

GLOSARIO IEA

Coal/peat includes all coal, both primary (including hard coal and lignite/brown coal) and derived fuels (including patent fuel, coke oven coke, gas coke, BKB, coke oven gas, blast furnace gas and oxygen steel furnace gas). Peat is also included in this category.

Crude oil comprises crude oil, natural gas liquids, refinery feedstocks and additives as well as other hydrocarbons.

Petroleum products comprises refinery gas, ethane, LPG, aviation gasoline, motor gasoline, jet fuels, kerosene, gas/diesel oil, heavy fuel oil, naphtha, white spirit, lubricants, bitumen, paraffin waxes, petroleum coke and other petroleum products.

Gas includes natural gas (excluding natural gas liquids) and gas works gas. The latter appears as a positive figure in the "gas works" row but is not part of indigenous production.

Nuclear shows the primary heat equivalent of the electricity produced by a nuclear power plant with an average thermal efficiency of 33 per cent.

Hydro shows the energy content of the electricity produced in hydro power plants. Hydro output excludes output from pumped storage plants.

Combustible renewables & waste comprises solid biomass, liquid biomass, biogas, industrial waste and municipal waste. Biomass is defined as any plant matter used directly as fuel or converted into fuels (e.g. charcoal) or electricity and/or heat. Included here are wood, vegetal waste (including wood waste and crops used for energy production), ethanol, animal materials/wastes and sulfites. Municipal waste comprises wastes produced by the residential, commercial and public service sectors that are collected by local authorities for disposal in a central location for the production of heat and/or power.

Other includes geothermal, solar, wind, tide/wave/ocean energy, electricity and heat. Unless the actual efficiency of the geothermal process is known, the quantity of geothermal energy entering electricity generation is inferred from the electricity production at geothermal plants assuming an average thermal efficiency of 10 percent. For solar, wind and tide/wave/ocean energy, the quantities entering electricity generation are equal to the electrical energy generated. Direct use of geothermal and solar heat is also included here. Electricity is accounted for at the same heat value as electricity in final consumption (i.e. 1 GWh = 0.000086 Mtoe). Heat includes heat that is produced for sale and is accounted for in the transformation sector.

Production is the production of primary energy, i.e. hard coal, lignite/brown coal, peat, crude oil, NGLs, natural gas, combustible renewables and waste, nuclear, hydro, geothermal, solar and the heat from heat pumps that is extracted from the ambient environment. Production is calculated after removal of impurities.

Imports and exports comprise amounts having crossed the national territorial boundaries of the country, whether or not customs clearance has taken place.

a) Oil and gas

Quantities of crude oil and oil products imported or exported under processing agreements (i.e. refining on account) are included. Quantities of oil in transit are excluded. Crude oil, NGL and natural gas are reported as coming from the country of origin; refinery feedstocks and oil products are reported as coming from the country of last consignment. Re-exports of oil imported for processing within bonded areas are shown as exports of product from the processing country to the final destination.

b) Coal

Imports and exports comprise the amount of fuels obtained from or supplied to other countries, whether or not there is an economic or customs union between the relevant countries. Coal in transit is not included.

c) Electricity

Amounts are considered as imported or exported when they have crossed the national territorial boundaries of the country.

International marine bunkers covers those quantities delivered to ships of all flags that are engaged in international navigation. The international navigation may take place at sea, on inland lakes and waterways, and in coastal waters. Consumption by ships engaged in domestic navigation is excluded. The domestic/international split is determined on the basis of port of departure and port of arrival, and not by the flag or nationality of the ship. Consumption by fishing vessels and by military forces is also excluded.

International aviation bunkers covers deliveries of aviation fuels to aircraft for international aviation. Fuels used by airlines for their road vehicles are excluded. The domestic/international split should be determined on the basis of departure and landing locations and not by the nationality of the airline. For many countries this incorrectly excludes fuel used by domestically owned carriers for their international departures.

Stock changes reflects the difference between opening stock levels on the first day of the year and closing levels on the last day of the year of stocks on national territory held by producers, importers, energy transformation industries and large consumers. A stock build is shown as a negative number, and a stock draw as a positive number.

Total primary energy supply (TPES) is made up of production + imports – exports – international marine bunkers – international aviation bunkers ± stock changes. For the world total, international marine bunkers and international aviation bunkers are not subtracted from TPES.

Transfers includes both interproduct transfers, products transferred and recycled products.

Statistical differences includes the sum of the unexplained statistical differences for individual fuels, as they appear in the basic energy statistics. It also includes the statistical differences that arise because of the variety of conversion factors in the coal and oil columns.

Electricity plants refers to plants which are designed to produce electricity only. If one or more units of the plant is a CHP unit (and the inputs and outputs can not be distinguished on a unit basis) then the whole plant is designated as a CHP plant. Both main activity producers and autoproducer plants are included here.

Combined heat and power plants refers to plants which are designed to produce both heat and electricity, sometimes referred as co-generation power stations. If possible, fuel inputs and electricity/heat outputs are on a unit basis rather than on a plant basis. However, if data are not available on a unit basis, the convention for defining a CHP plant noted above is adopted. Both main activity producers and autoproducer plants are included here.

Heat plants refers to plants (including heat pumps and electric boilers) designed to produce heat only, which is sold to a third party under the provisions of a contract. Both main activity producers and autoproducer plants are included here.

Gas works is treated similarly to electricity generation, with the quantity produced appearing as a positive figure in the gas column, inputs as negative entries in the coal and petroleum products columns, and conversion losses appearing in the total column.

Petroleum refineries shows the use of primary energy for the manufacture of finished petroleum products and the corresponding output. Thus, the total reflects transformation losses. In certain cases the data in the total column are positive numbers. This can be due to either problems in the primary refinery balance or to the fact that the IEA uses regional net calorific values for the petroleum products.

Coal transformation contains losses in transformation of coal from primary to secondary fuels and from secondary to tertiary fuels (hard coal to coke, coke to blast furnace gas, lignite to BKB, etc.).

Liquefaction includes diverse liquefaction processes, such as coal liquefaction plants and gas-to-liquid plants.

Other transformation covers non-specified transformation not shown elsewhere. It also includes backflows from the petrochemical sector.

Own use contains the primary and secondary energy consumed by transformation industries for heating, pumping, traction and lighting purposes [International Standard Industrial Classification (ISIC) Divisions 10-12, 23 and 40]. These quantities are shown as negative figures. Included here are, for example, coal mines' own use of energy, power plants' own consumption (which includes net electricity consumed for pumped storage), and energy used for oil and gas extraction.

Distribution and transmission losses includes losses in gas distribution, electricity transmission and coal transport.

Total final consumption (TFC) is the sum of consumption by the different end-use sectors. Backflows from the petrochemical industry are not included in final consumption.

Industry sector consumption is specified in the following subsectors (energy used for transport by industry is not included here but reported under transport):

- . Iron and steel industry [ISIC Group 271 and Class 2731]; . Chemical and petrochemical industry [ISIC Division 24] excluding petrochemical feedstocks;
- . Non-ferrous metals basic industries [ISIC Group 272 and Class 2732];
- . Non-metallic mineral products such as glass, ceramic, cement, etc. [ISIC Division 26];
- . Transport equipment [ISIC Divisions 34 and 35]; . Machinery comprises fabricated metal products, machinery and equipment other than transport equipment [ISIC Divisions 28 to 32];
- . Mining (excluding fuels) and quarrying [ISIC Divisions 13 and 14];
- . Food and tobacco [ISIC Divisions 15 and 16]; . Paper, pulp and printing [ISIC Divisions 21 and 22]; . Wood and wood products (other than pulp and paper) [ISIC Division 20];
- . Construction [ISIC Division 45]; . Textile and leather [ISIC Divisions 17 to 19];
- . Non-specified (any manufacturing industry not included above) [ISIC Divisions 25, 33, 36 and 37].

Transport sector includes all fuels used for transport [ISIC Divisions 60 to 62]. It includes transport in the industry sector and covers road, railway, domestic aviation, domestic navigation, fuels used for transport of materials by pipeline and non-specified transport. Fuel used for ocean, coastal and inland fishing should be included in fishing (other sectors). Please note that international marine bunkers and international aviation bunkers are also included here for world total.

Other sectors covers residential, commercial and public services [ISIC Divisions 41, 50-52, 55, 63-67, 70-75, 80, 85, 90-93, 95 and 99], agriculture/forestry [ISIC Divisions 01 and 02], fishing [ISIC Division 05] and non-specified consumption.

Non-energy use covers those fuels that are used as raw materials in the different sectors and are not consumed as a fuel or transformed into another fuel. Non-energy use also includes petrochemical feedstocks. Non-energy use is shown separately in final consumption under the heading non-energy use.