | -            | -            |
| Not elsewhere specified - transformation                    | -              | -           | -            | -            | -                  | -            | -            |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>14130</b>   | <b>-</b>    | <b>-</b>     | <b>635</b>   | <b>14</b>          | <b>3230</b>  | <b>10251</b> |
| Electricity plants                                          | 229            | -           | -            | -            | -                  | 229          | -            |
| Main activity producer combined heat and power (CHP) plants | 8904           | -           | -            | -            | -                  | 2831         | 6073         |
| Autoproducer combined heat and power (CHP) plants           | 990            | -           | -            | -            | -                  | 170          | 820          |
| Main activity producer heat plants                          | 1750           | -           | -            | -            | -                  | -            | 1750         |
| Autoproducer heat plants                                    | 1608           | -           | -            | -            | -                  | -            | 1608         |
| Oil refineries                                              | -              | -           | -            | -            | -                  | -            | -            |
| Petrochemical plants                                        | 635            | -           | -            | 635          | -                  | -            | -            |
| Liquefaction plants                                         | -              | -           | -            | -            | -                  | -            | -            |
| Charcoal production plants                                  | 14             | -           | -            | -            | 14                 | -            | -            |
| Not elsewhere specified — transformation                    | -              | -           | -            | -            | -                  | -            | -            |
| <b>Energy sector</b>                                        | <b>709</b>     | <b>-</b>    | <b>6</b>     | <b>-</b>     | <b>-</b>           | <b>634</b>   | <b>69</b>    |
| <b>LOSSES</b>                                               | <b>5403</b>    | <b>12</b>   | <b>2058</b>  | <b>126</b>   | <b>2</b>           | <b>1546</b>  | <b>1659</b>  |

| TeraJoule                       |                       |             |              |              |                    |              |             |
|---------------------------------|-----------------------|-------------|--------------|--------------|--------------------|--------------|-------------|
| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | Coal        | Natural gas  | Oil products | Biofuels and waste | Electricity  | Heat        |
| <b>FINAL CONSUMPTION</b>        | <b>114088</b>         | <b>4305</b> | <b>17959</b> | <b>38685</b> | <b>31272</b>       | <b>13344</b> | <b>8523</b> |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>111962</b>         | <b>4287</b> | <b>17959</b> | <b>37097</b> | <b>30752</b>       | <b>13344</b> | <b>8523</b> |
| <b>INDUSTRY</b>                 | <b>9243</b>           | <b>1212</b> | <b>2513</b>  | <b>768</b>   | <b>43</b>          | <b>2749</b>  | <b>1958</b> |
| Iron and steel                  | 6                     | -           | 0            | -            | -                  | 6            | -           |
| Chemical and petrochem.         | 247                   | -           | 29           | -            | 2                  | 161          | 55          |
| Non-metallic minerals           | 3446                  | 1161        | 1318         | 488          | 1                  | 478          | 0           |
| Machinery                       | 187                   | 2           | 10           | 3            | -                  | 168          | 4           |
| Transport equipment             | 13                    | -           | 2            | -            | 1                  | 10           | -           |
| Mining and quarrying            | 91                    | -           | -            | 39           | -                  | 52           | -           |
| Food and tobacco                | 4385                  | 49          | 1021         | 49           | 33                 | 1437         | 1796        |
| Paper, pulp and print           | 99                    | -           | 41           | -            | -                  | 35           | 23          |
| Wood and wood products          | 44                    | -           | 0            | 5            | 3                  | 36           | -           |
| Construction                    | 231                   | -           | 24           | 174          | -                  | 32           | 1           |
| Textile and leather             | 305                   | -           | 40           | 3            | 1                  | 187          | 74          |
| Not elsewhere specified         | 189                   | -           | 28           | 7            | 2                  | 147          | 5           |
| <b>TRANSPORT</b>                | <b>30779</b>          | <b>-</b>    | <b>1052</b>  | <b>29430</b> | <b>0</b>           | <b>297</b>   | <b>-</b>    |
| Domestic aviation               | 1999                  | -           | -            | 1999         | -                  | -            | -           |
| Road                            | 27830                 | -           | 738          | 26936        | -                  | 156          | -           |
| Rail                            | 437                   | -           | -            | 437          | -                  | -            | -           |
| Pipeline transport              | 455                   | -           | 314          | -            | -                  | 141          | -           |
| Domestic navigation             | 20                    | -           | -            | 20           | -                  | -            | -           |
| Non-specified                   | 38                    | -           | -            | 38           | 0                  | -            | -           |
| <b>OTHER</b>                    | <b>71940</b>          | <b>3075</b> | <b>14394</b> | <b>6899</b>  | <b>30709</b>       | <b>10298</b> | <b>6565</b> |
| Residential                     | 56254                 | 2254        | 10476        | 2642         | 30165              | 5895         | 4822        |
| Comm. and public services       | 11165                 | 773         | 3830         | 98           | 495                | 4227         | 1742        |
| Agriculture                     | 4521                  | 48          | 88           | 4159         | 49                 | 176          | 1           |
| <b>NON-ENERGY USE</b>           | <b>2126</b>           | <b>18</b>   | <b>-</b>     | <b>1588</b>  | <b>520</b>         | <b>-</b>     | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>     | <b>-</b>     | <b>-</b>           | <b>-</b>     | <b>-</b>    |

## 1.9. THE ENERGY BALANCE for 2017

thousands of tonnes of coal equivalent

| SUPPLY AND CONSUMPTION                                      | Total products | Coal       | Natural gas | Oil products | Biofuels and waste | Electricity | Heat       |
|-------------------------------------------------------------|----------------|------------|-------------|--------------|--------------------|-------------|------------|
| Primary Production                                          | 1100           | -          | 0           | 7            | 1086               | 7           | -          |
| From other sources                                          | 279            | -          | -           | -            | -                  | 279         | -          |
| Imports                                                     | 2874           | 171        | 1193        | 1368         | 3                  | 139         | -          |
| Exports                                                     | 48             | 0          | -           | 48           | 0                  | 0           | -          |
| International bunkers                                       | -              | -          | -           | -            | -                  | -           | -          |
| Stock changes                                               | 10             | 22         | -2          | -9           | -1                 | -           | -          |
| <b>GROSS CONSUMPTION</b>                                    | <b>4195</b>    | <b>149</b> | <b>1195</b> | <b>1336</b>  | <b>1090</b>        | <b>425</b>  | <b>-</b>   |
| <b>TRANSFORMATION, INPUT</b>                                | <b>584</b>     | <b>2</b>   | <b>513</b>  | <b>36</b>    | <b>26</b>          | <b>7</b>    | <b>-</b>   |
| Electricity plants                                          | 10             | -          | -           | -            | 3                  | 7           | -          |
| Main activity producer combined heat and power (CHP) plants | 371            | -          | 371         | -            | -                  | -           | -          |
| Autoproducer combined heat and power (CHP) plants           | 42             | -          | 21          | 14           | 7                  | -           | -          |
| Main activity producer heat plants                          | 70             | 0          | 69          | -            | 1                  | -           | -          |
| Autoproducer heat plants                                    | 68             | 2          | 52          | 1            | 13                 | -           | -          |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 21             | -          | -           | 21           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 2              | -          | -           | -            | 2                  | -           | -          |
| Not elsewhere specified - transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>481</b>     | <b>-</b>   | <b>-</b>    | <b>21</b>    | <b>-</b>           | <b>110</b>  | <b>350</b> |
| Electricity plants                                          | 8              | -          | -           | -            | -                  | 8           | -          |
| Main activity producer combined heat and power (CHP) plants | 303            | -          | -           | -            | -                  | 96          | 207        |
| Autoproducer combined heat and power (CHP) plants           | 34             | -          | -           | -            | -                  | 6           | 28         |
| Main activity producer heat plants                          | 60             | -          | -           | -            | -                  | -           | 60         |
| Autoproducer heat plants                                    | 55             | -          | -           | -            | -                  | -           | 55         |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 21             | -          | -           | 21           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | -              | -          | -           | -            | -                  | -           | -          |
| Not elsewhere specified — transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>Energy sector</b>                                        | <b>25</b>      | <b>-</b>   | <b>0</b>    | <b>-</b>     | <b>-</b>           | <b>22</b>   | <b>3</b>   |
| <b>LOSSES</b>                                               | <b>185</b>     | <b>0</b>   | <b>70</b>   | <b>5</b>     | <b>0</b>           | <b>53</b>   | <b>57</b>  |

thousands of tonnes of coal equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | <b>Coal</b> | <b>Natural gas</b> | <b>Oil products</b> | <b>Biofuels and waste</b> | <b>Electricity</b> | <b>Heat</b> |
|---------------------------------|-----------------------|-------------|--------------------|---------------------|---------------------------|--------------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>3882</b>           | <b>147</b>  | <b>612</b>         | <b>1316</b>         | <b>1064</b>               | <b>453</b>         | <b>290</b>  |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>3812</b>           | <b>146</b>  | <b>612</b>         | <b>1263</b>         | <b>1048</b>               | <b>453</b>         | <b>290</b>  |
| <b>INDUSTRY</b>                 | <b>308</b>            | <b>42</b>   | <b>85</b>          | <b>22</b>           | <b>1</b>                  | <b>92</b>          | <b>66</b>   |
| Iron and steel                  | 0                     | -           | 0                  | -                   | -                         | 0                  | -           |
| Chemical and petrochem.         | 8                     | -           | 1                  | -                   | 0                         | 5                  | 2           |
| Non-metallic minerals           | 117                   | 40          | 45                 | 16                  | 0                         | 16                 | 0           |
| Machinery                       | 5                     | 0           | 0                  | 0                   | -                         | 5                  | 0           |
| Transport equipment             | 0                     | -           | 0                  | -                   | 0                         | 0                  | -           |
| Mining and quarrying            | 3                     | -           | -                  | 1                   | -                         | 2                  | -           |
| Food and tobacco                | 149                   | 2           | 35                 | 1                   | 1                         | 49                 | 61          |
| Paper, pulp and print           | 3                     | -           | 1                  | -                   | -                         | 1                  | 1           |
| Wood and wood products          | 1                     | -           | 0                  | 0                   | 0                         | 1                  | -           |
| Construction                    | 6                     | -           | 1                  | 4                   | -                         | 1                  | 0           |
| Textile and leather             | 10                    | -           | 1                  | 0                   | 0                         | 7                  | 2           |
| Not elsewhere specified         | 6                     | -           | 1                  | 0                   | 0                         | 5                  | 0           |
| <b>TRANSPORT</b>                | <b>1050</b>           | <b>-</b>    | <b>36</b>          | <b>1004</b>         | <b>0</b>                  | <b>10</b>          | <b>-</b>    |
| Domestic aviation               | 67                    | -           | -                  | 67                  | -                         | -                  | -           |
| Road                            | 950                   | -           | 25                 | 920                 | -                         | 5                  | -           |
| Rail                            | 15                    | -           | -                  | 15                  | -                         | -                  | -           |
| Pipeline transport              | 16                    | -           | 11                 | -                   | -                         | 5                  | -           |
| Domestic navigation             | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| Non-specified                   | 1                     | -           | -                  | 1                   | 0                         | -                  | -           |
| <b>OTHER</b>                    | <b>2454</b>           | <b>104</b>  | <b>491</b>         | <b>237</b>          | <b>1047</b>               | <b>351</b>         | <b>224</b>  |
| Residential                     | 1916                  | 75          | 357                | 91                  | 1028                      | 201                | 164         |
| Comm. and public services       | 384                   | 27          | 131                | 4                   | 18                        | 144                | 60          |
| Agriculture                     | 154                   | 2           | 3                  | 142                 | 1                         | 6                  | 0           |
| <b>NON-ENERGY USE</b>           | <b>70</b>             | <b>1</b>    | <b>-</b>           | <b>53</b>           | <b>16</b>                 | <b>-</b>           | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>           | <b>-</b>            | <b>-</b>                  | <b>-</b>           | <b>-</b>    |

# 1.10. THE ENERGY BALANCE for 2018

thousands of tonnes of oil equivalent

| SUPPLY AND CONSUMPTION                                      | Total products | Coal      | Natural gas | Oil products | Biofuels and waste | Electricity | Heat       |
|-------------------------------------------------------------|----------------|-----------|-------------|--------------|--------------------|-------------|------------|
| Primary Production                                          | 798            | -         | 0           | 5            | 787                | 6           | -          |
| From other sources                                          | 219            | -         | -           | -            | -                  | 219         | -          |
| Imports                                                     | 2109           | 85        | 913         | 1026         | 3                  | 82          | -          |
| Exports                                                     | 27             | -         | -           | 27           | -                  | 0           | -          |
| International bunkers                                       | -              | -         | -           | -            | -                  | -           | -          |
| Stock changes                                               | 12             | 5         | 2           | 2            | 3                  | -           | -          |
| <b>GROSS CONSUMPTION</b>                                    | <b>3087</b>    | <b>80</b> | <b>911</b>  | <b>1002</b>  | <b>787</b>         | <b>307</b>  | <b>-</b>   |
| <b>TRANSFORMATION, INPUT</b>                                | <b>430</b>     | <b>1</b>  | <b>381</b>  | <b>19</b>    | <b>23</b>          | <b>6</b>    | <b>-</b>   |
| Electricity plants                                          | 10             | -         | -           | 0            | 4                  | 6           | -          |
| Main activity producer combined heat and power (CHP) plants | 285            | -         | 285         | -            | -                  | -           | -          |
| Autoproducer combined heat and power (CHP) plants           | 28             | -         | 18          | 6            | 4                  | -           | -          |
| Main activity producer heat plants                          | 41             | 0         | 40          | -            | 1                  | -           | -          |
| Autoproducer heat plants                                    | 53             | 1         | 38          | 1            | 13                 | -           | -          |
| Oil refineries                                              | -              | -         | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 12             | -         | -           | 12           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -         | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 1              | -         | -           | -            | 1                  | -           | -          |
| Not elsewhere specified - transformation                    | -              | -         | -           | -            | -                  | -           | -          |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>345</b>     | <b>-</b>  | <b>-</b>    | <b>8</b>     | <b>0</b>           | <b>82</b>   | <b>255</b> |
| Electricity plants                                          | 7              | -         | -           | -            | -                  | 7           | -          |
| Main activity producer combined heat and power (CHP) plants | 224            | -         | -           | -            | -                  | 71          | 153        |
| Autoproducer combined heat and power (CHP) plants           | 21             | -         | -           | -            | -                  | 4           | 17         |
| Main activity producer heat plants                          | 43             | -         | -           | -            | -                  | -           | 43         |
| Autoproducer heat plants                                    | 42             | -         | -           | -            | -                  | -           | 42         |
| Oil refineries                                              | -              | -         | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 8              | -         | -           | 8            | -                  | -           | -          |
| Liquefaction plants                                         | -              | -         | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 0              | -         | -           | -            | 0                  | -           | -          |
| Not elsewhere specified — transformation                    | -              | -         | -           | -            | -                  | -           | -          |
| <b>Energy sector</b>                                        | <b>16</b>      | <b>-</b>  | <b>0</b>    | <b>0</b>     | <b>-</b>           | <b>14</b>   | <b>2</b>   |
| <b>LOSSES</b>                                               | <b>124</b>     | <b>0</b>  | <b>44</b>   | <b>3</b>     | <b>0</b>           | <b>38</b>   | <b>39</b>  |

thousands of tonnes of oil equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | <b>Coal</b> | <b>Natural gas</b> | <b>Oil products</b> | <b>Biofuels and waste</b> | <b>Electricity</b> | <b>Heat</b> |
|---------------------------------|-----------------------|-------------|--------------------|---------------------|---------------------------|--------------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>2862</b>           | <b>79</b>   | <b>486</b>         | <b>988</b>          | <b>764</b>                | <b>331</b>         | <b>214</b>  |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>2786</b>           | <b>79</b>   | <b>486</b>         | <b>925</b>          | <b>751</b>                | <b>331</b>         | <b>214</b>  |
| <b>INDUSTRY</b>                 | <b>251</b>            | <b>24</b>   | <b>76</b>          | <b>37</b>           | <b>1</b>                  | <b>67</b>          | <b>46</b>   |
| Iron and steel                  | 0                     | 0           | 0                  | 0                   | -                         | 0                  | -           |
| Chemical and petrochem.         | 6                     | -           | 1                  | 0                   | 0                         | 4                  | 1           |
| Non-metallic minerals           | 102                   | 23          | 42                 | 25                  | 0                         | 12                 | 0           |
| Machinery                       | 5                     | 0           | 1                  | 0                   | -                         | 4                  | 0           |
| Transport equipment             | 1                     | -           | 0                  | -                   | 0                         | 1                  | -           |
| Mining and quarrying            | 5                     | -           | -                  | 4                   | -                         | 1                  | -           |
| Food and tobacco                | 107                   | 1           | 28                 | 1                   | 1                         | 33                 | 43          |
| Paper, pulp and print           | 2                     | -           | 1                  | -                   | 0                         | 1                  | -           |
| Wood and wood products          | 1                     | -           | 0                  | 0                   | 0                         | 1                  | 0           |
| Construction                    | 9                     | -           | 1                  | 7                   | 0                         | 1                  | -           |
| Textile and leather             | 8                     | -           | 1                  | 0                   | 0                         | 5                  | 2           |
| Not elsewhere specified         | 5                     | -           | 1                  | 0                   | 0                         | 4                  | -           |
| <b>TRANSPORT</b>                | <b>758</b>            | <b>-</b>    | <b>25</b>          | <b>727</b>          | <b>-</b>                  | <b>6</b>           | <b>-</b>    |
| Domestic aviation               | 55                    | -           | -                  | 55                  | -                         | -                  | -           |
| Road                            | 688                   | -           | 19                 | 665                 | -                         | 4                  | -           |
| Rail                            | 6                     | -           | -                  | 6                   | -                         | -                  | -           |
| Pipeline transport              | 8                     | -           | 6                  | -                   | -                         | 2                  | -           |
| Domestic navigation             | 0                     | -           | -                  | 0                   | -                         | -                  | -           |
| Non-specified                   | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| <b>OTHER</b>                    | <b>1777</b>           | <b>55</b>   | <b>385</b>         | <b>161</b>          | <b>750</b>                | <b>258</b>         | <b>168</b>  |
| Residential                     | 1385                  | 36          | 286                | 62                  | 737                       | 142                | 122         |
| Comm. and public services       | 283                   | 18          | 96                 | 1                   | 12                        | 110                | 46          |
| Agriculture                     | 109                   | 1           | 3                  | 98                  | 1                         | 6                  | 0           |
| <b>NON-ENERGY USE</b>           | <b>76</b>             | <b>0</b>    | <b>-</b>           | <b>63</b>           | <b>13</b>                 | <b>-</b>           | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>           | <b>-</b>            | <b>-</b>                  | <b>-</b>           | <b>-</b>    |

### 1.11. THE ENERGY BALANCE for 2018

| TeraJoule                                                   |                |             |              |              |                    |              |              |
|-------------------------------------------------------------|----------------|-------------|--------------|--------------|--------------------|--------------|--------------|
| SUPPLY AND CONSUMPTION                                      | Total products | Coal        | Natural gas  | Oil products | Biofuels and waste | Electricity  | Heat         |
| Primary Production                                          | 33409          | -           | 4            | 218          | 32934              | 253          | -            |
| From other sources                                          | 9166           | -           | -            | -            | -                  | 9166         | -            |
| Imports                                                     | 88433          | 3579        | 38250        | 43074        | 86                 | 3444         | -            |
| Exports                                                     | 1161           | -           | -            | 1161         | -                  | 0            | -            |
| International bunkers                                       | -              | -           | -            | -            | -                  | -            | -            |
| Stock changes                                               | 453            | 242         | 97           | 7            | 107                | -            | -            |
| <b>GROSS CONSUMPTION</b>                                    | <b>129394</b>  | <b>3337</b> | <b>38157</b> | <b>42124</b> | <b>32913</b>       | <b>12863</b> | <b>-</b>     |
| <b>TRANSFORMATION, INPUT</b>                                | <b>18009</b>   | <b>72</b>   | <b>15930</b> | <b>836</b>   | <b>918</b>         | <b>253</b>   | <b>-</b>     |
| Electricity plants                                          | 411            | -           | -            | 8            | 150                | 253          | -            |
| Main activity producer combined heat and power (CHP) plants | 11949          | -           | 11949        | -            | -                  | -            | -            |
| Autoproducer combined heat and power (CHP) plants           | 1179           | -           | 743          | 273          | 163                | -            | -            |
| Main activity producer heat plants                          | 1709           | 3           | 1674         | -            | 32                 | -            | -            |
| Autoproducer heat plants                                    | 2187           | 69          | 1564         | 32           | 522                | -            | -            |
| Oil refineries                                              | -              | -           | -            | -            | -                  | -            | -            |
| Petrochemical plants                                        | 523            | -           | -            | 523          | -                  | -            | -            |
| Liquefaction plants                                         | -              | -           | -            | -            | -                  | -            | -            |
| Charcoal production plants                                  | 51             | -           | -            | -            | 51                 | -            | -            |
| Not elsewhere specified - transformation                    | -              | -           | -            | -            | -                  | -            | -            |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>14464</b>   | <b>-</b>    | <b>-</b>     | <b>354</b>   | <b>12</b>          | <b>3440</b>  | <b>10658</b> |
| Electricity plants                                          | 293            | -           | -            | -            | -                  | 293          | -            |
| Main activity producer combined heat and power (CHP) plants | 9384           | -           | -            | -            | -                  | 2980         | 6404         |
| Autoproducer combined heat and power (CHP) plants           | 869            | -           | -            | -            | -                  | 167          | 702          |
| Main activity producer heat plants                          | 1808           | -           | -            | -            | -                  | -            | 1808         |
| Autoproducer heat plants                                    | 1744           | -           | -            | -            | -                  | -            | 1744         |
| Oil refineries                                              | -              | -           | -            | -            | -                  | -            | -            |
| Petrochemical plants                                        | 354            | -           | -            | 354          | -                  | -            | -            |
| Liquefaction plants                                         | -              | -           | -            | -            | -                  | -            | -            |
| Charcoal production plants                                  | 12             | -           | -            | -            | 12                 | -            | -            |
| Not elsewhere specified — transformation                    | -              | -           | -            | -            | -                  | -            | -            |
| <b>Energy sector</b>                                        | <b>691</b>     | <b>-</b>    | <b>2</b>     | <b>1</b>     | <b>-</b>           | <b>618</b>   | <b>70</b>    |
| <b>LOSSES</b>                                               | <b>5214</b>    | <b>6</b>    | <b>1861</b>  | <b>131</b>   | <b>1</b>           | <b>1590</b>  | <b>1625</b>  |



| TeraJoule                       |                |             |              |              |                    |              |             |
|---------------------------------|----------------|-------------|--------------|--------------|--------------------|--------------|-------------|
| SUPPLY AND CONSUMPTION          | Total products | Coal        | Natural gas  | Oil products | Biofuels and waste | Electricity  | Heat        |
| <b>FINAL CONSUMPTION</b>        | <b>119944</b>  | <b>3259</b> | <b>20364</b> | <b>41510</b> | <b>32006</b>       | <b>13842</b> | <b>8963</b> |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>116663</b>  | <b>3257</b> | <b>20364</b> | <b>38782</b> | <b>31455</b>       | <b>13842</b> | <b>8963</b> |
| <b>INDUSTRY</b>                 | <b>10576</b>   | <b>990</b>  | <b>3199</b>  | <b>1568</b>  | <b>66</b>          | <b>2780</b>  | <b>1973</b> |
| Iron and steel                  | 8              | 0           | 0            | 0            | -                  | 8            | -           |
| Chemical and petrochem.         | 237            | -           | 30           | 1            | 3                  | 150          | 53          |
| Non-metallic minerals           | 4292           | 929         | 1777         | 1077         | 1                  | 508          | 0           |
| Machinery                       | 216            | 1           | 25           | 3            | -                  | 176          | 11          |
| Transport equipment             | 36             | -           | 7            | -            | 1                  | 28           | -           |
| Mining and quarrying            | 211            | -           | -            | 156          | -                  | 55           | -           |
| Food and tobacco                | 4520           | 60          | 1186         | 44           | 49                 | 1371         | 1810        |
| Paper, pulp and print           | 124            | -           | 51           | -            | 4                  | 48           | 21          |
| Wood and wood products          | 41             | -           | 0            | 5            | 5                  | 31           | 0           |
| Construction                    | 355            | -           | 38           | 276          | -                  | 41           | -           |
| Textile and leather             | 306            | -           | 50           | -            | 1                  | 182          | 73          |
| Not elsewhere specified         | 230            | -           | 35           | 6            | 2                  | 182          | 5           |
| <b>TRANSPORT</b>                | <b>31722</b>   | <b>-</b>    | <b>1038</b>  | <b>30427</b> | <b>-</b>           | <b>257</b>   | <b>-</b>    |
| Domestic aviation               | 2324           | -           | -            | 2324         | -                  | -            | -           |
| Road                            | 28733          | -           | 762          | 27806        | -                  | 165          | -           |
| Rail                            | 236            | -           | -            | 236          | -                  | -            | -           |
| Pipeline transport              | 368            | -           | 276          | -            | -                  | 92           | -           |
| Domestic navigation             | 18             | -           | -            | 18           | -                  | -            | -           |
| Non-specified                   | 43             | -           | -            | 43           | -                  | -            | -           |
| <b>OTHER</b>                    | <b>74365</b>   | <b>2267</b> | <b>16127</b> | <b>6787</b>  | <b>31389</b>       | <b>10805</b> | <b>6990</b> |
| Residential                     | 57953          | 1474        | 12004        | 2610         | 30827              | 5916         | 5122        |
| Comm. and public services       | 11833          | 753         | 4001         | 48           | 510                | 4654         | 1867        |
| Agriculture                     | 4579           | 40          | 122          | 4129         | 52                 | 235          | 1           |
| <b>NON-ENERGY USE</b>           | <b>3281</b>    | <b>2</b>    | <b>-</b>     | <b>2728</b>  | <b>551</b>         | <b>-</b>     | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>       | <b>-</b>    | <b>-</b>     | <b>-</b>     | <b>-</b>           | <b>-</b>     | <b>-</b>    |

## 1.12. THE ENERGY BALANCE for 2018

thousands of tonnes of coal equivalent

| SUPPLY AND CONSUMPTION                                      | Total products | Coal       | Natural gas | Oil products | Biofuels and waste | Electricity | Heat       |
|-------------------------------------------------------------|----------------|------------|-------------|--------------|--------------------|-------------|------------|
| Primary Production                                          | 1137           | -          | 0           | 7            | 1122               | 8           | -          |
| From other sources                                          | 312            | -          | -           | -            | -                  | 312         | -          |
| Imports                                                     | 3013           | 121        | 1303        | 1469         | 3                  | 117         | -          |
| Exports                                                     | 40             | -          | -           | 40           | -                  | 0           | -          |
| International bunkers                                       | -              | -          | -           | -            | -                  | -           | -          |
| Stock changes                                               | 12             | 6          | 3           | -1           | 4                  | -           | -          |
| <b>GROSS CONSUMPTION</b>                                    | <b>4410</b>    | <b>115</b> | <b>1300</b> | <b>1437</b>  | <b>1121</b>        | <b>437</b>  | <b>-</b>   |
| <b>TRANSFORMATION, INPUT</b>                                | <b>613</b>     | <b>2</b>   | <b>543</b>  | <b>28</b>    | <b>32</b>          | <b>8</b>    | <b>-</b>   |
| Electricity plants                                          | 13             | -          | -           | 0            | 5                  | 8           | -          |
| Main activity producer combined heat and power (CHP) plants | 407            | -          | 407         | -            | -                  | -           | -          |
| Autoproducer combined heat and power (CHP) plants           | 40             | -          | 25          | 9            | 6                  | -           | -          |
| Main activity producer heat plants                          | 58             | 0          | 57          | -            | 1                  | -           | -          |
| Autoproducer heat plants                                    | 75             | 2          | 54          | 1            | 18                 | -           | -          |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 18             | -          | -           | 18           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 2              | -          | -           | -            | 2                  | -           | -          |
| Not elsewhere specified - transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>493</b>     | <b>-</b>   | <b>-</b>    | <b>12</b>    | <b>-</b>           | <b>118</b>  | <b>363</b> |
| Electricity plants                                          | 10             | -          | -           | -            | -                  | 10          | -          |
| Main activity producer combined heat and power (CHP) plants | 320            | -          | -           | -            | -                  | 102         | 218        |
| Autoproducer combined heat and power (CHP) plants           | 30             | -          | -           | -            | -                  | 6           | 24         |
| Main activity producer heat plants                          | 62             | -          | -           | -            | -                  | -           | 62         |
| Autoproducer heat plants                                    | 59             | -          | -           | -            | -                  | -           | 59         |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 12             | -          | -           | 12           | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | -              | -          | -           | -            | -                  | -           | -          |
| Not elsewhere specified — transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>Energy sector</b>                                        | <b>23</b>      | <b>-</b>   | <b>0</b>    | <b>-</b>     | <b>-</b>           | <b>21</b>   | <b>2</b>   |
| <b>LOSSES</b>                                               | <b>177</b>     | <b>-</b>   | <b>63</b>   | <b>5</b>     | <b>-</b>           | <b>54</b>   | <b>55</b>  |

thousands of tonnes of coal equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | <b>Coal</b> | <b>Natural gas</b> | <b>Oil products</b> | <b>Biofuels and waste</b> | <b>Electricity</b> | <b>Heat</b> |
|---------------------------------|-----------------------|-------------|--------------------|---------------------|---------------------------|--------------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>4090</b>           | <b>113</b>  | <b>694</b>         | <b>1416</b>         | <b>1089</b>               | <b>472</b>         | <b>306</b>  |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>3981</b>           | <b>113</b>  | <b>694</b>         | <b>1325</b>         | <b>1071</b>               | <b>472</b>         | <b>306</b>  |
| <b>INDUSTRY</b>                 | <b>357</b>            | <b>33</b>   | <b>109</b>         | <b>53</b>           | <b>1</b>                  | <b>96</b>          | <b>65</b>   |
| Iron and steel                  | 0                     | -           | 0                  | 0                   | 0                         | 0                  | -           |
| Chemical and petrochem.         | 8                     | -           | 1                  | -                   | -                         | 6                  | 1           |
| Non-metallic minerals           | 146                   | 31          | 61                 | 37                  | 0                         | 17                 | 0           |
| Machinery                       | 7                     | -           | 1                  | 0                   | -                         | 6                  | -           |
| Transport equipment             | 1                     | -           | -                  | -                   | -                         | 1                  | -           |
| Mining and quarrying            | 7                     | -           | -                  | 5                   | -                         | 2                  | -           |
| Food and tobacco                | 153                   | 2           | 40                 | 2                   | 1                         | 47                 | 61          |
| Paper, pulp and print           | 5                     | -           | 2                  | -                   | -                         | 2                  | 1           |
| Wood and wood products          | 1                     | -           | 0                  | 0                   | 0                         | 1                  | 0           |
| Construction                    | 11                    | -           | 1                  | 9                   | 0                         | 1                  | -           |
| Textile and leather             | 11                    | -           | 2                  | -                   | -                         | 7                  | 2           |
| Not elsewhere specified         | 7                     | -           | 1                  | -                   | -                         | 6                  | -           |
| <b>TRANSPORT</b>                | <b>1083</b>           | <b>-</b>    | <b>35</b>          | <b>1039</b>         | <b>-</b>                  | <b>9</b>           | <b>-</b>    |
| Domestic aviation               | 80                    | -           | -                  | 80                  | -                         | -                  | -           |
| Road                            | 981                   | -           | 26                 | 949                 | -                         | 6                  | -           |
| Rail                            | 8                     | -           | -                  | 8                   | -                         | -                  | -           |
| Pipeline transport              | 12                    | -           | 9                  | -                   | -                         | 3                  | -           |
| Domestic navigation             | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| Non-specified                   | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| <b>OTHER</b>                    | <b>2541</b>           | <b>80</b>   | <b>550</b>         | <b>233</b>          | <b>1070</b>               | <b>367</b>         | <b>241</b>  |
| Residential                     | 1979                  | 53          | 409                | 89                  | 1051                      | 202                | 175         |
| Comm. and public services       | 406                   | 26          | 137                | 2                   | 18                        | 157                | 66          |
| Agriculture                     | 156                   | 1           | 4                  | 142                 | 1                         | 8                  | 0           |
| <b>NON-ENERGY USE</b>           | <b>109</b>            | <b>0</b>    | <b>-</b>           | <b>91</b>           | <b>18</b>                 | <b>-</b>           | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>           | <b>-</b>            | <b>-</b>                  | <b>-</b>           | <b>-</b>    |

### 1.13. THE ENERGY BALANCE for 2019

thousands of tonnes of oil equivalent

| SUPPLY AND CONSUMPTION                                      | Total products | Coal       | Natural gas | Oil products | Biofuels and waste | Electricity | Heat       |
|-------------------------------------------------------------|----------------|------------|-------------|--------------|--------------------|-------------|------------|
| Primary Production                                          | 668            | -          | 0           | 5            | 653                | 10          | -          |
| From other sources                                          | 246            | -          | -           | -            | -                  | 246         | -          |
| Imports                                                     | 2031           | 92         | 854         | 1029         | 1                  | 55          | -          |
| Exports                                                     | 9              | -          | -           | 9            | 0                  | 0           | -          |
| International bunkers                                       | -              | -          | -           | -            | -                  | -           | -          |
| Stock changes                                               | -              | -10        | -1          | 7            | 4                  | -           | -          |
| <b>GROSS CONSUMPTION</b>                                    | <b>2936</b>    | <b>102</b> | <b>855</b>  | <b>1018</b>  | <b>650</b>         | <b>311</b>  | <b>-</b>   |
| <b>TRANSFORMATION, INPUT</b>                                | <b>389</b>     | <b>-</b>   | <b>349</b>  | <b>8</b>     | <b>22</b>          | <b>10</b>   | <b>-</b>   |
| Electricity plants                                          | 13             | -          | -           | -            | 3                  | 10          | -          |
| Main activity producer combined heat and power (CHP) plants | 257            | -          | 257         | -            | -                  | -           | -          |
| Autoproducer combined heat and power (CHP) plants           | 22             | -          | 16          | 2            | 4                  | -           | -          |
| Main activity producer heat plants                          | 35             | -          | 35          | -            | 0                  | -           | -          |
| Autoproducer heat plants                                    | 55             | -          | 41          | 1            | 13                 | -           | -          |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 5              | -          | -           | 5            | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 2              | -          | -           | -            | 2                  | -           | -          |
| Not elsewhere specified - transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>315</b>     | <b>-</b>   | <b>-</b>    | <b>4</b>     | <b>0</b>           | <b>81</b>   | <b>230</b> |
| Electricity plants                                          | 11             | -          | -           | -            | -                  | 11          | -          |
| Main activity producer combined heat and power (CHP) plants | 204            | -          | -           | -            | -                  | 67          | 137        |
| Autoproducer combined heat and power (CHP) plants           | 16             | -          | -           | -            | -                  | 3           | 13         |
| Main activity producer heat plants                          | 36             | -          | -           | -            | -                  | -           | 36         |
| Autoproducer heat plants                                    | 44             | -          | -           | -            | -                  | -           | 44         |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 4              | -          | -           | 4            | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 0              | -          | -           | -            | 0                  | -           | -          |
| Not elsewhere specified — transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>Energy sector</b>                                        | <b>19</b>      | <b>-</b>   | <b>0</b>    | <b>0</b>     | <b>-</b>           | <b>18</b>   | <b>1</b>   |
| <b>LOSSES</b>                                               | <b>104</b>     | <b>-</b>   | <b>30</b>   | <b>3</b>     | <b>-</b>           | <b>37</b>   | <b>34</b>  |

thousands of tonnes of oil equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | <b>Coal</b> | <b>Natural gas</b> | <b>Oil products</b> | <b>Biofuels and waste</b> | <b>Electricity</b> | <b>Heat</b> |
|---------------------------------|-----------------------|-------------|--------------------|---------------------|---------------------------|--------------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>2739</b>           | <b>102</b>  | <b>476</b>         | <b>1011</b>         | <b>628</b>                | <b>327</b>         | <b>195</b>  |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>2672</b>           | <b>102</b>  | <b>476</b>         | <b>953</b>          | <b>619</b>                | <b>327</b>         | <b>195</b>  |
| <b>INDUSTRY</b>                 | <b>234</b>            | <b>23</b>   | <b>64</b>          | <b>37</b>           | <b>0</b>                  | <b>62</b>          | <b>48</b>   |
| Iron and steel                  | 0                     | -           | 0                  | 0                   | -                         | 0                  | -           |
| Chemical and petrochem.         | 8                     | -           | 1                  | -                   | -                         | 3                  | 4           |
| Non-metallic minerals           | 99                    | 22          | 37                 | 27                  | 0                         | 13                 | 0           |
| Machinery                       | 3                     | -           | -                  | -                   | -                         | 3                  | -           |
| Transport equipment             | 1                     | -           | -                  | -                   | -                         | 1                  | -           |
| Mining and quarrying            | 4                     | -           | -                  | 3                   | -                         | 1                  | -           |
| Food and tobacco                | 97                    | 1           | 23                 | 1                   | -                         | 30                 | 42          |
| Paper, pulp and print           | 2                     | -           | 1                  | -                   | -                         | 1                  | -           |
| Wood and wood products          | 1                     | -           | 0                  | 0                   | 0                         | 1                  | 0           |
| Construction                    | 8                     | -           | 1                  | 6                   | 0                         | 1                  | -           |
| Textile and leather             | 7                     | -           | 1                  | -                   | -                         | 4                  | 2           |
| Not elsewhere specified         | 4                     | -           | -                  | -                   | -                         | 4                  | -           |
| <b>TRANSPORT</b>                | <b>769</b>            | <b>-</b>    | <b>20</b>          | <b>745</b>          | <b>-</b>                  | <b>4</b>           | <b>-</b>    |
| Domestic aviation               | 49                    | -           | -                  | 49                  | -                         | -                  | -           |
| Road                            | 705                   | -           | 14                 | 687                 | -                         | 4                  | -           |
| Rail                            | 7                     | -           | -                  | 7                   | -                         | -                  | -           |
| Pipeline transport              | 6                     | -           | 6                  | -                   | -                         | 0                  | -           |
| Domestic navigation             | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| Non-specified                   | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| <b>OTHER</b>                    | <b>1669</b>           | <b>79</b>   | <b>392</b>         | <b>171</b>          | <b>619</b>                | <b>261</b>         | <b>147</b>  |
| Residential                     | 1274                  | 62          | 293                | 58                  | 608                       | 144                | 109         |
| Comm. and public services       | 272                   | 16          | 96                 | 1                   | 10                        | 111                | 38          |
| Agriculture                     | 123                   | 1           | 3                  | 112                 | 1                         | 6                  | 0           |
| <b>NON-ENERGY USE</b>           | <b>67</b>             | <b>-</b>    | <b>-</b>           | <b>58</b>           | <b>9</b>                  | <b>-</b>           | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>           | <b>-</b>            | <b>-</b>                  | <b>-</b>           | <b>-</b>    |

# 1.14. THE ENERGY BALANCE for 2019

| TeraJoule                                                   |                |             |              |              |                    |              |             |
|-------------------------------------------------------------|----------------|-------------|--------------|--------------|--------------------|--------------|-------------|
| SUPPLY AND CONSUMPTION                                      | Total products | Coal        | Natural gas  | Oil products | Biofuels and waste | Electricity  | Heat        |
| Primary Production                                          | 27954          | -           | 3            | 203          | 27346              | 402          | -           |
| From other sources                                          | 10293          | -           | -            | -            | -                  | 10293        | -           |
| Imports                                                     | 85164          | 3850        | 35812        | 43124        | 57                 | 2321         | -           |
| Exports                                                     | 413            | -           | -            | 412          | 1                  | 0            | -           |
| International bunkers                                       | -              | -           | -            | -            | -                  | -            | -           |
| Stock changes                                               | -1             | -449        | -53          | 283          | 218                | -            | -           |
| <b>GROSS CONSUMPTION</b>                                    | <b>122999</b>  | <b>4299</b> | <b>35868</b> | <b>42632</b> | <b>27184</b>       | <b>13016</b> | <b>-</b>    |
| <b>TRANSFORMATION, INPUT</b>                                | <b>16269</b>   | <b>5</b>    | <b>14627</b> | <b>360</b>   | <b>875</b>         | <b>402</b>   | <b>-</b>    |
| Electricity plants                                          | 536            | -           | -            | 8            | 126                | 402          | -           |
| Main activity producer combined heat and power (CHP) plants | 10462          | -           | 10462        | -            | -                  | -            | -           |
| Autoproducer combined heat and power (CHP) plants           | 926            | -           | 663          | 97           | 166                | -            | -           |
| Main activity producer heat plants                          | 1794           | -           | 1784         | -            | 10                 | -            | -           |
| Autoproducer heat plants                                    | 2251           | 5           | 1718         | 28           | 500                | -            | -           |
| Oil refineries                                              | -              | -           | -            | -            | -                  | -            | -           |
| Petrochemical plants                                        | 227            | -           | -            | 227          | -                  | -            | -           |
| Liquefaction plants                                         | -              | -           | -            | -            | -                  | -            | -           |
| Charcoal production plants                                  | 73             | -           | -            | -            | 73                 | -            | -           |
| Not elsewhere specified - transformation                    | -              | -           | -            | -            | -                  | -            | -           |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>13281</b>   | <b>-</b>    | <b>-</b>     | <b>205</b>   | <b>15</b>          | <b>3391</b>  | <b>9670</b> |
| Electricity plants                                          | 442            | -           | -            | -            | -                  | 442          | -           |
| Main activity producer combined heat and power (CHP) plants | 8562           | -           | -            | -            | -                  | 2801         | 5761        |
| Autoproducer combined heat and power (CHP) plants           | 705            | -           | -            | -            | -                  | 148          | 557         |
| Main activity producer heat plants                          | 1522           | -           | -            | -            | -                  | -            | 1522        |
| Autoproducer heat plants                                    | 1830           | -           | -            | -            | -                  | -            | 1830        |
| Oil refineries                                              | -              | -           | -            | -            | -                  | -            | -           |
| Petrochemical plants                                        | 205            | -           | -            | 205          | -                  | -            | -           |
| Liquefaction plants                                         | -              | -           | -            | -            | -                  | -            | -           |
| Charcoal production plants                                  | 15             | -           | -            | -            | 15                 | -            | -           |
| Not elsewhere specified — transformation                    | -              | -           | -            | -            | -                  | -            | -           |
| <b>Energy sector</b>                                        | <b>781</b>     | <b>-</b>    | <b>2</b>     | <b>0</b>     | <b>-</b>           | <b>734</b>   | <b>45</b>   |
| <b>LOSSES</b>                                               | <b>4345</b>    | <b>4</b>    | <b>1227</b>  | <b>131</b>   | <b>1</b>           | <b>1533</b>  | <b>1449</b> |

| TeraJoule                       |                |             |              |              |                    |              |             |
|---------------------------------|----------------|-------------|--------------|--------------|--------------------|--------------|-------------|
| SUPPLY AND CONSUMPTION          | Total products | Coal        | Natural gas  | Oil products | Biofuels and waste | Electricity  | Heat        |
| <b>FINAL CONSUMPTION</b>        | <b>114885</b>  | <b>4290</b> | <b>20012</b> | <b>42346</b> | <b>26323</b>       | <b>13738</b> | <b>8176</b> |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>112157</b>  | <b>4290</b> | <b>20012</b> | <b>39960</b> | <b>25981</b>       | <b>13738</b> | <b>8176</b> |
| <b>INDUSTRY</b>                 | <b>10011</b>   | <b>932</b>  | <b>2759</b>  | <b>1599</b>  | <b>23</b>          | <b>2666</b>  | <b>2032</b> |
| Iron and steel                  | 12             | -           | 2            | 0            | -                  | 10           | -           |
| Chemical and petrochem.         | 354            | -           | 42           | -            | 2                  | 127          | 183         |
| Non-metallic minerals           | 4126           | 893         | 1528         | 1150         | 1                  | 554          | 0           |
| Machinery                       | 158            | -           | 18           | 8            | -                  | 121          | 11          |
| Transport equipment             | 51             | -           | 14           | -            | 2                  | 35           | -           |
| Mining and quarrying            | 213            | -           | 5            | 154          | -                  | 54           | -           |
| Food and tobacco                | 4083           | 38          | 974          | 31           | 15                 | 1270         | 1755        |
| Paper, pulp and print           | 116            | 1           | 47           | -            | -                  | 47           | 21          |
| Wood and wood products          | 28             | -           | 0            | 4            | 1                  | 23           | 0           |
| Construction                    | 346            | -           | 38           | 250          | 0                  | 58           | -           |
| Textile and leather             | 294            | -           | 55           | -            | -                  | 181          | 58          |
| Not elsewhere specified         | 230            | -           | 36           | 2            | 2                  | 186          | 4           |
| <b>TRANSPORT</b>                | <b>32192</b>   | <b>-</b>    | <b>830</b>   | <b>31199</b> | <b>-</b>           | <b>163</b>   | <b>-</b>    |
| Domestic aviation               | 2067           | -           | -            | 2067         | -                  | -            | -           |
| Road                            | 29510          | -           | 569          | 28785        | -                  | 156          | -           |
| Rail                            | 282            | -           | -            | 282          | -                  | -            | -           |
| Pipeline transport              | 268            | -           | 261          | -            | -                  | 7            | -           |
| Domestic navigation             | 21             | -           | -            | 21           | -                  | -            | -           |
| Non-specified                   | 44             | -           | -            | 44           | -                  | -            | -           |
| <b>OTHER</b>                    | <b>69954</b>   | <b>3358</b> | <b>16423</b> | <b>7162</b>  | <b>25958</b>       | <b>10909</b> | <b>6144</b> |
| Residential                     | 53348          | 2635        | 12276        | 2410         | 25456              | 6019         | 4552        |
| Comm. and public services       | 11429          | 678         | 4019         | 51           | 458                | 4632         | 1591        |
| Agriculture                     | 5177           | 45          | 128          | 4701         | 44                 | 258          | 1           |
| <b>NON-ENERGY USE</b>           | <b>2728</b>    | <b>-</b>    | <b>-</b>     | <b>2386</b>  | <b>342</b>         | <b>-</b>     | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>       | <b>-</b>    | <b>-</b>     | <b>-</b>     | <b>-</b>           | <b>-</b>     | <b>-</b>    |

### 1.15. THE ENERGY BALANCE for 2019

thousands of tonnes of coal equivalent

| SUPPLY AND CONSUMPTION                                      | Total products | Coal       | Natural gas | Oil products | Biofuels and waste | Electricity | Heat       |
|-------------------------------------------------------------|----------------|------------|-------------|--------------|--------------------|-------------|------------|
| Primary Production                                          | 953            | -          | 0           | 7            | 932                | 14          | -          |
| From other sources                                          | 351            | -          | -           | -            | -                  | 351         | -          |
| Imports                                                     | 2903           | 132        | 1221        | 1469         | 2                  | 79          | -          |
| Exports                                                     | 13             | -          | -           | 13           | 0                  | 0           | -          |
| International bunkers                                       | -              | -          | -           | -            | -                  | -           | -          |
| Stock changes                                               | 1              | -13        | -1          | 8            | 7                  | -           | -          |
| <b>GROSS CONSUMPTION</b>                                    | <b>4193</b>    | <b>145</b> | <b>1222</b> | <b>1455</b>  | <b>927</b>         | <b>444</b>  | <b>-</b>   |
| <b>TRANSFORMATION, INPUT</b>                                | <b>556</b>     | <b>-</b>   | <b>499</b>  | <b>13</b>    | <b>30</b>          | <b>14</b>   | <b>-</b>   |
| Electricity plants                                          | 18             | -          | -           | -            | 4                  | 14          | -          |
| Main activity producer combined heat and power (CHP) plants | 367            | -          | 367         | -            | -                  | -           | -          |
| Autoproducer combined heat and power (CHP) plants           | 32             | -          | 23          | 3            | 6                  | -           | -          |
| Main activity producer heat plants                          | 50             | -          | 50          | -            | 0                  | -           | -          |
| Autoproducer heat plants                                    | 77             | -          | 59          | 1            | 17                 | -           | -          |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 9              | -          | -           | 9            | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 3              | -          | -           | -            | 3                  | -           | -          |
| Not elsewhere specified - transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>451</b>     | <b>-</b>   | <b>-</b>    | <b>6</b>     | <b>1</b>           | <b>115</b>  | <b>329</b> |
| Electricity plants                                          | 15             | -          | -           | -            | -                  | 15          | -          |
| Main activity producer combined heat and power (CHP) plants | 291            | -          | -           | -            | -                  | 95          | 196        |
| Autoproducer combined heat and power (CHP) plants           | 24             | -          | -           | -            | -                  | 5           | 19         |
| Main activity producer heat plants                          | 52             | -          | -           | -            | -                  | -           | 52         |
| Autoproducer heat plants                                    | 62             | -          | -           | -            | -                  | -           | 62         |
| Oil refineries                                              | -              | -          | -           | -            | -                  | -           | -          |
| Petrochemical plants                                        | 6              | -          | -           | 6            | -                  | -           | -          |
| Liquefaction plants                                         | -              | -          | -           | -            | -                  | -           | -          |
| Charcoal production plants                                  | 1              | -          | -           | -            | 1                  | -           | -          |
| Not elsewhere specified — transformation                    | -              | -          | -           | -            | -                  | -           | -          |
| <b>Energy sector</b>                                        | <b>26</b>      | <b>-</b>   | <b>0</b>    | <b>0</b>     | <b>-</b>           | <b>25</b>   | <b>1</b>   |
| <b>LOSSES</b>                                               | <b>148</b>     | <b>-</b>   | <b>43</b>   | <b>4</b>     | <b>-</b>           | <b>52</b>   | <b>49</b>  |



thousands of tonnes of coal equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>Total products</b> | <b>Coal</b> | <b>Natural gas</b> | <b>Oil products</b> | <b>Biofuels and waste</b> | <b>Electricity</b> | <b>Heat</b> |
|---------------------------------|-----------------------|-------------|--------------------|---------------------|---------------------------|--------------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>3914</b>           | <b>145</b>  | <b>680</b>         | <b>1444</b>         | <b>898</b>                | <b>468</b>         | <b>279</b>  |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>3821</b>           | <b>145</b>  | <b>680</b>         | <b>1363</b>         | <b>886</b>                | <b>468</b>         | <b>279</b>  |
| <b>INDUSTRY</b>                 | <b>338</b>            | <b>32</b>   | <b>92</b>          | <b>54</b>           | <b>0</b>                  | <b>91</b>          | <b>69</b>   |
| Iron and steel                  | 0                     | -           | 0                  | 0                   | -                         | 0                  | -           |
| Chemical and petrochem.         | 12                    | -           | 1                  | -                   | -                         | 5                  | 6           |
| Non-metallic minerals           | 140                   | 30          | 52                 | 39                  | 0                         | 19                 | 0           |
| Machinery                       | 4                     | -           | -                  | -                   | -                         | 4                  | -           |
| Transport equipment             | 1                     | -           | -                  | -                   | -                         | 1                  | -           |
| Mining and quarrying            | 7                     | -           | -                  | 5                   | -                         | 2                  | -           |
| Food and tobacco                | 139                   | 2           | 33                 | 1                   | -                         | 43                 | 60          |
| Paper, pulp and print           | 5                     | -           | 2                  | -                   | -                         | 2                  | 1           |
| Wood and wood products          | 1                     | -           | 0                  | 0                   | 0                         | 1                  | 0           |
| Construction                    | 12                    | -           | 1                  | 9                   | 0                         | 2                  | -           |
| Textile and leather             | 10                    | -           | 2                  | -                   | -                         | 6                  | 2           |
| Not elsewhere specified         | 7                     | -           | 1                  | -                   | -                         | 6                  | -           |
| <b>TRANSPORT</b>                | <b>1099</b>           | <b>-</b>    | <b>29</b>          | <b>1065</b>         | <b>-</b>                  | <b>5</b>           | <b>-</b>    |
| Domestic aviation               | 71                    | -           | -                  | 71                  | -                         | -                  | -           |
| Road                            | 1007                  | -           | 20                 | 982                 | -                         | 5                  | -           |
| Rail                            | 10                    | -           | -                  | 10                  | -                         | -                  | -           |
| Pipeline transport              | 9                     | -           | 9                  | -                   | -                         | 0                  | -           |
| Domestic navigation             | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| Non-specified                   | 1                     | -           | -                  | 1                   | -                         | -                  | -           |
| <b>OTHER</b>                    | <b>2384</b>           | <b>113</b>  | <b>559</b>         | <b>244</b>          | <b>886</b>                | <b>372</b>         | <b>210</b>  |
| Residential                     | 1817                  | 87          | 418                | 82                  | 870                       | 205                | 155         |
| Comm. and public services       | 391                   | 24          | 137                | 2                   | 15                        | 158                | 55          |
| Agriculture                     | 176                   | 2           | 4                  | 160                 | 1                         | 9                  | 0           |
| <b>NON-ENERGY USE</b>           | <b>93</b>             | <b>-</b>    | <b>-</b>           | <b>81</b>           | <b>12</b>                 | <b>-</b>           | <b>-</b>    |
| <b>Statistical differences</b>  | <b>-</b>              | <b>-</b>    | <b>-</b>           | <b>-</b>            | <b>-</b>                  | <b>-</b>           | <b>-</b>    |

## 2. THE ENERGY BALANCE, TOTAL PRODUCTS

### 2.1. THE ENERGY BALANCE for 2015-2019

| thousands of tonnes of oil equivalent                       |             |             |             |             |             |
|-------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|
| SUPPLY AND CONSUMPTION                                      | 2015        | 2016        | 2017        | 2018        | 2019        |
| Primary Production                                          | 655         | 709         | 770         | 798         | 668         |
| From other sources                                          | 283         | 286         | 195         | 219         | 246         |
| Imports                                                     | 1766        | 1818        | 2012        | 2109        | 2031        |
| Exports                                                     | 16          | 15          | 34          | 27          | 9           |
| International bunkers                                       | -           | -           | -           | -           | -           |
| Stock changes                                               | -2          | -2          | 4           | 12          | -           |
| <b>GROSS CONSUMPTION</b>                                    | <b>2686</b> | <b>2796</b> | <b>2939</b> | <b>3087</b> | <b>2936</b> |
| <b>TRANSFORMATION, INPUT</b>                                | <b>415</b>  | <b>424</b>  | <b>411</b>  | <b>430</b>  | <b>389</b>  |
| Electricity plants                                          | 4           | 4           | 7           | 10          | 13          |
| Main activity producer combined heat and power (CHP) plants | 279         | 279         | 260         | 285         | 257         |
| Autoproducer combined heat and power (CHP) plants           | 31          | 32          | 29          | 28          | 22          |
| Main activity producer heat plants                          | 39          | 44          | 50          | 41          | 35          |
| Autoproducer heat plants                                    | 44          | 46          | 49          | 53          | 55          |
| Oil refineries                                              | -           | 0           | -           | -           | -           |
| Petrochemical plants                                        | 16          | 18          | 14          | 12          | 5           |
| Liquefaction plants                                         | -           | -           | -           | -           | -           |
| Charcoal production plants                                  | 2           | 1           | 2           | 1           | 2           |
| Not elsewhere specified - transformation                    | -           | -           | -           | -           | -           |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>331</b>  | <b>346</b>  | <b>336</b>  | <b>345</b>  | <b>315</b>  |
| Electricity plants                                          | 5           | 4           | 5           | 7           | 11          |
| Main activity producer combined heat and power (CHP) plants | 216         | 217         | 213         | 224         | 204         |
| Autoproducer combined heat and power (CHP) plants           | 18          | 22          | 24          | 21          | 16          |
| Main activity producer heat plants                          | 43          | 47          | 42          | 43          | 36          |
| Autoproducer heat plants                                    | 38          | 41          | 38          | 42          | 44          |
| Oil refineries                                              | -           | -           | -           | -           | -           |
| Petrochemical plants                                        | 11          | 15          | 14          | 8           | 4           |
| Liquefaction plants                                         | -           | -           | -           | -           | -           |
| Charcoal production plants                                  | 0           | 0           | 0           | 0           | 0           |
| Not elsewhere specified — transformation                    | -           | -           | -           | -           | -           |
| <b>Energy sector</b>                                        | <b>18</b>   | <b>19</b>   | <b>17</b>   | <b>16</b>   | <b>19</b>   |
| <b>LOSSES</b>                                               | <b>129</b>  | <b>128</b>  | <b>128</b>  | <b>124</b>  | <b>104</b>  |

thousands of tonnes of oil equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>2015</b> | <b>2016</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>2455</b> | <b>2571</b> | <b>2719</b> | <b>2862</b> | <b>2739</b> |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>2410</b> | <b>2525</b> | <b>2671</b> | <b>2786</b> | <b>2672</b> |
| <b>INDUSTRY</b>                 | <b>209</b>  | <b>203</b>  | <b>218</b>  | <b>251</b>  | <b>234</b>  |
| Iron and steel                  | 0           | 0           | 0           | 0           | 0           |
| Chemical and petrochem.         | 5           | 5           | 6           | 6           | 8           |
| Non-metallic minerals           | 88          | 69          | 83          | 102         | 99          |
| Machinery                       | 4           | 4           | 4           | 5           | 3           |
| Transport equipment             | 0           | 0           | -           | 1           | 1           |
| Mining and quarrying            | 2           | 2           | 2           | 5           | 4           |
| Food and tobacco                | 94          | 103         | 103         | 107         | 97          |
| Paper, pulp and print           | 1           | 1           | 2           | 2           | 2           |
| Wood and wood products          | 1           | 2           | 1           | 1           | 1           |
| Construction                    | 4           | 5           | 6           | 9           | 8           |
| Textile and leather             | 6           | 7           | 7           | 8           | 7           |
| Not elsewhere specified         | 4           | 5           | 4           | 5           | 4           |
| <b>TRANSPORT</b>                | <b>662</b>  | <b>717</b>  | <b>734</b>  | <b>758</b>  | <b>769</b>  |
| Domestic aviation               | 25          | 33          | 47          | 55          | 49          |
| Road                            | 621         | 661         | 665         | 688         | 705         |
| Rail                            | 6           | 13          | 10          | 6           | 7           |
| Pipeline transport              | 8           | 8           | 10          | 8           | 6           |
| Domestic navigation             | 1           | 1           | 1           | 0           | 1           |
| Non-specified                   | 1           | 1           | 1           | 1           | 1           |
| <b>OTHER</b>                    | <b>1539</b> | <b>1605</b> | <b>1719</b> | <b>1777</b> | <b>1669</b> |
| Residential                     | 1205        | 1257        | 1346        | 1385        | 1274        |
| Comm. and public services       | 260         | 268         | 266         | 283         | 272         |
| Agriculture                     | 74          | 80          | 107         | 109         | 123         |
| <b>NON-ENERGY USE</b>           | <b>45</b>   | <b>46</b>   | <b>48</b>   | <b>76</b>   | <b>67</b>   |
| <b>Statistical differences</b>  | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |

## 2.2. THE ENERGY BALANCE for 2015-2019

|                                                             | TeraJoule     |               |               |               |               |
|-------------------------------------------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>SUPPLY AND CONSUMPTION</b>                               | <b>2015</b>   | <b>2016</b>   | <b>2017</b>   | <b>2018</b>   | <b>2019</b>   |
| Primary Production                                          | 27482         | 29584         | 32315         | 33409         | 27954         |
| From other sources                                          | 11879         | 11967         | 8208          | 9166          | 10293         |
| Imports                                                     | 74076         | 76320         | 84351         | 88433         | 85164         |
| Exports                                                     | 726           | 634           | 1403          | 1161          | 413           |
| International bunkers                                       | -             | -             | -             | -             | -             |
| Stock changes                                               | -59           | -75           | 236           | 453           | -1            |
| <b>GROSS CONSUMPTION</b>                                    | <b>112652</b> | <b>117162</b> | <b>123235</b> | <b>129394</b> | <b>122999</b> |
| <b>TRANSFORMATION, INPUT</b>                                | <b>17380</b>  | <b>17732</b>  | <b>17165</b>  | <b>18009</b>  | <b>16269</b>  |
| Electricity plants                                          | 214           | 168           | 299           | 411           | 536           |
| Main activity producer combined heat and power (CHP) plants | 11286         | 11278         | 10883         | 11949         | 10462         |
| Autoproducer combined heat and power (CHP) plants           | 1236          | 1222          | 1238          | 1179          | 926           |
| Main activity producer heat plants                          | 2040          | 2276          | 2042          | 1709          | 1794          |
| Autoproducer heat plants                                    | 1872          | 2049          | 1975          | 2187          | 2251          |
| Oil refineries                                              | -             | -             | -             | -             | -             |
| Petrochemical plants                                        | 660           | 680           | 667           | 523           | 227           |
| Liquefaction plants                                         | -             | -             | -             | -             | -             |
| Charcoal production plants                                  | 72            | 59            | 61            | 51            | 73            |
| Not elsewhere specified - transformation                    | -             | -             | -             | -             | -             |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>14122</b>  | <b>14495</b>  | <b>14130</b>  | <b>14464</b>  | <b>13281</b>  |
| Electricity plants                                          | 199           | 161           | 229           | 293           | 442           |
| Main activity producer combined heat and power (CHP) plants | 9039          | 9134          | 8904          | 9384          | 8562          |
| Autoproducer combined heat and power (CHP) plants           | 789           | 887           | 990           | 869           | 705           |
| Main activity producer heat plants                          | 1805          | 1981          | 1750          | 1808          | 1522          |
| Autoproducer heat plants                                    | 1595          | 1709          | 1608          | 1744          | 1830          |
| Oil refineries                                              | -             | -             | -             | -             | -             |
| Petrochemical plants                                        | 483           | 607           | 635           | 354           | 205           |
| Liquefaction plants                                         | -             | -             | -             | -             | -             |
| Charcoal production plants                                  | 13            | 16            | 14            | 12            | 15            |
| Not elsewhere specified — transformation                    | -             | -             | -             | -             | -             |
| <b>Energy sector</b>                                        | <b>721</b>    | <b>730</b>    | <b>709</b>    | <b>691</b>    | <b>781</b>    |
| <b>LOSSES</b>                                               | <b>5531</b>   | <b>5405</b>   | <b>5403</b>   | <b>5214</b>   | <b>4345</b>   |

| <b>SUPPLY AND CONSUMPTION</b>   | <b>2015</b>   | <b>2016</b>   | <b>2017</b>   | <b>2018</b>   | <b>2019</b>   |
|---------------------------------|---------------|---------------|---------------|---------------|---------------|
| <b>FINAL CONSUMPTION</b>        | <b>103142</b> | <b>107790</b> | <b>114088</b> | <b>119944</b> | <b>114885</b> |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>101231</b> | <b>105941</b> | <b>111962</b> | <b>116663</b> | <b>112157</b> |
| <b>INDUSTRY</b>                 | <b>9043</b>   | <b>8598</b>   | <b>9243</b>   | <b>10576</b>  | <b>10011</b>  |
| Iron and steel                  | 8             | 7             | 6             | 8             | 12            |
| Chemical and petrochem.         | 214           | 221           | 247           | 237           | 354           |
| Non-metallic minerals           | 3715          | 2945          | 3446          | 4292          | 4126          |
| Machinery                       | 180           | 192           | 187           | 216           | 158           |
| Transport equipment             | 3             | 12            | 13            | 36            | 51            |
| Mining and quarrying            | 119           | 78            | 91            | 211           | 213           |
| Food and tobacco                | 4014          | 4277          | 4385          | 4520          | 4083          |
| Paper, pulp and print           | 108           | 108           | 99            | 124           | 116           |
| Wood and wood products          | 54            | 55            | 44            | 41            | 28            |
| Construction                    | 201           | 187           | 231           | 355           | 346           |
| Textile and leather             | 232           | 243           | 305           | 306           | 294           |
| Not elsewhere specified         | 195           | 273           | 189           | 230           | 230           |
| <b>TRANSPORT</b>                | <b>28133</b>  | <b>29991</b>  | <b>30779</b>  | <b>31722</b>  | <b>32192</b>  |
| Domestic aviation               | 1008          | 1410          | 1999          | 2324          | 2067          |
| Road                            | 26454         | 27640         | 27830         | 28733         | 29510         |
| Rail                            | 258           | 542           | 437           | 236           | 282           |
| Pipeline transport              | 319           | 330           | 455           | 368           | 268           |
| Domestic navigation             | 28            | 21            | 20            | 18            | 21            |
| Non-specified                   | 66            | 48            | 38            | 43            | 44            |
| <b>OTHER</b>                    | <b>64055</b>  | <b>67352</b>  | <b>71940</b>  | <b>74365</b>  | <b>69954</b>  |
| Residential                     | 50114         | 52724         | 56254         | 57953         | 53348         |
| Comm. and public services       | 10952         | 11250         | 11165         | 11833         | 11429         |
| Agriculture                     | 2989          | 3378          | 4521          | 4579          | 5177          |
| <b>NON-ENERGY USE</b>           | <b>1911</b>   | <b>1849</b>   | <b>2126</b>   | <b>3281</b>   | <b>2728</b>   |
| <b>Statistical differences</b>  | -             | -             | -             | -             | -             |

### 2.3. THE ENERGY BALANCE for 2015-2019

thousands of tonnes of coal equivalent

| <b>SUPPLY AND CONSUMPTION</b>                               | <b>2015</b> | <b>2016</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> |
|-------------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Primary Production                                          | 934         | 1010        | 1100        | 1137        | 953         |
| From other sources                                          | 405         | 408         | 279         | 312         | 351         |
| Imports                                                     | 2522        | 2597        | 2874        | 3013        | 2903        |
| Exports                                                     | 24          | 22          | 48          | 40          | 13          |
| International bunkers                                       | -           | -           | -           | -           | -           |
| Stock changes                                               | -5          | -4          | 10          | 12          | 1           |
| <b>GROSS CONSUMPTION</b>                                    | <b>3832</b> | <b>3989</b> | <b>4195</b> | <b>4410</b> | <b>4193</b> |
| <b>TRANSFORMATION, INPUT</b>                                | <b>590</b>  | <b>604</b>  | <b>584</b>  | <b>613</b>  | <b>556</b>  |
| Electricity plants                                          | 6           | 5           | 10          | 13          | 18          |
| Main activity producer combined heat and power (CHP) plants | 398         | 399         | 371         | 407         | 367         |
| Autoproducer combined heat and power (CHP) plants           | 43          | 45          | 42          | 40          | 32          |
| Main activity producer heat plants                          | 56          | 63          | 70          | 58          | 50          |
| Autoproducer heat plants                                    | 63          | 66          | 68          | 75          | 77          |
| Oil refineries                                              | -           | -           | -           | -           | -           |
| Petrochemical plants                                        | 22          | 26          | 21          | 18          | 9           |
| Liquefaction plants                                         | -           | -           | -           | -           | -           |
| Charcoal production plants                                  | 2           | 2           | 2           | 2           | 3           |
| Not elsewhere specified - transformation                    | -           | -           | -           | -           | -           |
| <b>TRANSFORMATION, OUTPUT</b>                               | <b>474</b>  | <b>495</b>  | <b>481</b>  | <b>493</b>  | <b>451</b>  |
| Electricity plants                                          | 6           | 5           | 8           | 10          | 15          |
| Main activity producer combined heat and power (CHP) plants | 308         | 312         | 303         | 320         | 291         |
| Autoproducer combined heat and power (CHP) plants           | 27          | 30          | 34          | 30          | 24          |
| Main activity producer heat plants                          | 62          | 67          | 60          | 62          | 52          |
| Autoproducer heat plants                                    | 54          | 58          | 55          | 59          | 62          |
| Oil refineries                                              | -           | -           | -           | -           | -           |
| Petrochemical plants                                        | 16          | 22          | 21          | 12          | 6           |
| Liquefaction plants                                         | -           | -           | -           | -           | -           |
| Charcoal production plants                                  | 1           | 1           | -           | -           | 1           |
| Not elsewhere specified — transformation                    | -           | -           | -           | -           | -           |
| <b>Energy sector</b>                                        | <b>24</b>   | <b>25</b>   | <b>25</b>   | <b>23</b>   | <b>26</b>   |
| <b>LOSSES</b>                                               | <b>188</b>  | <b>182</b>  | <b>185</b>  | <b>177</b>  | <b>148</b>  |

thousands of tonnes of coal equivalent

| <b>SUPPLY AND CONSUMPTION</b>   | <b>2015</b> | <b>2016</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> |
|---------------------------------|-------------|-------------|-------------|-------------|-------------|
| <b>FINAL CONSUMPTION</b>        | <b>3504</b> | <b>3673</b> | <b>3882</b> | <b>4090</b> | <b>3914</b> |
| <b>FINAL ENERGY CONSUMPTION</b> | <b>3441</b> | <b>3608</b> | <b>3812</b> | <b>3981</b> | <b>3821</b> |
| <b>INDUSTRY</b>                 | <b>305</b>  | <b>290</b>  | <b>308</b>  | <b>357</b>  | <b>338</b>  |
| Iron and steel                  | 0           | 0           | 0           | 0           | 0           |
| Chemical and petrochem.         | 7           | 6           | 8           | 8           | 12          |
| Non-metallic minerals           | 124         | 101         | 117         | 146         | 140         |
| Machinery                       | 6           | 6           | 5           | 7           | 4           |
| Transport equipment             | 0           | 0           | 0           | 1           | 1           |
| Mining and quarrying            | 4           | 4           | 3           | 7           | 7           |
| Food and tobacco                | 138         | 146         | 149         | 153         | 139         |
| Paper, pulp and print           | 4           | 4           | 3           | 5           | 5           |
| Wood and wood products          | 1           | 1           | 1           | 1           | 1           |
| Construction                    | 7           | 6           | 6           | 11          | 12          |
| Textile and leather             | 8           | 8           | 10          | 11          | 10          |
| Not elsewhere specified         | 6           | 8           | 6           | 7           | 7           |
| <b>TRANSPORT</b>                | <b>943</b>  | <b>1023</b> | <b>1050</b> | <b>1083</b> | <b>1099</b> |
| Domestic aviation               | 34          | 48          | 67          | 80          | 71          |
| Road                            | 888         | 942         | 950         | 981         | 1007        |
| Rail                            | 9           | 19          | 15          | 8           | 10          |
| Pipeline transport              | 9           | 11          | 16          | 12          | 9           |
| Domestic navigation             | 1           | 2           | 1           | 1           | 1           |
| Non-specified                   | 2           | 1           | 1           | 1           | 1           |
| <b>OTHER</b>                    | <b>2193</b> | <b>2295</b> | <b>2454</b> | <b>2541</b> | <b>2384</b> |
| Residential                     | 1722        | 1797        | 1916        | 1979        | 1817        |
| Comm. and public services       | 368         | 384         | 384         | 406         | 391         |
| Agriculture                     | 103         | 114         | 154         | 156         | 176         |
| <b>NON-ENERGY USE</b>           | <b>63</b>   | <b>65</b>   | <b>70</b>   | <b>109</b>  | <b>93</b>   |
| <b>Statistical differences</b>  | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>-</b>    |