

## REGULATION (EC) 1099/2008 of 22 October 2008 on energy statistics

Incorporated and adapted by Ministerial Council Decision 2012/02/MC-EnC of 18 October 2012 concerning the implementation of the rules of energy statistics in the Energy Community and amended by Decision 2013/02/MC-EnC of 24 October 2013 on implementation of Regulation (EU) 147/2013 on statistics and the Decision 2015/02/MC-EnC of 16 October 2015 on implementation of Regulation 431/2014 and amending Regulation 1099/2008 on Energy Statistics.

*The adaptations made by Ministerial Council Decision 2012/02/MC-EnC are highlighted in **blue and bold**.*

Whereas:

(1) The Community needs to have precise and timely data on energy quantities, their forms, sources, generation, supply, transformation and consumption, for the purpose of monitoring the impact and consequences of its policy work on energy.

(2) Energy statistics have traditionally been focused on energy supply and on fossil energies. In the coming years, greater focus is needed on increased knowledge and monitoring of final energy consumption, renewable energy and nuclear energy.

(3) The availability of accurate, up-to-date information on energy is essential for assessing the impact of energy consumption on the environment, in particular in relation to the emission of greenhouse gasses. This information is required by Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

(4) Directive 2001/77/EC of the European Parliament and of the Council of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market and Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market require Member States to report quantitative energy data. In order to monitor progress towards the achievement of the objectives set in those Directives, detailed, up-to-date energy data are required.

(5) Directive 2002/91/EC of the European Parliament and of the Council of 16 December 2002 on the energy performance of buildings, Directive 2006/32/EC of the European Parliament and of the Council of 5 April 2006 on energy end-use efficiency and energy services and Directive 2005/32/EC of the European Parliament and of the Council of 6 July 2005 establishing a framework for the setting of ecodesign requirements for energy-using products require Member States to report quantitative energy consumption data. To monitor progress towards the achievement of the objectives set in those Directives, detailed, up-to-date energy data, as well as a better interface between these energy data and related statistical surveys such as the population and housing censuses and transportation data, are required.

(6) The Green Papers of the Commission of 22 June 2005 on Energy Efficiency and of 8 March 2006 on a European Strategy for Sustainable, Competitive and Secure Energy discuss EU energy policies for which the availability of EU energy statistics are required, including for the purpose of establishing a European Energy Market Observatory.

(7) The establishment of a public domain energy forecast model, as called for by the European Par-

liament in its Resolution of 14 December 2006 on a European Strategy for Sustainable, Competitive and Secure Energy requires detailed, up-to-date energy data.

(8) In the coming years, greater attention should be paid to the security of supply of the most important fuels and more timely and more accurate data at EU level is needed to anticipate and coordinate EU solutions to possible supply crises.

(9) The liberalisation of the energy market and its growing complexity make it increasingly difficult to obtain reliable, timely energy data in the absence, in particular, of a legal basis concerning the provision of such data.

(10) In order for the energy statistics system to assist political decision-making by the European Union and its Member States and promote public debate which includes citizens, it must afford guarantees of comparability, transparency, flexibility and ability to evolve. Thus, in the near future, statistics on nuclear energy should be incorporated and relevant data concerning renewable energy should be developed more. Similarly, with regard to energy efficiency, the availability of detailed statistics on habitat and transport would be extremely useful.

(11) The production of Community statistics is governed by the rules set out in Council Regulation (EC) No 322/97 of 17 February 1997 on Community Statistics.

(12) Since the objective of this Regulation, namely establishing a common framework for the production, transmission, evaluation and dissemination of comparable energy statistics in the Community cannot be sufficiently achieved by the Member States and can therefore be better achieved at Community level, the Community may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary to achieve that objective.

(13) In the production and dissemination of Community statistics under this Regulation, the national and Community statistical authorities should take account of the principles set out in the European Statistics Code of Practice, which was adopted on 24 February 2005 by the Statistical Programme Committee, established by Council Decision 89/382/EEC, Euratom and attached to the Recommendation of the Commission on the independence, integrity and accountability of the national and Community statistical authorities.

(14) The measures necessary for the implementation of this Regulation should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission.

(15) In particular, power should be conferred on the Commission to modify the list of data sources, the national statistics and the applicable clarifications or definitions as well as the transmission arrangements and to establish and modify the annual nuclear statistics, once incorporated, to modify the renewable energy statistics, once incorporated, and to establish and modify the final energy consumption statistics. Since those measures are of general scope and are designed to amend non-essential elements of this Regulation, *inter alia*, by supplementing it with new non-essential elements, they must be adopted in accordance with the regulatory procedure with scrutiny provided for in Article 5(a) of Decision 1999/468/EC.

(16) It is necessary to provide that the Commission may grant exemptions or derogations to Member States from those aspects of the energy data collection that would lead to an excessive burden on respondents. The exemptions or derogations should be granted only upon receipt of a proper justification which indicates the present situation and the excessive burden transparently. The period for

which they remain in force should be limited to the shortest time necessary.

(17) The measures provided for in this Regulation are in accordance with the opinion of the Statistical Programme Committee.

### **Article 1**

#### **Subject matter and scope**

1. This Regulation establishes a common framework for the production, transmission, evaluation and dissemination of comparable energy statistics in the Community.
2. This Regulation shall apply to statistical data concerning energy products and their aggregates in the Community.

### **Article 2**

#### **Definitions**

For the purpose of this Regulation, the following definitions shall apply:

- (a) "Community statistics" mean Community statistics as defined in the first indent of Article 2 of Regulation (EC) No 322/97;
- (b) "production of statistics" means production of statistics as defined in the second indent of Article 2 of Regulation (EC) No 322/97;
- (c) "Commission (Eurostat)" means the Community authority as defined in the fourth indent of Article 2 of Regulation (EC) No 322/97;
- (d) "energy products" mean combustible fuels, heat, renewable energy, electricity, or any other form of energy;
- (e) "aggregates" mean data aggregated at national level on the treatment or use of energy products, namely production, trade, stocks, transformation, consumption, and structural characteristics of the energy system such as installed capacities for electricity generation or production capacities for oil products;
- (f) "quality of data" means the following aspects of statistical quality: relevance, accuracy, timeliness and punctuality, accessibility and clarity, comparability, coherence and completeness.

### **Article 3**

#### **Data sources**

1. While applying the principles of maintaining a reduced burden on respondents and of administrative simplification, Member States<sup>1</sup> shall compile data concerning energy products and their aggregates in the Community from the following sources:

- (a) specific statistical surveys addressed to the primary and transformed energy producers and trad-

<sup>1</sup> Decision 2012/02/MC-EnC incorporating this Regulation is addressed to Contracting Parties.

ers, distributors and transporters, importers and exporters of energy products;

(b) other statistical surveys addressed to final energy users in the sectors of manufacturing industry, transport, and other sectors, including households;

(c) other statistical estimation procedures or other sources, including administrative sources, such as regulators of the electricity and gas markets.

2. Member States shall lay down the detailed rules concerning the reporting of the data needed for the national statistics as specified in Article 4 by undertakings and other sources.

3. The list of data sources may be modified in accordance with the regulatory procedure with scrutiny referred to in Article 11(2).

#### **Article 4**

##### **Aggregates, energy products and the transmission frequency of national statistics**

1. The national statistics to be reported shall be as set out in the Annexes. They shall be transmitted with the following frequencies:

(a) annual, for the energy statistics in Annex B;

(b) monthly, for the energy statistics in Annex C;

(c) short-term monthly, for the energy statistics in Annex D.

2. Applicable clarifications or definitions of the technical terms used are provided in the individual Annexes and also in Annex A (Clarifications of terminology).

3. The data to be forwarded and the applicable clarifications or definitions may be modified in accordance with the regulatory procedure with scrutiny referred to in Article 11(2).

#### **Article 5**

##### **Transmission and dissemination**

1. Member States shall transmit to the Commission (Eurostat) the national statistics referred to in Article 4.

2. The arrangements for their transmission, including the applicable time limits, derogations and exemptions therefrom, shall be as set out in the Annexes.

3. The arrangements for the transmission of the national statistics may be modified in accordance with the regulatory procedure with scrutiny referred in Article 11(2).

4. At the duly justified request of a Member States, additional exemptions or derogations may be granted by the Commission in accordance with the regulatory procedure referred to in Article 11(3), for those parts of the national statistics for which the collection would lead to an excessive burden on respondents.

5. The Commission (Eurostat) shall disseminate yearly energy statistics by 31 January of the second year following the reported period.

## **Article 6**

### **Quality assessment and reports**

1. Member States shall ensure the quality of the data transmitted.
2. Every reasonable effort shall be undertaken to ensure coherence between energy data declared in accordance with Annex B and data declared in accordance with Commission Decision 2005/166/EC of 10 February 2005 laying down the rules for implementing Decision No 280/2004/EC of the European Parliament and of the Council concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.
3. For the purposes of this Regulation, the following quality assessment dimensions shall apply to the data to be transmitted:
  - (a) "relevance" shall refer to the degree to which statistics meet current and potential needs of the users;
  - (b) "accuracy" shall refer to the closeness of estimates to the unknown true values;
  - (c) "timeliness" shall refer to the delay between the availability of the information and the event or phenomenon it describes;
  - (d) "punctuality" shall refer to the delay between the date of the release of the data and the target date when it should have been delivered;
  - (e) "accessibility" and "clarity" shall refer to the conditions and modalities by which users can obtain, use and interpret data;
  - (f) "comparability" shall refer to the measurement of the impact of differences in applied statistical concepts and measurement tools and procedures where statistics are compared between geographical areas, sectoral domains or over time;
  - (g) "coherence" shall refer to the adequacy of the data to be reliably combined in different ways and for various uses.
4. Every five years, Member States shall provide the Commission (Eurostat) with a report on the quality of the data transmitted as well as on any methodological changes that have been made.
5. Within six months of receipt of a request from the Commission (Eurostat), and in order to allow it to assess the quality of the data transmitted, Member States shall send to the Commission (Eurostat) a report containing any relevant information concerning the implementation of this Regulation.

## **Article 7**

### **Time reference and frequency**

Member States shall compile all data specified in this Regulation from the beginning of the calendar year following the adoption of this Regulation, and shall transmit them from then onwards with the frequencies laid down in Article 4(1).

### **Article 8**

#### **Annual nuclear statistics**

The Commission (Eurostat) shall, in cooperation with the nuclear energy sector in the EU, define a set of annual nuclear statistics which shall be reported and disseminated from 2009 onwards, that year being the first reported period, without prejudice to confidentiality, where it is necessary, and avoiding any duplication of data collection, while at the same time keeping production costs low and the reporting burden reasonable.

The set of annual nuclear statistics shall be established and may be modified in accordance with the regulatory procedure with scrutiny referred to in Article 11(2).

### **Article 9**

#### **Renewable energy statistics and final energy consumption statistics**

1. With a view to improving the quality of renewable energy and final energy consumption statistics, the Commission (Eurostat), in collaboration with the Member States, shall make sure that these statistics are comparable, transparent, detailed and flexible by:

(a) reviewing the methodology used to generate renewable energy statistics in order to make available additional, pertinent, detailed statistics on each renewable energy source, annually and in a cost-effective manner. The Commission (Eurostat) shall present and disseminate the statistics generated from 2010 (reference year) onwards;

(b) reviewing and determining the methodology used at national and Community level to generate final energy consumption statistics (sources, variables, quality, costs) based on the current situation, existing studies and feasibility pilot studies, as well as cost-benefit analyses yet to be conducted, and evaluating the findings of the pilot studies and cost-benefit analyses with a view to establishing breakdown keys for final energies by sector and main energy uses and gradually integrating the resulting elements into the statistics from 2012 (reference year) onwards.

2. The set of renewable energy statistics may be modified in accordance with the regulatory procedure with scrutiny referred to in Article 11(2).

3. The set of final energy consumption statistics shall be established and may be modified in accordance with the regulatory procedure with scrutiny referred to in Article 11(2).

### **Article 10**

#### **Implementing measures**

1. The following measures necessary for implementation of this Regulation, designed to amend non-essential elements of this Regulation, *inter alia*, by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 11(2):

(a) modifications to the list of data sources (Article 3(3));

(b) modifications to the national statistics and to the applicable clarifications or definitions (Article 4(3));

- (c) modifications to the transmission arrangements (Article 5(3));
  - (d) establishment of and modifications to the annual nuclear statistics (Article 8(2));
  - (e) modifications to the renewable energy statistics (Article 9(2));
  - (f) establishment of and modifications to the final energy consumption statistics (Article 9(3)).
2. Additional exemptions or derogations (Article 5(4)) shall be granted in accordance with the regulatory procedure referred to in Article 11(3).
3. Consideration is to be given to the principle that additional costs and the reporting burden remain within reasonable limits.

**Article 11**  
**Committee**

<...>

**Article 12**  
**Entry into force and Addressees<sup>2</sup>**

**This Decision [2012/02/MC-EnC] enters into force upon its adoption and is addressed to the Contracting Parties.**

**Article 1 of Decision 2012/02/MC-EnC**

**Each Contracting Party shall implement Regulation (EC) 1099/2008 of 22 October 2008 on energy statistics <...> Directive not later than 31 December 2013.**

**Article 1 of Decision 2013/02/MC-EnC**

**Each Contracting Part shall implement Commission Regulation (EU) No 147/2013 of 13 February 2013 amending Regulation (EC) No 1099/2008 of the European Parliament and of the Council on energy statistics, as regards the implementation of updates for the monthly and annual energy statistics not later than 31 December 2013.**

**Article 1 of Decision 2015/02/MC-EnC**

**Each Contracting Party shall implement Commission Regulation (EU) No 431/2014 of 24 April 2014 amending Regulation (EC) No 1099/2008 of the European Parliament and of the Council on energy statistics, as regards the implementation of annual statistics on energy consumption in households, not later than 31 December 2016.**

<sup>2</sup> The text displayed here corresponds to Article 4 of Decision 2012/02/MC-EnC.

## ANNEX A

### CLARIFICATIONS OF TERMINOLOGY

This Annex supplies explanations or definitions of terms that are used in the other Annexes.

#### 1. GEOGRAPHICAL NOTES

For statistical reporting purposes only, the following geographical definitions apply:

- Australia excludes the overseas territories,
- Denmark excludes the Faeroe Islands and Greenland,
- France includes Monaco and excludes the French overseas territories Guadeloupe, Martinique, Guyane, Reunion, St.-Pierre and Miquelon, New Caledonia, French Polynesia, Wallis and Futuna, Mayotte,
- Italy includes San Marino and the Vatican,
- Japan includes Okinawa,
- The Netherlands excludes Suriname and the Netherlands Antilles,
- Portugal includes the Açores and Madeira,
- Spain includes the Canary Islands, the Balearic Islands, and Ceuta and Melilla,
- Switzerland does not include Liechtenstein,
- United States includes the 50 States, the District of Columbia, the US Virgin Islands, Puerto Rico and Guam.

#### 2. AGGREGATES

Producers are classified according to the purpose of production:

- Main activity producer: enterprises, both privately or publicly owned, which generate electricity and/or heat for sale to third parties, as their principal activity,
- Autoproducers: enterprises, both privately or publicly owned, which generate electricity and/or heat wholly or partly for their own use as an activity which supports their primary activity.

Note: the Commission may further clarify terminology by adding relevant NACE references in accordance with the regulatory procedure with scrutiny referred to in Article 11(2) after a revision of the NACE classification has entered into force.

##### 2.1. Supply and Transformation Sectors

###### Production/Indigenous Production

Quantities of fuels extracted or produced, calculated after any operation for removal of inert matter. Production includes the quantities consumed by the producer in the production process (e.g. for heating or operation of equipment and auxiliaries) as well as supplies to other producers of energy for transformation or other uses.

Indigenous means: production from resources within the concerned state.



## Imports/Exports

For geographical definitions see 'Geographical Notes' section.

Unless specified differently, 'imports' refer to ultimate origin (the country in which the energy product was produced) for use in the country and 'exports' to the ultimate country of consumption of the produced energy product.

Amounts are considered as imported or exported when they have crossed the political boundaries of the country, whether customs clearance has taken place or not.

Where no origin or destination can be reported 'Other' may be used.

Statistical differences may arise if only total import and export are available on the above basis, while the geographical breakdown is based on a different survey, source or concept. In this case, differences shall be included under 'Other'.

## International Marine Bunkers

Quantities of fuels 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. Excluded is:

- consumption by ships engaged in domestic navigation. The domestic/ international split should be 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
- consumption by military forces.

## Stock Changes

The difference between the opening stock level and closing stock level for stocks held on national territory.

## Gross Consumption (calculated)

Calculated value, defined as:

= Indigenous production + From other sources + Imports – Exports – International marine bunkers + Stock changes

## Gross Consumption (observed)

The quantity actually recorded in surveys of end-use sectors.

## Statistical Differences

Calculated value, defined as:

= Calculated gross consumption – Observed gross consumption.

Includes changes in stocks at final consumers when this cannot be specified as part of the 'Stock changes'.

Reasons for any major differences should be stated.

## Main Activity Producer Electricity Plants

Fuel quantities used to produce electricity.

Fuels used by plants containing at least one CHP unit are to be reported under Main Activity Producer CHP Plants.

#### Main Activity Producer Combined Heat and Power (CHP) Plants

Quantities of fuels used to produce electricity and heat.

#### Main Activity Producer Heat Plants

Quantities of fuels used to produce heat.

#### Autoproducer Electricity Plants

Quantities of fuels used to produce electricity.

Fuels used by plants containing at least one CHP unit are to be reported under Autoproducer CHP Plants.

#### Autoproducer Combined Heat and Power (CHP) Plants

Quantities of fuels that correspond to the quantity of electricity produced and heat sold.

#### Autoproducer Heat Plants

Quantities of fuels that correspond to the quantity of heat sold.

#### Patent Fuel Plants

Quantities used to produce fuels.

Quantities used for heating and operation of equipment should not be declared here, but declared as consumption in the Energy sector.

#### Coke Ovens

Quantities used in coke ovens.

Quantities used for heating and operation of equipment should not be declared here, but declared as consumption in the Energy sector.

#### BKB/PB plants

Quantities of lignite used to produce brown coal briquettes (BKB) or of peat to produce peat briquettes (PB).

Quantities used for heating and operation of equipment should not be declared here, but declared as consumption in the Energy sector.

#### Gas Works

Quantities used to produce gas in gas works and coal gasification plants.

Quantities used as a fuel for heating and operation of equipment should not be included here, but declared as consumption in the Energy sector.

#### Blast furnace

Quantities of coking coal and/or bituminous coal (generally referred to as PCI) and coke oven coke transformed in blast furnaces.

Quantities used as a fuel for heating and operation of blast furnaces (e.g.: blast furnaces gas) should not be included here, but declared as consumption in the Energy sector.

#### Coal Liquefaction

Quantities of fuel used to produce synthetic oil.

#### Petroleum refineries

Quantities used to produce petroleum products.

Quantities used as a fuel for heating and operation of equipment should not be declared here, but declared as consumption in the Energy sector.

#### Not Elsewhere Specified – Transformation

Quantities used for transformation activities not included elsewhere. If used, what is included under this heading should be explained in the report.

## 2.2. Energy sector and final consumption

### Total Energy Sector

Quantities consumed by the energy industry to support the extraction (mining, oil and gas production) or plant operations of transformation activities. This corresponds to NACE Divisions 05, 06, 08.92, 07.21, 09.1, 19 and 35.

Excludes quantities of fuels transformed into another energy form (which should be reported under the Transformation sector) or used in support of the operation of oil, gas and coal slurry pipelines (which should be reported in the Transport Sector).

Includes the manufacture of chemical materials for atomic fission and fusion and the products of these processes.

### Electricity, CHP and Heat Plants

Quantities consumed as energy at electricity plants, combined heat and power plants (CHP) and heat plants.

### Coal Mines

Quantities consumed as energy to support the extraction and preparation of coal within the coal mining industry.

Coal burned in pithead power stations should be reported in the Transformation Sector.

### Patent fuel plants

Quantities consumed as energy at patent fuel plants.

### Coke Ovens

Quantities consumed as energy at coking plants.

### BKB/PB plants

Quantities used as energy in BKP/PB plants.

### Gas Works/gasification works

Quantities consumed as energy at gas works and coal gasification plants.

### Blast Furnaces

Quantities consumed as energy at blast furnaces.

### Coal Liquefaction

Quantities consumed as energy at coal liquefaction plants.

### Petroleum Refineries

Quantities consumed as energy at petroleum refineries.

### Oil and Gas extraction

Quantities consumed as fuel in the oil and gas extraction process and in natural gas processing plants.

Excludes pipeline losses (to be reported as distribution losses) and energy quantities used to operate pipelines (to be reported in the Transport sector).

#### Total Final Consumption

Defined (calculated) as:

= Total non-energy use + Final Energy Consumption (Industry + Transport + Other sectors)

It excludes deliveries for transformation, use by the energy producing industries, and distribution losses.

#### Non-Energy Use

Energy products used as raw materials in the different sectors; that is, not consumed as a fuel or transformed into another fuel.

### 2.3. Energy end-use Specification

#### Final Energy Consumption

Total energy consumption in industry, transport and other sectors.

#### Industry Sector

This refers to fuel quantities consumed by the industrial undertaking in support of its primary activities.

For heat only or CHP plants, only quantities of fuels consumed for the production of heat used by the plant itself are applicable. Quantities of fuels consumed for the production of heat that is sold, and for the production of electricity, should be reported under the appropriate Transformation sector.

Iron and Steel: NACE Divisions 24.1, 24.2, 24.3, 24.51 and 24.52.

#### Chemical (including Petrochemical)

Chemical and petrochemical industries; NACE Divisions 20 and 21.

#### Non-Ferrous Metals

Non-ferrous metals industries; NACE Divisions 24.4, 24.53 and 24.54.

#### Non-Metallic Minerals

Glass, ceramic, cement and other building materials industries; NACE Division 23.

#### Transport Equipment

Industries related to the equipment used for transport; NACE Divisions 29 and 30.

#### Machinery

Fabricated metal products, machinery and equipment other than transport equipment; NACE Divisions 25, 26, 27 and 28.

#### Mining and Quarrying

NACE Divisions 07 (except 07.21), 08 (except 08.92) and 09.9; it excludes energy producing industries.

Food, Beverages and Tobacco: NACE Divisions 10, 11 and 12.

Pulp, Paper and Printing

Includes production of recorded media; NACE Divisions 17 and 18.

Wood and Wood Products (other than pulp and paper): NACE Division 16.

Construction: NACE Division 41, 42 and 43.

Textile and Leather; NACE Divisions 13, 14 and 15.

Not Elsewhere Specified – Industry

Consumption in sectors which is not covered above.

Transport Sector

Energy used in all transport activities irrespective of the economic sector in which the activity occurs; NACE Divisions 49, 50 and 51.

Transport Sector – Rail

All consumption for use in rail traffic, including industrial railways; NACE Divisions 49.1 and 49.2.

Transport Sector – Domestic Navigation

Quantities delivered to vessels of all flags not engaged in international navigation (see International marine bunkers). The domestic/international split should be determined on the basis of port of departure and port of arrival and not by the flag or nationality of the ship. NACE Division 50.

Transport Sector – Road

Quantities used in road vehicles.

Includes fuel used by agricultural vehicles on highways and lubricants for use in road vehicles.

Excludes energy used in stationary engines (see Other sector), for non-highway use in tractors (see Agriculture), military use in road vehicles (see Other sector – Not elsewhere specified), bitumen used in road surfacing and energy used in engines at construction sites (see Industry sub-sector Construction). NACE Divisions 49.3 and 49.4.

Transport Sector – Pipeline Transport

Quantities used as energy in the support and operation of pipelines transporting gases, liquids, slurries and other commodities; NACE Division 49.5.

Includes energy used for pump stations and maintenance of the pipeline.

Excludes energy used for the pipeline distribution of natural or manufactured gas, hot water or steam from the distributor to final users (to be reported in the energy sector), energy used for the final distribution of water to household, industrial, commercial and other users (to be included in Commercial and Public Services) and losses occurring during this transport between distributor and final users (to be reported as distribution losses).

Transport Sector – International Aviation

Quantities of aviation fuels delivered to aircraft for international aviation. The domestic/international split should be determined on the basis of departure and landing locations and not by the nationality of the airline. Part of NACE Division 51.

Excludes fuels used by airlines for their road vehicles (to be reported in the transport sector – Not

elsewhere specified) and military use of aviation fuels (to be reported in the Other sectors – Not elsewhere specified).

#### Transport Sector – Domestic Aviation

Quantities of aviation fuels delivered to aircraft for domestic aviation – commercial, private, agricultural, etc. Part of NACE Division 51.

Includes fuel used for purposes other than flying, e.g. bench testing of engines. The domestic/international split should be determined on the basis of departure and landing locations and not by the nationality of the airline.

Excludes fuels used by airlines for their road vehicles (to be reported in the transport sector – Not elsewhere specified) and military use of aviation fuels (to be reported in the Other sector – Not elsewhere specified).

#### Transport Sector – Not Elsewhere Specified

Quantities used for transport activities not included elsewhere.

Includes fuels used by airlines for their road vehicles and fuels used in ports for ships' unloaders, various types of cranes.

To be declared is what is included under this heading.

#### Other Sectors

Sectors not specifically mentioned or not belonging to energy, industry or transport.

#### Other Sectors – Commercial and Public Services

Fuels consumed by business and offices in the public and private sectors.

NACE Divisions 33, 36, 37, 38, 39, 45, 46, 47, 52, 53, 55, 56, 58, 59, 60, 61, 62, 63, 64, 65, 66, 68, 69, 70, 71, 72, 73, 74, 75, 77, 78, 79, 80, 81, 82, 84, 85, 86, 87, 88, 90, 91, 92, 93, 94, 95, 96 and 99.

#### Other Sectors – Residential

To be declared are fuels consumed by all households including 'households with employed persons'. NACE Divisions 97 and 98.

The following specific definitions apply for this sector:

##### Household sector:

Household means a person living alone or a group of people who live together in the same private dwelling and sharing expenditures including the joint provision of the essentials of living. The household sector, also known as the residential (or domestic) sector is therefore, a collective pool of all households in a country.

Collective residences which can be permanent (e.g. prisons) or temporary (e.g. hospitals) should be excluded as these are covered in consumption in the service sector. Energy used in all transport activities should be reported in the transport sector and not in the household sector.

Energy consumption associated with significant economic activities of households should also be excluded from the total household energy consumption. These activities include agricultural economic activities on small farms and other economic activities carried out in a household's residence and should be reported in the corresponding sector.

**Space heating:**

This energy service refers to the use of energy to provide heat in an interior area of a dwelling.

**Space cooling:**

This energy service is referred to the use of energy for cooling in a dwelling by a refrigeration system and/or unit.

Fans, blowers and other appliances not connected to a refrigeration unit are excluded from this section, but should be covered in the lighting and electrical appliances section.

**Water heating:**

This energy service is referred to the use of energy to heat water for hot running water, bathing, cleaning and other non-cooking applications.

Swimming pool heating is excluded, but should be covered in the other end uses section.

**Cooking:**

This energy service is referred to the use of energy to prepare meals.

Appliances for auxiliary cooking (microwave ovens, kettles, coffee makers, etc.) are excluded; they should be covered in the the lighting and electrical appliances section

**Lighting and electrical appliances (electricity only):**

Use of electricity for lighting and any other electrical appliances in a dwelling not considered within other end uses.

**Other end uses:**

Any other energy consumption in households such as use of energy for the outdoor and any other activities not included into the five energy end- uses mentioned above (e.g. lawn mowers, swimming pool heating, outdoor heaters, outdoor barbecues, saunas etc.).

**Other Sectors – Agriculture/Forestry**

Fuels consumed by users classified as agriculture, hunting and forestry; NACE Divisions 01 and 02.

**Other Sectors – Fishing**

Fuels delivered for inland, coastal and deep-sea fishing. Fishing should cover fuels delivered to ships of all flags that have refuelled in the country (include international fishing) and energy used in the fishing industry. NACE Division 03.

**Other Sectors – Not Elsewhere Specified**

These are activities not included elsewhere. This category includes military fuel use for all mobile and stationary consumption (e.g. ships, aircraft, road and energy used in living quarters), regardless of whether the fuel delivered is for the military of that country or for the military of another country. If used, what is included under this heading should be explained in the report.

### 3. *OTHER TERMS*

The meaning of the following abbreviations applies:

- TML: tetramethyl lead,
- TEL: tetraethyl lead,
- SBP: special boiling point,
- LPG: liquified petroleum gas,
- NGL: natural gas liquids,
- LNG: liquefied natural gas,
- CNG: compressed natural gas.



## ANNEX B

### ANNUAL ENERGY STATISTICS

This Annex describes the scope, units, reported period, frequency, deadline and transmission modalities for the annual collection of energy statistics.

Annex A applies for explanations of terms for which a specific explanation is not supplied in this Annex.

#### 1. SOLID FOSSIL FUELS AND MANUFACTURED GASES

##### 1.1. Applicable energy products

Unless otherwise specified this data collection applies to all of the following energy products:

1. Anthracite

High rank coal used for industrial and residential applications. It has generally less than 10% volatile matter and a high carbon content (about 90% fixed carbon). Its gross calorific value is greater than 24 000 kJ/kg on an ash-free but moist basis.

2. 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 24 000 kJ/kg on an ash-free but moist basis.

3. Other Bituminous Coal (Steam coal)

Coal used for steam raising purposes and includes all bituminous coal that is not 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 24 000 kJ/kg on an ash-free but moist basis. If bituminous coal is used in coke ovens it should be reported as coking coal.

4. Sub-Bituminous Coal

Refers to non-agglomerating coal with a gross calorific value between 20 000 kJ/kg and 24 000 kJ/kg containing more than 31% volatile matter on a dry mineral matter free basis.

5. Lignite

Non-agglomerating coal with a gross calorific value less than 20 000 kJ/kg and greater than 31% volatile matter on a dry mineral matter free basis.

6. 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.

7. 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.

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.

#### 8. Gas Coke

By-product of hard coal used for production of town gas in gas works. Gas Coke is used for heating purposes.

#### 9. Coal Tar

A result of the destructive distillation of bituminous coal. Coal tar is the liquid by-product of the distillation of coal to make coke in the coke oven process or it is produced from brown coal ('low-temperature tar'). Coal tar can be further distilled into different organic products (e.g. benzene, toluene, naphthalene), which normally would be reported as a feedstock to the petrochemical industry.

#### 10. BKB (Brown Coal Briquettes)

BKB is a composition fuel manufactured from lignite or sub-bituminous coal, produced by briquetting under high pressure without the addition of a binding agent, including dried lignite fines and dust.

#### 11. Gas Works 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 gas works 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 gas works gas transferred to blended natural gas which will be distributed and consumed through the natural gas grid.

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 gas works gas. The coal gases transferred to gas works plants should then be reported (in their own column) in the transformation sector in the gas works plants row. The total amount of gas works gas resulting from transfers of other coal gases should appear in the production line for gas works gas.

#### 12. Coke Oven Gas

Obtained as a by-product of the manufacture of coke oven coke for the production of iron and steel.

#### 13. Blast Furnace Gas

Produced during the combustion of coke in blast furnaces in the iron and steel industry. It is recovered and used as a fuel partly within the plant and partly in other steel industry processes or in power stations equipped to burn it. The quantity of fuel should be reported on a gross calorific value basis.

#### 14. Other recovered gases

By-product of the production of steel in an oxygen furnace, recovered on leaving the fur-

nace. The gases are also known as converter gas, LD gas or BOS gas. The quantity of recuperated fuel should be reported on a gross calorific value basis. Also covers non-specified manufactured gases not mentioned above, such as combustible gases of solid carbonaceous origin recovered from manufacturing and chemical processes not elsewhere defined.

#### 15. Peat

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.

This definition is without prejudice to the definition of renewable energy sources in Directive 2009/28/EC and to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.

#### 16. Peat Products

Products such as peat briquettes derived directly or indirectly from sod peat and milled peat.

#### 17. Oil shale and oil sands

Oil shale and oil sands are sedimentary rock which contains organic matter in the form of kerogen. Kerogen is a waxy hydrocarbon-rich material regarded as a precursor of petroleum. Oil shale may be burned directly or processed by heating to extract shale oil. Shale oil and other products derived from liquefaction should be reported on the Annual oil questionnaire in Other hydrocarbons.

## 1.2. List of aggregates

The following list of aggregates shall be declared for all energy products listed in the previous paragraph unless otherwise specified.

Annex A applies for explanations of terms for which a specific explanation is not supplied in this annex.

### 1.2.1. Supply and Transformation Sectors

#### 1. Production

##### 1.1. Of which: underground

Applicable only for anthracite, coking coal, other bituminous coal, subbituminous coal and lignite.

##### 1.2. Of which: surface

Applicable only for anthracite, coking coal, other bituminous coal, subbituminous coal and lignite.

#### 2. From Other Sources

This consists of two components:

- recovered slurries, middlings 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,
- supplies of fuel of which production is covered in other fuel energy balances, but for which consumption will occur in the coal energy balance.

## 2.1. Of which: from oil products

Not applicable for anthracite, coking coal, other bituminous coal, subbituminous coal, lignite, peat, peat products and oil shale and oil sands.

E.g.: petroleum coke addition to coking coal for coke ovens

## 2.2. Of which: from natural gas

Not applicable for anthracite, coking coal, other bituminous coal, subbituminous coal, lignite, peat, peat products and oil shale and oil sands.

E.g.: natural gas addition to gas works gas for direct final consumption

## 2.3. Of which: from renewables

Not applicable for anthracite, coking coal, other bituminous coal, subbituminous coal, lignite, peat, peat products and oil shale and oil sands.

E.g.: industrial waste as binding agent in the manufacturing of patent fuel

## 3. Imports

## 4. Exports

## 5. International Marine Bunkers

## 6. Stock changes

A stock build is shown as a negative number and a stock draw is shown as a positive number.

## 7. Gross consumption

## 8. Statistical differences

## 9. Total transformation Sector

Quantities of fuels used for the primary or secondary conversion of energy (e.g. coal to electricity, coke oven gas to electricity) or used for the transformation to derived energy products (e.g.: coking coal to coke).

## 9.1. Of which: Main Activity Producer Electricity Plants

## 9.2. Of which: Main Activity Producer CHP Plants

## 9.3. Of which: Main Activity Producer Heat Plants

## 9.4. Of which: Autoproducer Electricity plants

## 9.5. Of which: Autoproducer CHP plants

## 9.6. Of which: Autoproducer Heat plants

## 9.7. Of which: Patent Fuel Plants

## 9.8. Of which: Coke Ovens

## 9.9. Of which: BKB/PB Plants

## 9.10. Of which: Gas Works

## 9.11. Of which: Blast Furnaces

Quantities of coking coal and/or bituminous coal (generally referred to as PCI) and coke oven coke transformed in blast furnaces. Amounts used as a fuel for heating and operation of blast furnaces (e.g.: blast furnaces gas) should not be included in the transformation sector, but reported as consumption in the energy sector.

## 9.12. Of which: Coal Liquefaction

Shale oil and other products derived from liquefaction should be reported as per Chapter 4 of this annex.

## 9.13. Of which: For Blended Natural Gas

Quantities of coal gases blended with natural gas.

## 9.14. Of which: Not Elsewhere Specified – Transformation

*1.2.2. Energy Sector*

## 1. Total Energy Sector

## 1.1. Of which: Electricity, CHP and Heat plants

## 1.2. Of which: Coal Mines

## 1.3. Of which: Patent Fuel Plants

## 1.4. Of which: Coke Ovens

## 1.5. Of which: BKB/PB Plants

## 1.6. Of which: Gas Works

## 1.7. Of which: Blast Furnaces

## 1.8. Of which: Petroleum Refineries

## 1.9. Of which: Coal Liquefaction

## 1.10. Of which: Not Elsewhere Specified – Energy

## 2. Distribution losses

Losses occurred due to transport and distribution, as well as flaring of manufactured gases.

## 3. Total Final Consumption

## 4. Total Non-energy use

## 4.1. Of which: Industry, Transformation and Energy Sectors

Non-energy use in all industry, transformation and energy sub- sectors, e.g. coal used to make methanol or ammonia.

## 4.1.1. From 4.1, of which: in the petrochemical sector

Non-energy use e.g. coal use as feedstocks to produce fertiliser and as feedstocks for other petrochemical products.

## 4.2. Of which: Transport Sector

Non-energy use in all Transport sub-sectors.

## 4.3. Of which: Other Sectors

Non-energy use in Commercial and Public Services, Residential, Agriculture and Not Elsewhere Specified Other.

*1.2.3. Energy end-use specification*

## 1. Final Energy Consumption

2. Industry Sector
  - 2.1. Of which: Iron and Steel
  - 2.2. Of which: Chemical and Petrochemical
  - 2.3. Of which: Non-Ferrous Metals
  - 2.4. Of which: Non-Metallic Minerals
  - 2.5. Of which: Transport Equipment
  - 2.6. Of which: Machinery
  - 2.7. Of which: Mining and Quarrying
  - 2.8. Of which: Food, Beverages and Tobacco
  - 2.9. Of which: Pulp, Paper and printing
  - 2.10. Of which: Wood and Wood Products
  - 2.11. Of which: Construction
  - 2.12. Of which: Textile and Leather
  - 2.13. Of which: Not Elsewhere Specified – Industry
3. Transport Sector
  - 3.1. Of which: Rail
  - 3.2. Of which: Domestic Navigation
  - 3.3. Of which: Not Elsewhere Specified – Transport
4. Other Sectors
  - 4.1. Of which: Commercial and Public Services
  - 4.2. Of which: Residential
    - 4.2.1. Residential, of which: Space heating
    - 4.2.2. Residential, of which: Space cooling
    - 4.2.3. Residential, of which: Water heating
    - 4.2.4. Residential, of which: Cooking
    - 4.2.5. Residential, of which: Other end uses
  - 4.3. Of which: Agriculture/Forestry
  - 4.4. Of which: Fishing
  - 4.5. Of which: Not Elsewhere Specified – Other

#### 1.2.4. Imports and exports

Imports by country of origin, and exports by country of destination.

Applicable to anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite, patent fuel, coke oven coke, coal tar, bkb, peat, peat products and oil shale and oil sands.

### 1.3. Calorific values

Applicable for anthracite, coking coal, other bituminous coal, sub-bituminous coal, lignite, pat-

ent fuel, coke oven coke, gas coke, coal tar, bkb, peat, peat products, oil shale and oil sands.

Both gross and net calorific values are to be declared for the following main aggregates:

1. Production
2. Imports
3. Exports
4. Used in coke ovens
5. Used in blast furnaces
6. Used in Main Activity Producer Electricity, CHP and Heat Plants
7. Used in Industry
8. For Other Uses

#### 1.4. Units of measurement

1. Energy quantities

10<sup>3</sup> tonnes

Exception: for gases (gas works gas, coke oven gas, blast furnace gas, other recovered gases) the measurement is directly in energy content and the unit to be used is therefore TJ (based on gross calorific values).

2. Calorific values

MJ/tonne

#### 1.5. Derogations and exemptions

Not applicable.

## 2. NATURAL GAS

### 2.1. Applicable energy products

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).

It does not include gases created by anaerobic digestion of biomass (e.g. municipal or sewage gas) nor gas works gas.

### 2.2. List of aggregates

The following list of aggregates shall be declared for all energy products listed in the previous paragraph unless otherwise specified.

#### 2.2.1. Supply and Transformation Sectors

To be declared are quantities expressed in both volume and energy units, and including the gross and net calorific values, for the following aggregates:

#### 1. Indigenous Production

All dry marketable production within national boundaries, including offshore production. Production is measured after purification and extraction of NGLs and sulphur.

Excludes extraction losses and quantities reinjected, vented or flared.

Includes quantities used within the natural gas industry; in gas extraction, pipeline systems and processing plants.

##### 1.1. Of which: Associated Gas

Natural gas produced in association with crude oil.

##### 1.2. Of which: Non-Associated Gas

Natural gas originating from fields producing hydrocarbons only in gaseous form.

##### 1.3. Of which: Colliery Gas

Methane produced at coal mines or from coal seams, piped to the surface and consumed at collieries or transmitted by pipeline to consumers.

#### 2. From Other Sources

Fuel which are blended with natural gas, and consumed as a blend.

##### 2.1. Of which: from oil products

LPG for upgrading the quality e.g. heat content

##### 2.2. Of which: from coal

manufactured gas for blending with natural gas

##### 2.3. Of which: from renewables

biogas for blending with natural gas

#### 3. Imports

#### 4. Exports

#### 5. International Marine Bunkers

#### 6. Stock changes

A stock build is shown as a negative number and a stock draw is shown as a positive number.

#### 7. Gross consumption

#### 8. Statistical differences

The requirement of declaring calorific values is not applicable here.

#### 9. Recoverable gas: opening and closing stocks

Quantities of gas available for delivery during any input-output cycle. This refers to recoverable natural gas stored in special storage facilities (depleted gas and/or oil field, aquifer, salt cavity, mixed caverns, or other) as well as liquefied natural gas storage. Cushion gas should be excluded.

The requirement of declaring calorific values is not applicable here.

#### 10. Gas Vented



The volume of gas released into the air on the production site or at the gas processing plant.

The requirement of declaring calorific values is not applicable here.

#### 11. Gas Flared

The volume of gas burned in flares on the production site or at the gas processing plant.

The requirement of declaring calorific values is not applicable here.

#### 12. Total transformation Sector

Quantities of fuels used for the primary or secondary conversion of energy (e.g. natural gas to electricity) or used for the transformation to derived energy products (e.g. natural gas to methanol).

##### 12.1. Of which: Main Activity Producer Electricity Plants

##### 12.2. Of which: Autoproducer Electricity plants

##### 12.3. Of which: Main Activity Producer CHP Plants

##### 12.4. Of which: Autoproducer CHP plants

##### 12.5. Of which: Main Activity Producer Heat Plants

##### 12.6. Of which: Autoproducer Heat plants

##### 12.7. Of which: Gas Works

##### 12.8. Of which: Coke Ovens

##### 12.9. Of which: Blast Furnaces

##### 12.10. Of which: Gas to liquids

Quantities of natural gas used as feedstock for the conversion to liquids e.g. the quantities of fuel entering the methanol production process for transformation into methanol.

##### 12.11. Of which: Non specified – Transformation

### 2.2.2. Energy Sector

#### 1. Total Energy Sector

##### 1.1. Of which: Coal Mines

##### 1.2. Of which: Oil and Gas extraction

##### 1.3. Of which: Inputs to oil refineries

##### 1.4. Of which: Coke Ovens

##### 1.5. Of which: Blast Furnaces

##### 1.6. Of which: Gas Works

##### 1.7. Of which: Electricity, CHP and Heat Plants

##### 1.8. Of which: Liquefaction (LNG) or Gasification

##### 1.9. Of which: Gas to Liquids

##### 1.10. Of which: Not Elsewhere Specified – Energy

#### 2. Losses of distribution and transport

### 2.2.3. Energy end-use specification

Consumption of natural gas needs to be reported for both energy use and (wherever applicable) non-energy use separately, for all of the following aggregates:

#### 1. Total Final Consumption

Final energy consumption and non-energy use to be declared separately under this heading.

#### 2. Transport Sector

##### 2.1. Of which: Transport by road

Includes both CNG and biogas.

##### 2.1.1. Of which: Biogas fraction in Transport by Road

##### 2.2. Of which: Pipeline transport

##### 2.3. Of which: Not Elsewhere Specified – Transport

#### 3. Industry Sector

##### 3.1. Of which: Iron and Steel

##### 3.2. Of which: Chemical and Petrochemical

##### 3.3. Of which: Non-Ferrous Metals

##### 3.4. Of which: Non-Metallic Minerals

##### 3.5. Of which: Transport Equipment

##### 3.6. Of which: Machinery

##### 3.7. Of which: Mining and Quarrying

##### 3.8. Of which: Food, Beverages and Tobacco

##### 3.9. Of which: Pulp, Paper and printing

##### 3.10. Of which: Wood and Wood Products

##### 3.11. Of which: Construction

##### 3.12. Of which: Textile and Leather

##### 3.13. Of which: Not Elsewhere Specified – Industry

#### 4. Other Sectors

##### 4.1. Of which: Commercial and Public Services

##### 4.2. Of which: Residential

##### 4.2.1. Residential, of which: Space heating

##### 4.2.2. Residential, of which: Space cooling

##### 4.2.3. Residential, of which: Water heating

##### 4.2.4. Residential, of which: Cooking

##### 4.2.5. Residential, of which: Other end uses

##### 4.3. Of which: Agriculture/Forestry

##### 4.4. Of which: Fishing

##### 4.5. Of which: Not Elsewhere Specified – Other

#### 2.2.4. Imports and exports

To be declared are both the quantities of the total natural gas and of the LNG part of it, per country of origin for imports and per country of destination for exports.

#### 2.2.5. Gas Storage Capacities

##### 1. Name

Name of the site of the storage facility.

##### 2. Type

Type of storage, such as depleted gas field, salt cavern, etc.

##### 3. Working Capacity

Total gas storage capacity, minus the cushion gas. The cushion gas is the total volume of gas required as a permanent inventory to maintain adequate underground storage reservoir pressures and deliverability rates throughout the output cycle.

##### 4. Peak Output

Maximum rate at which gas can be withdrawn from the concerned storage; this corresponds to the maximum withdrawal capacity.

### 2.3. Units of measurement

#### 1. Energy quantities

Unless indicated differently, quantities of natural gas are declared by its energy content, i.e. in TJ, based on the gross calorific value. Where physical quantities are required, the unit is in  $10^6$  m<sup>3</sup> assuming reference gas conditions (15 °C, 101,325 kPa).

#### 2. Calorific values

kJ/m<sup>3</sup>, assuming reference gas conditions (15 °C, 101,325 kPa).

#### 3. Storage working capacity

$10^6$  m<sup>3</sup>, assuming reference gas conditions (15 °C, 101,325 kPa).

#### 4. Peak output

$10^6$  m<sup>3</sup> /day, assuming reference gas conditions (15 °C, 101,325 kPa).

### 2.4. Derogations and exemptions

Not applicable.

## 3. ELECTRICITY AND HEAT

### 3.1. Applicable energy products

This chapter covers heat and electricity.

### 3.2. List of aggregates

The following list of aggregates shall be declared for all energy products listed in the previous para-

graph unless otherwise specified.

Annex A applies for explanations of terms for which a specific explanation is not supplied in this chapter. The definitions and units mentioned in Chapters 1, 2, 4 and 5 apply to energy products belonging to solid fuels and manufactured gases, natural gas, oil and petroleum products, and renewable energy and energy from waste.

### 3.2.1. Supply and Transformation Sectors

The following specific definitions apply to aggregates for electricity and heat in this chapter:

- Gross Electricity Production: the sum of the electrical energy production by all the generating sets concerned (including pumped storage) measured at the output terminals of the main generators.
- Gross Heat Production: the total heat produced by the installation and includes the heat used by the installation's auxiliaries which use a hot fluid (space heating, liquid fuel heating etc.) and losses in the installation/network heat exchanges, as well as heat from chemical processes used as a primary energy form.
- Net Electricity Production: the gross electricity production less the electrical energy absorbed by the generating auxiliaries and the losses in the main generator transformers.
- Net Heat Production: the heat supplied to the distribution system as determined from measurements of the outgoing and return flows.

The aggregates mentioned in the next table must be declared separately for main activity producer plants and for autoproducer plants. Within these two types of plants, both gross and net electricity and heat production must be declared for electricity only, for CHP and for heat only plants separately wherever applicable, for the following aggregates:

1. Total production
  - 1.1. Of which: Nuclear
  - 1.2. Of which: Hydro
    - 1.2.1. Of which: part of hydro produced from pumped storage
  - 1.3. Of which: Geothermal
  - 1.4. Of which: Solar
  - 1.5. Of which: Tide, wave, ocean
  - 1.6. Of which: Wind
  - 1.7. Of which: Combustible fuels
 

Fuels capable of igniting or burning, i.e. reacting with oxygen to produce a significant rise in temperature and combusted directly for the production of electricity and/or heat.
  - 1.8. Of which: Heat Pumps
 

Heat output from heat pumps only where the heat is sold to third parties (i.e. in cases where production occurs in the Transformation Sector).
  - 1.9. Of which: Electric Boilers
 

Quantities of heat from electric boilers where the output is sold to third parties.

## 1.10. Of which: Heat from Chemical Processes

Heat originating from processes without input energy, such as a chemical reaction.

Excludes waste heat originating from energy driven processes, which should be reported as heat produced from the corresponding fuel.

## 1.11. Of which: Other Sources (please specify)

The aggregates mentioned in the next table must be declared as totals, for electricity and heat separately, wherever applicable. For the three first aggregates in the next table, quantities should be calculated from and be compatible with the values declared according to the previous table.

## 1. Total Gross Production

## 2. Own Use by Plant

## 3. Total Net Production

## 4. Imports

See also explanation under 5 'Exports'.

## 5. Exports

Amounts of electricity are considered as imported or exported when they have crossed the political boundaries of the country, whether customs clearance has taken place or not. If electricity is transited through a country, the amount should be reported as both an import and an export.

## 6. Used for Heat Pumps

## 7. Used for Electric Powered Steam Boilers

## 8. Used for Pumped Storage

## 9. Used for Electricity Production

## 10. Energy Supplied

For electricity: the sum of the net electrical energy production supplied by all power stations within the country, reduced by the amount used simultaneously for heat pumps, electrically powered steam boilers, pumping and reduced or increased by exports to or imports from abroad.

For heat: the sum of the net heat production for sale by all plants within a country, reduced by heat used for electricity production and reduced or increased by exports or imports from abroad.

## 11. Transmission and Distribution Losses

All losses due to transport and distribution of electrical energy and heat.

For electricity, includes losses in transformers which are not considered as integral parts of the power plants.

## 12. Total Consumption (calculated)

## 13. Statistical Difference

## 14. Total Consumption (observed)

The electricity produced, the heat sold and the fuel quantities used including their corresponding total energy from the combustibles listed in the next table must be declared separately for main

activity producer plants and for autoproducer plants. Within these two types of plants, this electricity and heat production must be declared for electricity (only) plants, for CHP and for heat (only) plants separately wherever applicable:

1. Solid fuels and manufactured gases:
  - 1.1. Anthracite
  - 1.2. Coking Coal
  - 1.3. Other Bituminous Coal
  - 1.4. Sub-Bituminous Coal
  - 1.5. Lignite
  - 1.6. Peat
  - 1.7. Patent Fuel
  - 1.8. Coke Oven Coke
  - 1.9. Gas Coke
  - 1.10. Coal Tar
  - 1.11. BKB (Brown Coal Briquettes)
  - 1.12. Gas Works Gas
  - 1.13. Coke Oven Gas
  - 1.14. Blast Furnace Gas
  - 1.15. Other recovered Gases
  - 1.16. Peat products
  - 1.17. Oil shale and oil sands
2. Oil and Petroleum Products:
  - 2.1. Crude Oil
  - 2.2. NGL
  - 2.3. Refinery Gas
  - 2.4. LPG
  - 2.5. Naphtha
  - 2.6. Kerosene Type Jet Fuel
  - 2.7. Other Kerosene
  - 2.8. Gas/Diesel (Distillate Fuel Oil)
  - 2.9. Heavy Fuel Oil
  - 2.10. Bitumen (Including Orimulsion)
  - 2.11. Petroleum Coke
  - 2.12. Other Oil Products
3. Natural Gas
4. Renewable Energy and Energy from Waste
  - 4.1. Industrial Waste (Non-Renewable)

- 4.2. Municipal Waste (Renewable)
- 4.3. Municipal Waste (Non-Renewable)
- 4.4. Solid biofuels
- 4.5. Biogases
- 4.6. Biodiesels
- 4.7. Other Liquid Biofuels

### 3.2.2. *Electricity and heat consumption in the Energy Sector*

#### 1. Total Energy Sector

Excludes own use by plant, used for pumped storage, heat pumps and electric boilers.

- 1.1. Of which: Coal Mines
- 1.2. Of which: Oil and Gas Extraction
- 1.3. Of which: Patent Fuel Plants
- 1.4. Of which: Coke Ovens
- 1.5. Of which: BKB/PB Plants
- 1.6. Of which: Gas Works
- 1.7. Of which: Blast Furnaces
- 1.8. Of which: Petroleum Refineries
- 1.9. Of which: Nuclear Industry
- 1.10. Of which: Coal Liquefaction Plants
- 1.11. Of which: Liquefaction (LNG)/Regasification Plants
- 1.12. Of which: Gasification Plants (biogas)
- 1.13. Of which: Gas-to-Liquids
- 1.14. Of which: Charcoal Production Plants
- 1.15. Of which: Not Elsewhere Specified – Energy

### 3.2.3. *Energy end-use specification*

#### 1. Industry Sector

- 1.1. Of which: Iron and Steel
- 1.2. Of which: Chemical and Petrochemical
- 1.3. Of which: Non-Ferrous Metals
- 1.4. Of which: Non-Metallic Minerals
- 1.5. Of which: Transport Equipment
- 1.6. Of which: Machinery
- 1.7. Of which: Mining and Quarrying
- 1.8. Of which: Food, Beverages and Tobacco

- 1.9. Of which: Pulp, Paper and printing
- 1.10. Of which: Wood and Wood Products
- 1.11. Of which: Construction
- 1.12. Of which: Textile and Leather
- 1.13. Of which: Not Elsewhere Specified – Industry
- 2. Transport Sector
  - 2.1. Of which: Rail
  - 2.2. Of which: Pipeline transport
  - 2.3. Of which: Road
  - 2.4. Of which: Not Elsewhere Specified – Transport
- 3. Residential Sector
  - 3.1. Residential, of which: Space heating
  - 3.2. Residential, of which: Space cooling
  - 3.3. Residential, of which: Water heating
  - 3.4. Residential, of which: Cooking
  - 3.5. Residential, of which: Lighting and electrical appliances
    - This applies only to electricity.
  - 3.6. Residential, of which: Other end uses
- 4. Commercial and Public Services
- 5. Agriculture/Forestry
- 6. Fishing
- 7. Not Elsewhere Specified – Other

#### 3.2.4. Imports and exports

Imports and exports of energy quantities of electricity and heat by country.

#### 3.2.5. Net production of electricity generation and net heat production from autoproducers

Net production of electricity and net generation of heat from autoproducers of electricity generation and heat production are to be declared, for CHP plants, for electricity (only) plants and for heat (only) plants separately, in the following plants or activities:

- 1. Total Energy Sector
  - 1.1. Of which: Coal Mines
  - 1.2. Of which: Oil and Gas Extraction
  - 1.3. Of which: Patent Fuel Plants
  - 1.4. Of which: Coke Ovens
  - 1.5. Of which: BKB/PB Plants
  - 1.6. Of which: Gas Works



- 1.7. Of which: Blast Furnaces
- 1.8. Of which: Petroleum Refineries
- 1.9. Of which: Coal Liquefaction Plants
- 1.10. Of which: Liquefaction (LNG)/Regasification Plants
- 1.11. Of which: Gasification Plants (biogas)
- 1.12. Of which: Gas-to-Liquids
- 1.13. Of which: Charcoal Production Plants
- 1.14. Of which: Not Elsewhere Specified – Energy
2. Transport Sector
  - 2.1. Of which: Rail
  - 2.2. Of which: Pipeline transport
  - 2.3. Of which: Road
  - 2.4. Of which: Not Elsewhere Specified – Transport
3. All other sectors: identical to the aggregate list as per '3.2.3 Energy end-use specification'.

### 3.3. Structural data on electricity and heat generation

#### 3.3.1. Net Maximum Electrical Capacity And Peak Load

The capacity should be reported at 31 December of the relevant reported year.

Includes electrical capacity of both electricity (only) and CHP plants.

The Net Maximum Electrical Capacity is the sum of the net maximum capacities of all stations taken individually throughout a given period of operation. The period of operation assumed for present purposes is continuous running: in practice 15 hours or more per day. The net maximum capacity is the maximum power assumed to be solely active power that can be supplied, continuously, with all plant running, at the point of outlet to the network. The Peak Load is defined as the highest value of the power absorbed or supplied by a network or combination of networks within the country.

The Net Maximum Electrical Capacity must be declared for both main activity producers and auto-producers:

1. Total
2. Nuclear
3. Hydro
  - 3.1. Of which: mixed plants
  - 3.2. Of which: pure pumped storage
4. Geothermal
5. Solar photovoltaic
6. Solar thermal
7. Tide, wave, ocean
8. Wind
9. Combustible fuels

- 9.1. Of which: Steam
- 9.2. Of which: Internal combustion
- 9.3. Of which: Gas turbine
- 9.4. Of which: Combined cycle
- 9.5. Of which: Other

To be specified if declared.

The following information about the peak load must be declared for the network:

- 10. Peak load
- 11. Available capacity at time of peak
- 12. Date and time of peak load occurrence

### 3.3.2. *Net Maximum Electrical Capacity Of Combustible Fuels*

Net maximum electrical capacity of combustible fuels must be declared for both main activity producers and autoproducers, and separately for each type of single-fired or multi-fired plant mentioned in the next table. Indications on which type of fuel is used as primary and alternate fuels must be added for all cases of multi-fired plants.

- 1. Single Fuel Fired:
  - 1.1. Fired with Coal or coal products
    - Includes coke oven gas, blast furnace and oxygen steel furnace gas capacity.
  - 1.2. Fired with Liquids fuels
    - Includes refinery gas capacity.
  - 1.3. Fired with Natural gas
    - Includes gas works gas capacity.
  - 1.4. Fired with Peat
  - 1.5. Fired with Combustible renewables and wastes
- 2. Multi-Fired, Solids And Liquids
- 3. Multi-Fired, Solids And Natural Gas
- 4. Multi-Fired, Liquids And Natural Gas
- 5. Multi-Fired, Solids Liquids And Natural Gas

Multi-fired systems include only units which can burn more than one fuel type on a continuous basis. Stations which have separate units using different fuels should be divided into the appropriate single-fuel categories.

### 3.4. Data on nuclear energy

The following data concerning the civil use of nuclear energy must be declared:

- 1. Enrichment capacity
  - The annual separative work capacity of operational enrichment plants (isotopic separation of Uranium).

## 2. Production capacity of fresh fuel elements

The annual production capacity of fuel fabrication plants. MOX fuel fabrication plants are excluded.

## 3. Production capacity of MOX fuel fabrication plants

The annual production capacity of MOX fuel fabrication plants. MOX fuel contains a mixture of Plutonium and Uranium (Mixed Oxide).

## 4. Production of fresh fuel elements

Production of finished fresh fuel elements in nuclear fuel fabrication plants. Rods or other partial products are not included. Fabrication plants producing MOX fuel are also excluded.

## 5. Production of MOX fuel elements

Production of finished fresh fuel elements in MOX fuel fabrication plants. Rods or other partial products are not included.

## 6. Production of nuclear heat

The total amount of heat generated by nuclear reactors for the production of electricity or for other useful applications of heat.

## 7. Annual average burnup of definitively discharged irradiated fuel elements

Calculated average of the burnup of the fuel elements which have been definitively discharged from the nuclear reactors during the concerned reference year. Excludes fuel elements which are temporarily discharged and are likely to be reloaded again later.

## 8. Production of Uranium and Plutonium in reprocessing plants

Uranium and Plutonium produced during the reference year in reprocessing plants.

## 9. Capacity (Uranium and Plutonium) of reprocessing plants

Annual reprocessing capacity of Uranium and Plutonium.

### 3.5. Units of measurement

#### 1. Energy quantities

Electricity: GWh

Heat: TJ

Solid fuels and manufactured gases: the units of measurement in Chapter 1 of this annex apply.

Natural gas: the units of measurement in chapter 2 of this annex apply.

Oil and petroleum products: the units of measurement in chapter 4 of this annex apply.

Renewables and waste: the units of measurement in chapter 5 of this annex apply.

Uranium and Plutonium: tHM (tons of heavy metal).

#### 2. Capacity

Electrical generation capacity: MWe

Heat generation capacity: MWt

Enrichment capacity (isotopic separation of Uranium): tSWU (tons of Separative Work Units).

Production capacity of nuclear fuel elements: tHM (tons of heavy metal).

### 3.6. Derogations and exemptions

France has a derogation for reporting the aggregates relating to heat. That derogation shall lapse as soon as France is able to forward this report and, at all events, no more than 4 years after the date of entry into force of this Regulation.

## 4. OIL AND PETROLEUM PRODUCTS

### 4.1. Applicable energy products

Unless otherwise specified this data collection applies to all of the following energy products:

#### 1. 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.

#### 2. 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).

#### 3. 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).

#### 4. Additives/Oxygenates

Additives are non-hydrocarbon compounds added to or blended with a product to modify fuel properties (octane, cetane, cold properties, etc.):

- oxygenates, such as alcohols (methanol, ethanol), ethers (such as MTBE (methyl tertiary butyl ether), ETBE (ethyl tertiary butyl ether), TAME (tertiary amyl methyl ether));
- esters (e.g. rapeseed oil or dimethylester, etc.);
- chemical compounds (such as TML, TEL and detergents).

Note: 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.

#### 4.1. Of Which: Biofuels

Biogasoline and Biodiesels. The definitions of Chapter 5, Renewable Energy and Energy from Waste, apply.

Quantities of liquid biofuels reported in this category relate to the biofuel and not to the total volume of liquids into which the biofuels are blended.

Excludes all trade of biofuels which have not been blended with transport fuels (i.e. in their pure form); these should be reported as per Chapter 5. The biofuels traded as part of transport fuels should be reported in the appropriate product indicating the biofuel portion.

#### 5. Other Hydro-carbons

Synthetic crude oil from tar sands, shale oil, etc., liquids from coal liquefaction, (see Chapter 1), output of liquids from natural gas conversion into gasoline (see Chapter 2), hydrogen and emulsified oils (e.g. Orimulsion).

Excludes oil shale production, for which Chapter 1 applies.

The production of shale oil (secondary product) is to be reported as 'From other sources' in the 'Other hydrocarbons category'.

#### 6. 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.

#### 7. Ethane

A naturally gaseous straight-chain hydrocarbon, (C<sub>2</sub>H<sub>6</sub>) extracted from natural gas and refinery gas streams.

#### 8. LPG

LPG are light paraffinic hydrocarbons derived from the refinery processes, crude oil stabilisation and natural gas processing plants. They consist mainly of propane (C<sub>3</sub>H<sub>8</sub>) and butane (C<sub>4</sub>H<sub>10</sub>) or a combination of the two. They could also include propylene, butylene, isopropylene and isobutylene. LPG are normally liquefied under pressure for transportation and storage.

#### 9. 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.

Naphtha comprises material in the 30 °C and 210 °C distillation range or part of this range.

#### 10. 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.

Includes motor gasoline blending components (excluding additives/oxygenates), e.g. alkylates, isomerate, reformate, cracked gasoline destined for use as finished motor gasoline.

##### 10.1. Of which: Biogasoline

The definitions of Chapter 5, Renewable Energy and Energy from Waste, apply.

#### 11. Aviation Gasoline

Motor spirit prepared especially for aviation piston engines, with an octane number suited to the engine, a freezing point of  $-60\text{ }^{\circ}\text{C}$  and a distillation range usually within the limits of  $30\text{ }^{\circ}\text{C}$  and  $180\text{ }^{\circ}\text{C}$ .

#### 12. Gasoline Type Jet Fuel (Naphtha Type Jet Fuel or JP4)

This includes all light hydrocarbon oils for use in aviation turbine power units, distilling between  $100\text{ }^{\circ}\text{C}$  and  $250\text{ }^{\circ}\text{C}$ . They are obtained by blending kerosenes and gasoline or naphthas in such a way that the aromatic content does not exceed 25% in volume, and the vapour pressure is between 13,7kPa and 20,6kPa.

#### 13. Kerosene Type Jet Fuel

Distillate used for aviation turbine power units. It has the same distillation characteristics between  $150\text{ }^{\circ}\text{C}$  and  $300\text{ }^{\circ}\text{C}$  (generally not above  $250\text{ }^{\circ}\text{C}$ ) 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.

##### 13.1. Bio jet kerosene

Liquid biofuels derived from biomass and blended with or replacing jet kerosene.

#### 14. Other Kerosene

Refined petroleum distillate used in sectors other than aircraft transport. It distils between  $150\text{ }^{\circ}\text{C}$  and  $300\text{ }^{\circ}\text{C}$ .

#### 15. Gas/Diesel Oil (Distillate Fuel Oil)

Gas/diesel oil is primarily a medium distillate distilling between  $180\text{ }^{\circ}\text{C}$  and  $380\text{ }^{\circ}\text{C}$ . Includes blending components. Several grades are available depending on uses:

##### 15.1. Of which: Road Diesel

On-road diesel oil for diesel compression ignition (cars, trucks, etc.), usually of low sulphur content;

##### 15.1.1. From 15.1, of which: Biodiesels

The definitions of Chapter 5, Renewable Energy and Energy from Waste, apply.

##### 15.2. Of which: Heating and Other Gasoil

Light heating oil for industrial and commercial uses, marine diesel and diesel used in rail traffic, other gas oil including heavy gas oils which distil between  $380\text{ }^{\circ}\text{C}$  and  $540\text{ }^{\circ}\text{C}$  and which are used as petrochemical feedstocks.

#### 16. Fuel Oil

All residual (heavy) fuel oils (including those obtained by blending). Kinematic viscosity is above 10 cSt at  $80\text{ }^{\circ}\text{C}$ . The flash point is always above  $50\text{ }^{\circ}\text{C}$  and density is always more than 0,90 kg/l.

##### 16.1. Of which: Low Sulphur Content

Heavy fuel oil with sulphur content lower than 1%.

##### 16.2. Of which: High Sulphur Content

Heavy fuel oil with sulphur content of 1% or higher.

## 17. White Spirit And SBP

Refined distillate intermediates with a distillation in the naphtha/kerosene range. They are sub-divided as:

- Industrial Spirit (SBP): Light oils distilling between 30 °C and 200 °C. There are 7 or 8 grades of industrial spirit, depending on the position of the cut in the distillation range. The grades are defined according to the temperature difference between the 5% volume and 90% volume distillation points (which is not more than 60 °C).
- White Spirit: Industrial spirit with a flash point above 30 °C. The distillation range of white spirit is 135 °C to 200 °C.

## 18. Lubricants

Hydrocarbons produced from distillate by product; they are mainly used to reduce friction between bearing surfaces.

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.

## 19. 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.

## 20. Paraffin Waxes

These are saturated aliphatic hydrocarbons. These waxes are residues extracted when de-waxing lubricant oils. They have a crystalline structure which is more-or-less fine according to the grade. Their main characteristics are as follows: they are colourless, odourless and translucent, with a melting point above 45 °C.

## 21. 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'.

Includes 'catalyst coke' deposited on the catalyst during refining processes; this coke is not recoverable and is usually burned as refinery fuel.

## 22. Other Products

All products not specifically mentioned above, for example: tar and sulphur. Includes aromatics (e.g. BTX or benzene, toluene and xylene) and olefins (e.g. propylene) produced within refineries.

## 4.2. List of aggregates

The following list of aggregates shall be declared for all energy products listed in the previous paragraph unless otherwise specified.

### 4.2.1. Supply of crude oil, NGL, refinery feedstocks, additives and other hydrocarbons

The following table applies to crude oil, natural gas liquids, refinery feedstocks, additives/oxygenates (and its bio part) and other hydrocarbons:

#### 1. Indigenous Production

Not applicable for refinery feedstocks and for biofuels.

#### 2. From Other Sources. Additives, Biofuels and Other hydrocarbons, the production of which has already been covered in other fuel balances.

Not applicable for crude oil, NGL and refinery feedstocks.

#### 2.1. Of which: from Coal

Includes liquids produced from coal liquefaction plants, liquid output from coke ovens.

#### 2.2. Of which: from Natural Gas

The manufacture of synthetic gasoline may require natural gas as feedstock. The amount of gas for methanol manufacture is declared according to Chapter 2, while the receipts of methanol are declared here.

#### 2.3. Of which: from Renewables

Includes biofuels which are for blending with transport fuels.

Production is declared as per Chapter 5, while amounts for blending are declared here.

#### 3. Backflows From Petrochemical Sector

Finished or semi-finished products which are returned from final consumers to refineries for processing, blending or sale. They are usually by-products of petrochemical manufacturing.

Only applicable for refinery feedstocks.

#### 4. Products Transferred

Imported petroleum products which are reclassified as feedstocks for further processing in the refinery, without delivery to final consumers.

Only applicable for refinery feedstocks.

#### 5. Imports and exports

Includes quantities of crude oil and products imported or exported under processing agreements (i.e. refining on account). Crude oil and NGLs should be reported as coming from the country of ultimate origin; refinery feedstocks and finished products should be reported as coming from the country of last consignment.

Includes any gas liquids (e.g. LPG) extracted during the regasification of imported liquefied natural gas and petroleum products imported or exported directly by the petrochemical industry.

Note: All trade of biofuels which have not been blended with transport fuels (i.e. in their pure form) should be reported in the Renewables Questionnaire.



Re-exports of oil imported for processing within bonded areas should be included as an export of product from the processing country to the final destination.

6. Direct Use

Crude oil, NGL, Additives and Oxygenates (and the part which are biofuels), and other hydrocarbons used directly without being processed in petroleum refineries.

Includes crude oil burned for electricity generation.

7. Stock changes

A stock build is shown as a negative number and a stock draw is shown as a positive number.

8. Calculated Refinery Intake

Total amount of product calculated to have entered the refinery process. It is defined as:

= Indigenous production + From other sources + Backflows from industry + Products transferred + Imports – Exports – Direct use + Stock changes

9. Statistical differences

Defined as the calculated refinery intake minus the observed one.

10. Observed Refinery Intake

Amounts measured as input to refineries

11. Refinery Losses

The difference between Refinery intake (observed) and Gross refinery output. Losses may occur during the distillation processes due to evaporation. Reported losses are positive. There may be volumetric gains but no gains in mass.

12. Opening and Closing Total Stocks On National Territory

All stocks on national territory, including stocks held by governments, by major consumers or by stockholding organisations, stocks held on board incoming ocean vessels, stocks held in bonded areas and stocks held for others, whether under bilateral government agreement or not. Opening and closing refers to the first and to the last day of the reporting period respectively.

13. Net Calorific Value

Production, imports and exports, and overall average.

#### 4.2.2. *Supply of oil products*

The following table applies to finished products (refinery gas, ethane, LPG, naphtha, motor gasoline as well as its part of biogasoline, aviation gasoline, gasoline type jet fuel, kerosene type jet fuel as well as its bio part, other kerosene, gas/diesel oil, low and high sulphur fuel oil, white spirit and SBP, lubricants, bitumen, paraffin waxes, petroleum coke and other products). Crude oil and NGL used for direct burn should be included in deliveries of finished products and interproduct transfers.

1. Primary Product Receipts

Includes quantities of indigenous or imported crude oil (including condensate) and indigenous NGL used directly without being processed in a petroleum refinery and quantities of Backflows from the Petrochemical industry which, although not primary fuel, are used

directly.

## 2. Gross Refinery Output

Production of finished products at a refinery or blending plant.

Excludes refinery losses, but includes Refinery fuel.

## 3. Recycled Products

Finished products which pass a second time through the marketing network, after having been once delivered to final consumers (e.g. used lubricants which are reprocessed). These quantities should be distinguished from petrochemical Backflows.

## 4. Refinery Fuel

Petroleum products consumed in support of the operation of a refinery.

Excludes products used by oil companies outside the refining process, e.g. bunkers or oil tankers.

Includes fuels used for the production at the refineries of electricity and heat sold.

### 4.1. Of which: used for electricity generation

Amounts used to generate electricity in plants at refineries.

### 4.2. Of which: used for CHP production

Amounts used in CHP plants at refineries.

### 4.3. Of which: used for heat generation

Amounts used to generate heat at refineries.

## 5. Imports and Exports

## 6. International Marine Bunkers

## 7. Interproduct Transfers

Quantities reclassified either because their specification has changed or because they are blended into another product.

A negative entry for one product is compensated by a positive entry (or several entries) for one or several products and vice versa; the total net effect should be zero.

## 8. Products Transferred

Imported petroleum products which are reclassified as feedstocks for further processing in the refinery, without delivery to final consumers.

## 9. Stock Changes

A stock build is shown as a negative number and a stock draw is shown as a positive number.

## 10. Calculated Gross Inland Deliveries

This is defined as:

= Primary product receipts + Gross refinery output + Recycled products – Refinery fuel + Imports – Exports – International marine bunkers + Interproduct transfers – Products transferred + Stock changes

## 11. Statistical Difference

Defined as the calculated gross inland delivery minus the observed one.

## 12. Observed Gross Inland Deliveries

The observed delivery of finished petroleum products from primary sources (e.g. refineries, blending plants, etc.) to the inland market.

This figure may differ from the calculated figure due, for example, to differences in coverage and/or differences of definition in different reporting systems.

### 12.1. Of which: Gross Deliveries To The Petrochemical Sector

Quantities of fuels delivered to the Petrochemical sector.

### 12.2. Of which: Energy Use In The Petrochemical Sector

Quantities of oil used as fuel for petrochemical processes such as steam cracking.

### 12.3. of which: Non-Energy Use In The Petrochemical Sector

Quantities of oil used in the petrochemical sector for the purpose of producing ethylene, propylene, butylene, synthesis gas, aromatics, butadiene and other hydrocarbon-based raw materials in processes such as steam cracking, aromatics plants and steam reforming. Excludes amounts of oil used for fuel purposes.

## 13. Backflows From Petrochemical Sector To Refineries

## 14. Opening and Closing Stock Levels

All stocks on national territory, including stocks held by governments, by major consumers or by stockholding organisations, stocks held on board incoming ocean vessels, stocks held in bonded areas and stocks held for others, whether under bilateral government agreement or not. Opening and closing refers to the first and to the last day of the reporting period respectively.

## 15. Stock Changes At Public Utilities

Changes in stocks which are held by public utilities and not included in the Stock levels and Stock changes reported elsewhere. A stock build is shown as a negative number and a stock draw is shown as a positive number.

Includes Crude oil and NGL used for direct burn, if applicable.

## 16. Net Calorific Value Of Gross Inland Deliveries

### 4.2.3. *Gross inland deliveries by sector*

In the now following tables, the following aggregates apply for crude oil, natural gas liquids, refinery gas, ethane, LPG, naphtha, total motor gasoline and its bio part, aviation gasoline, gasoline type jet fuel, total kerosene type jet fuel and its bio part, other kerosene, gas/diesel oil (and its fractions of road diesel, heating and other gas oil, biodiesels and Non- bio gas/diesel oil), total fuel oil (including its fractions of low and of high sulfur content), white spirit and SBP, lubricants, bitumen, paraffin waxes, petroleum coke, other oil products.

Both the quantities involved for energy use and non-energy use and their total sum need to be declared.

### 1. Total transformation Sector

Total quantities of fuels used for the primary or secondary conversion of energy.

#### 1.1. Of which: Main Activity Producer Electricity Plants

- 1.2. Of which: Autoproducer Electricity plants
- 1.3. Of which: Main Activity Producer CHP Plants
- 1.4. Of which: Autoproducer CHP plants
- 1.5. Of which: Main Activity Producer Heat Plants
- 1.6. Of which: Autoproducer Heat plants
- 1.7. Of which: Gas Works/Gasification Plants
- 1.8. Of which: Blended Natural Gas
- 1.9. Of which: Coke Ovens
- 1.10. Of which: Blast Furnaces
- 1.11. Of which: Petrochemical Industry
- 1.12. Of which: Patent Fuel Plants
- 1.13. Of which: Not Elsewhere Specified – Transformation

## 2. Total Energy Sector

Total quantity used as energy in the energy sector

- 2.1. Of which: Coal Mines
  - 2.2. Of which: Oil and Gas Extraction
  - 2.3. Of which: Coke Ovens
  - 2.4. Of which: Blast Furnaces
  - 2.5. Of which: Gas Works
  - 2.6. Of which: Power Plants
- Electricity, CHP and heat plants.
- 2.7. Of which: Not Elsewhere Specified – Energy

## 3. Distribution losses

Losses occurred outside the refinery due to transport and distribution.

Includes pipeline losses.

## 4. Final Energy Consumption

### 5. Industry Sector

- 5.1. Of which: Iron and Steel
- 5.2. Of which: Chemical and Petrochemical
- 5.3. Of which: Non-Ferrous Metals
- 5.4. Of which: Non-Metallic Minerals
- 5.5. Of which: Transport Equipment
- 5.6. Of which: Machinery
- 5.7. Of which: Mining and Quarrying
- 5.8. Of which: Food, Beverages and Tobacco
- 5.9. Of which: Pulp, Paper and printing

- 5.10. Of which: Wood and Wood Products
- 5.11. Of which: Construction
- 5.12. Of which: Textile and Leather
- 5.13. Of which: Not Elsewhere Specified – Industry
- 6. Transport Sector
  - 6.1. Of which: International Aviation
  - 6.2. Of which: Domestic Aviation
  - 6.3. Of which: Road
  - 6.4. Of which: Rail
  - 6.5. Of which: Domestic Navigation
  - 6.6. Of which: Pipeline Transport
  - 6.7. Of which: Not Elsewhere Specified – Transport
- 7. Other Sectors
  - 7.1. Of which: Commercial and Public Services
  - 7.2. Of which: Residential
    - 7.2.1. Residential, of which: Space heating
    - 7.2.2. Residential, of which: Space cooling
    - 7.2.3. Residential, of which: Water heating
    - 7.2.4. Residential, of which: Cooking
    - 7.2.5. Residential, of which: Other end uses
  - 7.3. Of which: Agriculture/Forestry
  - 7.4. Of which: Fishing
  - 7.5. Of which: Not Elsewhere Specified – Other
- 8. Total Non-Energy Use

Quantities used as raw materials in the different sectors and not consumed as a fuel or transformed into another fuel. These quantities are included into the aggregates listed above.

- 8.1. Of which: Transformation Sector
- 8.2. Of which: Energy Sector
- 8.3. Of which: Transport Sector
- 8.4. Of which: Industry Sector
  - 8.4.1 Industry Sector of which: Chemical (incl. Petrochemical)
- 8.5. Of which: Other Sectors

#### 4.2.4. Imports and exports

Imports by country of origin, and exports by country of destination. See also notes under point 4.2.1, aggregate 5.

### 4.3. Units of measurement

1. Energy quantities  
10<sup>3</sup> tonnes
2. Calorific values  
MJ/tonne

### 4.4. Derogations and exemptions

Cyprus is exempted from reporting the aggregates defined in Section 4.2.3 under point 7 (Other Sectors) and point 8 (Total Non-Energy Use); only the total values shall be applicable.

## 5. RENEWABLE ENERGY AND ENERGY FROM WASTE

### 5.1. Applicable energy products

Unless otherwise specified this data collection applies to all of the following energy products:

1. 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, ≥ 10 MW and from pumped storage.
2. Geothermal  
Energy available as heat emitted from within the earth's crust, usually in the form of hot water or steam. This energy production is the difference between the enthalpy of the fluid produced in the production borehole and that of the fluid eventually disposed of. It is exploited at suitable sites:
  - for electricity generation using dry steam or high enthalpy brine after flashing
  - directly as heat for district heating, agriculture etc.
3. 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.
  - 3.1. Of which: Solar Photovoltaic  
Sunlight converted into electricity by the use of solar cells usually made of semi-conducting material which exposed to light will generate electricity.
  - 3.2. Of which: Solar Thermal  
Heat from solar radiation; can consist of:
    - (a) solar thermal-electric plants, or
    - (b) equipment for the production of domestic hot water or for the seasonal heating of swimming pools (e.g. flat plate collectors, mainly of the thermosyphon type).
4. Tide, Wave, Ocean

Mechanical energy derived from tidal movement, wave motion or ocean current and exploited for electricity generation.

5. Wind

Kinetic energy of wind exploited for electricity generation in wind turbines.

6. Industrial Waste (non- renewable)

Report wastes of industrial non-renewable origin (solids or liquids) combusted directly for the production of electricity and/or heat. The quantity of fuel used should be reported on a net calorific value basis. Renewable industrial waste should be reported in the Solid Biomass, Biogas and/or Liquid Biofuels categories.

7. Municipal Waste:

Wastes produced by households, hospitals and the tertiary sector incinerated at specific installations, on a net calorific value basis.

7.1. Of which: Renewable

The portion of municipal waste which is of biological origin.

7.2. Of which: Non-Renewable

The portion of municipal waste which is of non- biological origin.

8. Solid Biofuels:

Covers organic, non-fossil material of biological origin which may be used as fuel for heat production or electricity generation. It comprises:

8.1. Of which: Charcoal

The solid residue of the destructive distillation and pyrolysis of wood and other vegetal material.

9. Biogas:

A gas composed principally of methane and carbon dioxide produced by anaerobic digestion of biomass.

10. 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. in their pure form); trade of liquids biofuels blended to transport fuels should be reported in the oil data in Chapter 4.

The following liquid biofuels are concerned:

10.1. Of which: Biogasoline

This category includes bioethanol (ethanol produced from biomass and/or the biodegradable fraction of waste), biomethanol (methanol produced from biomass and/or the biodegradable fraction of waste), bioETBE (ethyl-tertio-butyl- ether produced on the basis of bioethanol; the percentage by volume of bioETBE that is calculated as biofuel is 47%) and bioMTBE (methyl-tertio- butyl-ether produced on the basis of biomethanol: the percentage by volume of bioMTBE that is calculated as biofuel is 36%).

10.1.1. Biogasoline of which: Bioethanol

Ethanol produced from biomass and/or the biodegradable fraction of waste

#### 10.2. Of which: Biodiesels

This category includes biodiesel (a methyl-ester produced from vegetable or animal oil, of diesel quality), biodimethylether (dimethylether produced from biomass), Fischer Tropsch (Fischer Tropsch produced from biomass), cold extracted bio-oil (oil produced from oil seed through mechanical processing only) and all other liquid biofuels which are added to, blended with or used straight as transport diesel.

#### 10.3. Bio jet kerosene

Liquid biofuels derived from biomass and blended with or replacing Jet kerosene.

#### 10.4. Other liquid biofuels

Liquid biofuels, used directly as fuel, not included in biogasoline nor biodiesels.

## 5.2. List of aggregates

The following list of aggregates shall be declared for all energy products listed in the previous paragraph unless otherwise specified.

### 5.2.1. Gross Electricity and Heat Production

Electricity and heat produced from the energy products mentioned in Section 5.1 (except charcoal, biogasoline and bio jet kerosene) must be declared, wherever applicable, separately:

- for main activity producer plants and for autoproducer plants;
- for electricity-only producing plants, for heat-only producing plants, and for combined heat and power (CHP) plants.

This requirement excludes charcoal. For the liquid biofuels, it excludes the biogasoline and the bio jet kerosene. For the hydro, declarations must be subdivided in plants with electrical output up 1 MW, between 1 and 10 MW, and above 10 MW.

### 5.2.2. Supply and Transformation Sectors

Quantities of energy products that are mentioned in Section 5.1 (except for hydro power, solar photovoltaic energy, energy from tides, waves and oceans and wind energy) and used in the Supply and Transformation Sectors must be declared for the following aggregates:

1. Production
2. Imports
3. Exports
4. Stock changes

A stock build is shown as a negative number and a stock draw is shown as a positive number.

5. Gross consumption
6. Statistical differences
7. Total transformation Sector



Quantities of renewables and wastes used for the conversion of primary forms of energy to secondary (e.g. landfill gases to electricity) or used for the transformation to derived energy products (e.g.: biogas used for blended natural gas).

7.1. Of which: Main Activity Producer Electricity Plants

7.2. Of which: Main Activity Producer CHP Plants

7.3. Of which: Main Activity Producer Heat Plants

7.4. Of which: Autoproducer Electricity plants

7.5. Of which: Autoproducer CHP plants

7.6. Of which: Autoproducer Heat plants

7.7. Of which: Patent Fuel Plants

Quantities of renewables and wastes used to produce patent fuel. Renewables and wastes used for heating and operation of equipment must be reported as consumption in the Energy sector.

7.8. Of which: BKB/PB Plants

Quantities of renewables and wastes used to produce BKB. Renewables and wastes used for heating and operation of equipment must be reported as consumption in the Energy sector.

7.9. Of which: Gas Works Gas

Quantities of renewables and wastes used to produce gas works gas. Renewables and wastes used for heating and operation of equipment must be reported as consumption in the Energy sector.

7.10. Of which: blast furnaces

Quantities of renewable energy (e.g. charcoal) transformed in blast furnaces.

Renewable energy used for heating and operations of equipment should not be reported here, but reported as consumption in the Energy sector.

7.11. Of which: Natural gas blending plants

Quantities of biogases blended with natural gas which are injected to the natural gas network.

7.12. Of which: blending with Motor gasoline/Diesel/Kerosene

Quantities of liquid biofuels which are not delivered to the final consumption but are used with other petroleum products reported in the oil questionnaire.

7.13. Of which: Charcoal production plants

Quantities of wood used for the production of Charcoal.

7.14. Of which: Not Elsewhere Specified – Transformation

### 5.2.3. Energy Sector

Quantities of energy products that are mentioned in Section 5.1 (except for hydro power, solar photovoltaic energy, energy from tides, waves and oceans and wind energy) and used in the energy sector or for final consumption must be declared for the following aggregates:

1. Total Energy Sector

Renewable energies and wastes consumed by the energy industry to support the transformation activity. For example renewable energies and wastes used for heating, lighting or operating pumps/ compressors.

Quantities of renewable energies and wastes transformed into another energy form should be reported under the Transformation sector.

- 1.1. Of which: Gasification plants
- 1.2. Of which: Public Electric, CHP & Heat plants
- 1.3. Of which: Coal Mines
- 1.4. Of which: Patent Fuel Plants
- 1.5. Of which: Coke Ovens
- 1.6. Of which: Petroleum Refineries
- 1.7. Of which: BKB/PB Plants
- 1.8. Of which: Gas Works Gas
- 1.9. Of which: Blast Furnaces
- 1.10. Of which: Charcoal production plants
- 1.11. Of which: Not Elsewhere Specified
2. Distribution Losses

All losses occurred due to transport and distribution.

#### 5.2.4. Energy end-use

Quantities of energy products that are mentioned in Section 5.1 (except for hydro power, solar photovoltaic energy, energy from tides, waves and oceans and wind energy) must be declared for the following aggregates:

1. Final Energy Consumption
2. Industry Sector
  - 2.1. Of which: Iron and Steel
  - 2.2. Of which: Chemical and Petrochemical
  - 2.3. Of which: Non-Ferrous Metals
  - 2.4. Of which: Non-Metallic Minerals
  - 2.5. Of which: Transport Equipment
  - 2.6. Of which: Machinery
  - 2.7. Of which: Mining and Quarrying
  - 2.8. Of which: Food, Beverages and Tobacco
  - 2.9. Of which: Pulp, Paper and printing
  - 2.10. Of which: Wood and Wood Products
  - 2.11. Of which: Construction
  - 2.12. Of which: Textile and Leather

- 2.13. Of which: Not Elsewhere Specified – Industry
- 3. Transport Sector
  - 3.1. Of which: Rail
  - 3.2. Of which: Road
  - 3.3. Of which: Domestic Navigation
  - 3.4. Of which: Not Elsewhere Specified – Transport
- 4. Other Sectors
  - 4.1. Of which: Commercial and Public Services
  - 4.2. Of which: Residential
    - 4.2.1. Residential, of which: Space heating
    - 4.2.2. Residential, of which: Space cooling
    - 4.2.3. Residential, of which: Water heating
    - 4.2.4. Residential, of which: Cooking
    - 4.2.5. Residential, of which: Other end uses
  - 4.3. Of which: Agriculture/Forestry
  - 4.4. Of which: Fishing
  - 4.5. Of which: Not Elsewhere Specified – Other

#### 5.2.5. *Technical Characteristics of Installations*

The following electricity generation capacities are to be declared as applicable at the end of the reported year:

- 1. Hydro power
  - Capacity must be reported for plant sizes of < 1 MW, 1 to < 10 MW,  $\geq$  10 MW, for mixed plants and for pure pumped storage, as well as for all sizes combined. Detailed plant sizes should be reported net of pumped storage.
- 2. Geothermal
- 3. Solar Photovoltaic
- 4. Solar Thermal
- 5. Tide, Wave, Ocean
- 6. Wind
- 7. Industrial Waste (non-renewable)
- 8. Municipal Waste
- 9. Solid biofuels
- 10. Biogases
- 11. Biodiesels
- 12. Other liquid Biofuels

The total surface installed of solar collectors is to be declared.

The following biofuel production capacities are to be declared:

1. Biogasoline
2. Biodiesels
3. Bio jet kerosene
4. Other Liquid Biofuels

#### 5.2.6. *Imports and exports*

Imports by country of origin, and exports by country of destination are to be declared for the following products:

1. Biogasoline
  - 1.1. Of which: Bioethanol
2. Bio jet kerosene
3. Biodiesels
4. Other Liquid Biofuels
5. Wood pellets

#### 5.2.7. *Production of solid biofuels and biogases*

The production of the following products is to be declared:

1. Solid biofuels (excluding charcoal)
  - 1.1. Of which: fuelwood, wood residues and by-products
    - 1.1.1. From fuelwood, wood residues and by-products, of which: wood pellets
  - 1.2. Of which: black liquor
  - 1.3. Of which: bagasse
  - 1.4. Of which: animal waste
  - 1.5. Of which: other vegetal materials and residues
2. Biogases from anaerobic fermentation
  - 2.1. Of which: landfill gas
  - 2.2. Of which: sewage sludge gas
  - 2.3. Of which: other biogases from anaerobic fermentation
3. Biogases from thermal proceses

### 5.3. **Calorific values**

Average net calorific values are to be declared for the following products:

1. Biogasoline
2. Bioethanol
3. Biodiesel
4. Bio jet kerosene

5. Other liquid biofuels
6. Charcoal

#### 5.4. Units of measurement

1. Electricity generation: MWh
2. Heat production: TJ
3. Renewable energy products
  - Biogasoline, biodiesels and other liquid biofuels: tonnes
  - Charcoal: 1 000 tonnes
  - All others: TJ (on the basis of net calorific values).
4. Solar collectors surface: 1 000 m<sup>2</sup>
5. Plants capacity
  - Biofuels: tonnes/year All others: MWe
6. Calorific values: kJ/kg (net calorific value).

#### 5.5. Derogations and exemptions

Not applicable.

### 6. APPLICABLE PROVISIONS

The following provisions apply for the data collection as described in all preceding chapters:

1. Reported period:
  - A calendar year (1 January to 31 December).
2. Frequency
  - Annual.
3. Deadline for transmission of data
  - 30 November of the year following the reported period.
4. Transmission format and method
  - The transmission format shall conform to an appropriate interchange standard specified by Eurostat.
  - Data shall be transmitted or uploaded by electronic means to the single entry point for data at Eurostat.

## ANNEX C

### MONTHLY ENERGY STATISTICS

This Annex describes the scope, units, reported period, frequency, deadline and transmission modalities for the monthly collection of energy statistics.

Annex A applies for explanations of terms for which a specific explanation is not supplied in this Annex.

#### 1. SOLID FUELS

##### 1.1. Applicable energy products

Unless otherwise specified this data collection applies to all of the following energy products:

1. Hard coal

Hard coal refers to coal of gross calorific value equal to or greater than 20 000 kJ/kg on an ash-free but moist basis and with a mean random reflectance of vitrinite of at least 0,6 percent.

2. Lignite

Non-agglomerating coal with a gross calorific value less than 20 000 kJ/kg and greater than 31% volatile matter on a dry mineral matter free basis.

3. Peat

A combustible soft, porous or compressed, fossil sedimentary deposit of plant origin with high water content (up to 90 percent in the raw state), easily cut, and of light to dark brown colour. Peat used for non-energy purposes should not included here. Milled peat is included here.

4. Patent fuel

A composition fuel manufactured from hard coal fines with the addition of a binding agent.

5. BKB (brown coal briquettes)

BKB is a composition fuel manufactured from lignite or sub-bituminous coal, produced by briquetting under high pressure without the addition of a binding agent, including dried lignite fines and dust.

6. 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. 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, gas coke and semi-coke made from lignite.

## 1.2. List of aggregates

The following list of aggregates shall be declared for all energy products listed in the previous paragraph unless otherwise specified.

Annex A applies for explanations of terms for which a specific explanation is not supplied in this Annex.

### 1.2.1. Supply Sector

The following aggregates apply to hard coal, lignite and peat:

1. Production
2. Recovered products (applies to hard coal only)  
Slurries and waste-heap shale recovered by mines.
3. Total imports
4. Total exports
5. Stocks:
  - Beginning of period
  - End of period
  - Stock changes

These are the quantities held by mines and importers.

Excludes consumer stocks (e.g. those held in power stations and coking plants) except stocks held by consumers who import directly.

A stock build is shown as a negative number and a stock draw is shown as a positive number.

#### 6. Calculated Inland Deliveries.

Total amount of product calculated to have been delivered for inland consumption. It is defined as:

= Production + recovered products + Imports - Exports + Stock changes

#### 7. Statistical difference.

Equals to calculated minus observed inland deliveries.

Applies to hard coal only.

#### 8. Observed Internal Deliveries.

Quantities delivered to the internal market. Equal to the total of the deliveries to the different types of consumers. A difference may occur between the calculated and observed deliveries.

Applies to hard coal only.

##### 8.1. Of which: deliveries to main activity producer power stations

##### 8.2. Of which: deliveries to coking plants

##### 8.3. Of which: deliveries to Patent fuel plants

Quantities used for transformation in patent fuels plants (pithead and independent).

##### 8.4. Of which: deliveries to total industry

## 8.5. Of which: other deliveries (services, households, etc.)

Quantities of fuel to households (including colliery coal supplied to workers in mines and associated plants) and services (administrations, shops, etc.) and also to sectors not elsewhere specified.

The following aggregates apply to coke, patent fuels and brown coal briquettes:

## 1. Production

## 2. Total imports

## 3. Total exports

## 4. Stocks:

- Beginning of period

- End of period

- Stock changes

Quantities held in coking plants (coke) and patent fuel plants (patent fuels).

Excludes consumers' stocks excepted stocks held by consumers which import directly.

A stock build is shown as a negative number and a stock draw is shown as a positive number.

## 5. Calculated Inland Deliveries

Total amount of product calculated to have been delivered for inland consumption. It is defined as:

= Production + Imports - Exports + Stock changes

## 6. Deliveries to Iron &amp; steel industry (applies to coke only)

## 1.2.2. Imports

Imports by country of origin and exports by country of destination are to be declared for hard coal.

## 1.3. Units of measurement

All product quantities are expressed in 10<sup>3</sup> tonnes.

## 1.4. Derogations and exemptions

Not applicable.

**2. ELECTRICITY****2.1. Applicable energy products**

This chapter covers electrical energy.

**2.2. List of aggregates**

The following list of aggregates shall be declared.

## 2.2.1. Production Sector

For the following aggregates both gross and net quantities must be declared:



1. Total electricity production
  - 1.1. Of which: Nuclear
  - 1.2. Of which: Hydro
    - 1.2.1. From 1.2, of which: part of hydro produced from pumped storage
  - 1.3. Of which: Geothermal
  - 1.4. Of which: Conventional thermal
  - 1.5. Of which: Wind

Also the following quantities of electrical energy must be declared:

2. Imports
  - 2.1. Of which: intra-EU imports
3. Exports
  - 3.1. Of which: extra-EU exports
4. Used for pumped storage
5. Used for the internal market

This is calculated as:

$$= \text{Total net production} + \text{Imports} - \text{Exports} - \text{Used for pumped storage}$$

For the fuel consumption in main activity producer plants the following aggregates apply (refer to Annex B for the definition of lignite and Annex C for the definition of hard coal):

6. Total fuel consumption in main activity producer plants
 

Total quantity of fuel consumed for the purpose of producing electricity and also for the production of heat to be sold to third parties exclusively.

  - 6.1. Of which: Hard coal
  - 6.2. Of which: Lignite
  - 6.3. Of which: Petroleum products
  - 6.4. Of which: Natural gas
  - 6.5. Of which: Derived gas (these are manufactured gases)
  - 6.6. Of which: Other fuels

#### 2.2.2. Fuel stocks in main activity producers

By main activity producers are meant public utilities generating electricity by using fuels. The following closing stocks (stocks at the end of the reported month) must be declared:

1. Hard coal
2. Lignite
3. Petroleum products

### 2.3. Units of measurement

1. Energy quantities

Electricity: GWh

Hard coal, lignite and petroleum products: both in  $10^3$  tonnes and in TJ on the basis of the net calorific value.

Natural gas and derived gases: TJ on the basis of the gross calorific value.

Other fuels: TJ on the basis of the net calorific value.

Nuclear heat: TJ.

## 2. Stocks

*10<sup>3</sup> tonnes*

### 2.4. Derogations and exemptions

Not applicable.

## 3. OIL AND PETROLEUM PRODUCTS

### 3.1. Applicable energy products

Unless otherwise specified this data collection applies to all of the following energy products, for which the definitions in Annex B Chapter 4 apply: crude oil, NGL, refinery feedstocks, other hydro-carbons, refinery gas (not liquefied), ethane, LPG, naphtha, motor gasoline, aviation gasoline, gasoline type jet fuel (naphtha type jet fuel or JP4), kerosene type jet fuel, other kerosene, gas/diesel oil (distillate fuel oil), transport diesel, heating and other gasoil, fuel oil (both low and high sulphur content), white spirit and SBP, lubricants, bitumen, paraffin waxes and petroleum coke.

Where applicable, motor gasoline must be declared in two categories namely biogasoline and non-biogasoline; jet kerosene must be declared in two categories namely bio jet kerosene and non-bio jet kerosene; gas/ diesel oil must be declared in four categories namely road diesel, heating and other gas oil, biodiesels and non-bio gas/diesel oil.

'Other Products' include both the quantities that correspond to the definition in Annex B Chapter 4) and in addition the quantities of white spirit and SBP, lubricants, bitumen and paraffin waxes; these products must not be declared separately.

### 3.2. List of aggregates

The following list of aggregates shall be declared for all energy products listed in the previous paragraph unless otherwise specified.

#### 3.2.1. Supply Sector

The following table applies only to crude oil, NGL, refinery feedstocks, additives/oxygenates, biofuels and other hydrocarbons only:

##### 1. Indigenous Production

Not applicable for refinery feedstocks.

##### 2. From Other Sources

Additives, Biofuels and Other hydrocarbons, the production of which has already been cov-

ered in other fuel balances.

Not applicable for crude oil, NGL and refinery feedstocks.

### 3. Backflows From Petrochemical Sector

Finished or semi-finished products which are returned from final consumers to refineries for processing, blending or sale. They are usually by-products of petrochemical manufacturing.

Only applicable for refinery feedstocks.

### 4. Products Transferred

Imported petroleum products which are reclassified as feedstocks for further processing in the refinery, without delivery to final consumers.

Only applicable for refinery feedstocks.

### 5. Imports and exports

Includes quantities of crude oil and products imported or exported under processing agreements (i.e. refining on account). Crude oil and NGLs should be reported as coming from the country of ultimate origin; refinery feedstocks and finished products should be reported as coming from the country of last consignment.

Includes any gas liquids (e.g. LPG) extracted during the regasification of imported liquefied natural gas and petroleum products imported or exported directly by the petrochemical industry.

Note: All trade of biofuels which have not been blended with transport fuels (i.e. in their pure form) should be reported in the Renewables Questionnaire.

### 6. Direct Use

Crude oil, NGL and Other hydrocarbons used directly without being processed in petroleum refineries.

Includes crude oil burned for electricity generation.

### 7. Stock changes

A stock build is shown as a positive number and a stock draw is shown as a negative number.

### 8. Calculated Refinery Intake

Total amount of product calculated to have entered the refinery process. It is defined as:

= Indigenous production + From other sources + Backflows from industry + Products transferred + Imports - Exports - Direct use - Stock changes

### 9. Statistical differences

Defined as the calculated refinery intake minus the observed one.

### 10. Observed Refinery Intake

Amounts measured as input to refineries

### 11. Refinery Losses

The difference between Refinery intake (observed) and Gross refinery output. Losses may occur during the distillation processes due to evaporation. Reported losses are positive. There may be volumetric gains but no gains in mass.

The following table does not apply to refinery feedstocks nor to additives/ oxygenates:

### 1. Primary Product Receipts

Includes quantities of indigenous or imported crude oil (including condensate) and indigenous NGL used directly without being processed in a petroleum refinery and quantities of Backflows from the Petrochemical industry which, although not primary fuel, are used directly.

### 2. Gross Refinery Output

Production of finished products at a refinery or blending plant.

Excludes refinery losses, but includes Refinery fuel.

### 3. Recycled Products

Finished products which pass a second time through the marketing network, after having been once delivered to final consumers (e.g. used lubricants which are reprocessed). These quantities should be distinguished from petrochemical Backflows.

### 4. Refinery Fuel

Petroleum products consumed in support of the operation of a refinery.

Excludes products used by oil companies outside the refining process, e.g. bunkers or oil tankers.

Includes fuels used for the production at the refineries of electricity and heat sold.

### 5. Imports and Exports

### 6. International Marine Bunkers

### 7. Interproduct Transfers

Quantities reclassified either because their specification has changed or because they are blended into another product.

A negative entry for one product is compensated by a positive entry (or several entries) for one or several products and vice versa; the total net effect should be zero.

### 8. Products Transferred

Imported petroleum products which are reclassified as feedstocks for further processing in the refinery, without delivery to final consumers.

### 9. Stock Changes

A stock build is shown as a positive number and a stock draw is shown as a negative number.

### 10. Calculated Gross Inland Deliveries

This is defined as:

$$= \text{Primary product receipts} + \text{Gross refinery output} + \text{Recycled products} - \text{Refinery fuel} + \text{Imports} - \text{Exports} - \text{International marine bunkers} + \text{Interproduct transfers} - \text{Products transferred} - \text{Stock changes}$$

### 11. Statistical Difference

Defined as the calculated gross inland delivery minus the observed one.

### 12. Observed Gross Inland Deliveries

The observed delivery of finished petroleum products from primary sources (e.g. refineries, blending plants, etc.) to the inland market.

This figure may differ from the calculated figure due, for example, to differences in coverage and/or differences of definition in different reporting systems.

- 12.1. Of which: Deliveries to International Civil Aviation
- 12.2. Of which: Deliveries to main activity producer power plants
- 12.3. Of which: Deliveries of Automotive LPG
- 12.4. Of which: Deliveries (gross) to Petrochemical sector
13. Backflows from Petrochemical sector to refineries
14. Total net inland deliveries

### 3.2.2. Stocks

The following opening and closing stocks must be declared for all energy products including for additives/oxygenates but except for refinery gas:

#### 1. Stocks on national territory

Stocks in the following locations: refinery tanks, bulk terminals, pipeline tankage, barges and coastal tankers (when port of departure and destination are in the same country), tankers in a port of a member country (if their cargo is to be discharged at the port), inland ship bunkers. Exclude stocks of oil held in pipelines, in rail tanks cars, in truck tanks cars, in sea-going ships' bunkers, in service stations, in retail stores and in bunkers at sea.

#### 2. Stocks held for other countries under bilateral government agreements

Stocks on national territory which belong to another country and to which the access is guaranteed by an agreement between the respective governments.

#### 3. Stocks with known foreign destination

Stocks not included in point 2 on national territory which belong to and are destined for another country. These stocks may be located inside or outside bonded areas.

#### 4. Other stocks held in bonded areas

Includes stocks not included in point 2 nor 3 irrespective of whether they have received customs clearance or not.

#### 5. Stocks held by major consumers

Include stocks which are subject to government control. This definition does not include other consumer stocks.

#### 6. Stocks held on board incoming ocean vessels in port or at mooring

Stocks irrespective of whether they have been cleared by customs or not. This category excludes stocks on board vessels at high seas.

Includes oil in coastal tankers if both their port of departure and destination are in the same country. In the case of incoming vessels with more than one port of unloading, only report the amount to be unloaded in the reporting country.

#### 7. Stocks held by government on national territory

Includes non-military stocks held within the national territory by government, which are government owned or controlled and held exclusively for emergency purposes.

Excludes stocks held by state oil companies or electric utilities or stocks held directly by oil companies on behalf of governments.

8. Stocks held by stock holding organisation on national territory

Stocks held by both public and private corporations established to maintain stocks exclusively for emergency purposes.

Excludes mandatory stocks held by private companies.

9. All other stocks held on national territory

All other stocks satisfying the conditions described in point 1 above.

10. Stocks held abroad under bilateral government agreements

Stocks belonging to the reporting country but held in another country, to which access is guaranteed by an agreement between the respective governments.

10.1. Of which: Government stocks

10.2. Of which: Holding organisation's stocks

10.3. Of which: Other stocks

11. Stocks held abroad designated definitely for import stocks

Stocks not included in category 10 which belonging to the reporting state but which are held in another state and awaiting import there.

12. Other stocks in bonded areas

Other stocks in the national territory not included in the above categories.

13. Pipeline fill

Oil (crude oil and petroleum products) contained in pipelines, necessary to maintain the flow in the pipelines.

In addition, a breakdown of quantities per corresponding country must be declared for:

- closing stocks held for other countries under official agreement, by beneficiary,
- closing stocks held for other countries under official agreement, of which held as stock tickets, by beneficiary,
- closing stocks with known foreign destination, by beneficiary,
- closing stocks held abroad under official agreement, by location,
- closing stocks held abroad under official agreement, of which held as stock tickets, by location,
- closing stocks held abroad designated definitely for import into the declarer's country, by location.

By opening stocks are meant the stocks on the last day of the month preceding the reported one.

By closing stocks are meant the stocks on the last day of the reported month.

### 3.2.3. Imports and exports

Imports by country of origin, and exports by country of destination.

## 3.3. Units of measurement

Energy quantities: 10<sup>3</sup> tonnes

### 3.4. Geographical notes

For statistical reporting purposes only, the clarifications of Annex A Chapter 1 apply with the following specific exceptions:

1. Denmark includes the Faeroe Islands and Greenland.
2. Switzerland includes Liechtenstein.

### 3.5. Derogations and exemptions

Not applicable.

## 4. NATURAL GAS

### 4.1. Applicable energy products

Natural gas is defined in Annex B Chapter 2.

### 4.2. List of aggregates

The following list of aggregates shall be declared for all energy products listed in the previous paragraph unless otherwise specified.

#### 4.2.1. Supply Sector

##### 1. Indigenous Production

All dry marketable production within national boundaries, including offshore production. Production is measured after purification and extraction of NGLs and sulphur.

Excludes extraction losses and quantities reinjected, vented or flared.

Includes quantities used within the natural gas industry; in gas extraction, pipeline systems and processing plants.

##### 2. Imports

##### 3. Exports

##### 4. Stock changes

A stock build is shown as a positive number and a stock draw is shown as a negative number.

##### 5. Calculated Gross Inland Deliveries

This is defined as:

= Indigenous Production + Imports - Exports - Stock Change

##### 6. Statistical Difference

Defined as the calculated gross inland delivery minus the observed one.

##### 7. Observed Gross Inland Deliveries

Includes gas used by the gas industry for heating and operation of their equipment (i.e. consumption in gas extraction, in the pipeline system and in processing plants) and losses in distribution.

##### 8. Opening and closing levels of stocks held on national territory

Quantities stored in special storage facilities (depleted gas and/or oil field, aquifer, salt cavity,

mixed caverns or other) as well as liquefied natural gas storage. By opening stocks are meant the stocks on the last day of the month preceding the reported one. By closing stocks are meant the stocks on the last day of the reported month.

#### 9. Own use and losses of the natural gas industry

Own used quantities by the gas industry for heating and operation of its equipment (i.e. consumption in gas extraction, in the pipeline system and in processing plants).

Includes losses in distribution.

#### 4.2.2. Imports and exports

Contrary to the definitions in Annexe A, imports and exports are to be declared by neighbouring country in this case.

### 4.3. Units of measurement

Quantities must be declared in two units:

- in physical quantity, in  $10^6 \text{ m}^3$  assuming reference gas conditions (15 °C, 101,325 kPa),
- in energy content, i.e. in TJ, based on the gross calorific value.

### 4.4. Derogations and exemptions

Not applicable.

## 5. APPLICABLE PROVISIONS

The following provisions apply for the data collection as described in all preceding chapters:

#### 1. Reported period:

A calendar month.

#### 2. Frequency

Monthly.

#### 3. Deadline for transmission of data

All data described under Section 3 (oil and petroleum products) and under Section 4 (natural gas): within 55 days following the reported month.

All other data: within three months following the reported month.

#### 4. Transmission format and method

The transmission format shall conform to an appropriate interchange standard specified by Eurostat.

Data shall be transmitted or uploaded by electronic means to the single entry point for data at Eurostat.



## ANNEX D

### SHORT TERM MONTHLY STATISTICS

This Annex describes the scope, units, reported period, frequency, deadline and transmission modalities for the short-term monthly collection of statistical data.

Annex A applies for explanations of terms for which a specific explanation is not supplied in this Annex.

#### 1. NATURAL GAS

##### 1.1. Applicable energy products

This chapter covers natural gas only. Natural gas is defined in chapter 2 of Annex B.

##### 1.2. List of aggregates

The following list of aggregates shall be declared.

1. Production
2. Imports
3. Exports
4. Stock change

A stock build is shown as a negative number and a stock draw is shown as a positive number.

5. Supply

This is calculated as:

$$= \text{Production} + \text{Imports} - \text{Exports} + \text{Stock change}$$

6. Stocks at the end of month

##### 1.3. Units of measurement

Quantities of natural gas must be declared in TJ, based on the gross calorific value.

##### 1.4. Other applicable provisions

1. Reported period:

A calendar month.

2. Frequency

Monthly.

3. Deadline for transmission of data

Within one month following the reported month.

4. Transmission format and method

The transmission format shall conform to an appropriate interchange standard specified by

Eurostat.

Data shall be transmitted or uploaded by electronic means to the single entry point for data at Eurostat.

### **1.5. Derogations and exemptions**

Germany has a derogation from this data collection until 30 September 2014.

## **2. ELECTRICITY**

### **2.1. Applicable energy products**

This chapter covers electricity only.

### **2.2. List of aggregates**

The following list of aggregates shall be declared.

1. Total electricity production  
Total gross quantity of electricity generated.  
Includes own consumption of power plants.
2. Imports
3. Exports
4. Gross electricity Supply  
This is calculated as:  
$$= \text{Total electricity production} + \text{Imports} - \text{Exports}$$

### **2.3. Units of measurement**

Energy quantities must be expressed in GWh

### **2.4. Other applicable provisions**

1. Reported period:  
A calendar month.
2. Frequency  
Monthly.
3. Deadline for transmission of data  
Within one month following the reported month.
4. Transmission format and method  
The transmission format shall conform to an appropriate interchange standard specified by Eurostat.  
Data shall be transmitted or uploaded by electronic means to the single entry point for data at Eurostat.

## 2.5. Derogations and exemptions

Germany is exempted from this data collection.

## 3. OIL AND PETROLEUM PRODUCTS

This data collection is commonly known as the 'JODI Questionnaire'.

### 3.1. Applicable energy products

Unless otherwise specified, this data collection applies to all of the following energy products, for which the definitions in Chapter 4 of Annex B apply: crude oil, LPG, gasoline (which is the sum of motor gasoline and aviation gasoline), kerosene (which is the sum of kerosene type jet fuel and other kerosene), gas/diesel oil and fuel oil (both low and high sulphur content).

In addition, this data collection also applies to 'total oil', by which is meant the sum of all these products except crude oil, and must also include other petroleum products such as refinery gas, ethane, naphtha, petroleum coke, white spirit and SBP, paraffin waxes, bitumen, lubricants and others.

### 3.2. List of aggregates

The following list of aggregates shall be declared for all energy products listed in the previous paragraph unless otherwise specified.

#### 3.2.1. Supply Sector

The following table applies only to crude oil:

1. Production
2. Imports
3. Exports
4. Closing Stock
5. Stock change

A stock build is shown as a positive number and a stock draw is shown as a negative number.

6. Refinery Intake

Observed refinery throughput.

The following table applies to crude oil, LPG, gasoline, kerosene, gas/ diesel oil, fuel oil and total oil:

1. Refinery Output
2. Imports
3. Exports
4. Closing Stock
5. Stock change

A stock build is shown as a positive number and a stock draw is shown as a negative number.

6. Demand

Deliveries or sales to the inland market (domestic consumption) plus Refinery Fuel plus International Marine and Aviation Bunkers. Demand for Total Oil includes Crude.

### **3.3. Units of measurement**

Energy quantities: 10<sup>3</sup> tonnes

### **3.4. Other applicable provisions**

1. Reported period:

A calendar month.

2. Frequency

Monthly.

3. Deadline for transmission of data

Within 25 days following the reported month.

4. Transmission format and method

The transmission format shall conform to an appropriate interchange standard specified by Eurostat.

Data shall be transmitted or uploaded by electronic means to the single entry point for data at Eurostat.

### **3.5. Derogations and exemptions**

Not applicable.