



EUROSTAT

INTERNATIONAL ENERGY AGENCY

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

Monthly Oil and Gas Questionnaire



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Attached is the Monthly Oil and Gas questionnaire, which provides for the submission of monthly oil and gas data. Administrations are to provide monthly oil and gas data for the month before last (M-2) on the 25th of each month to the IEA and within 55 calendar days after the end of each reference month (M-2) to Eurostat, i.e. March data is to be submitted on the 25th of May.

For the IEA/OECD member countries, please complete data for your country on the Energy Validation Outlet: <https://evo.iea.org/>

Alternatively send the questionnaire electronically to MOS@iea.org.

For the EU Member States, the European Economic Area (EEA) countries and the Energy Community (EnC) Contracting Parties, please submit the questionnaire via Eurostat's Single Entry Point (SEP) <https://webgate.ec.europa.eu/edamis> or alternatively send the questionnaire electronically to ESTAT-ENERGY-MONTHLY@ec.europa.eu.

REPORTING INSTRUCTIONS

OIL

1. UNITS AND CONVERSION TO METRIC TONS

Report all figures in thousands of metric tons, with three (3) decimal places.

(Examples: Eighteen thousand four hundred and thirty-six metric tons (18 436) should be reported as "18.436". A consistent reporting scheme should be used (of 0, 1, 2 or 3 decimal places), and communicated in the Remarks page. In order to ensure that for example 18.130 is actually 18.130, and not 18.132, rounded to, and displayed as, 18.13. Reporting should be consistent across all time-series for any given year, avoiding any inconsistencies between flows or products.)

- Barrels to metric tons

Barrels are to be converted to metric tons by using conversion factors based on actual density. Where conversion from barrels per day is necessary, units should be multiplied by the actual number of days. Please specify on the Remarks page the factor that has been used.

- Kilolitres (cubic metres) to metric tons

Kilolitres should be converted to metric tons by using conversion factors based on actual density. Please specify on the Remarks page the factor that has been used.

2. DEFINITIONS OF CRUDE OIL AND PRODUCTS

Please note: in the definitions, petrochemical feedstocks refer to all oil products which are used as raw material in the petrochemical industry for steam cracking, aromatics plants, e.g. naphtha, LPG, light and heavy gasoil, reformat etc.

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.

Natural gas liquids (NGL)

NGL are liquid or liquefied hydrocarbons recovered from natural gas in separation facilities or gas processing plants. Natural gas liquids include ethane, propane, butane (normal and iso-), (iso) pentane and pentanes plus (sometimes referred to as natural gasoline or plant condensate).

Refinery feedstocks

A refinery feedstock is a processed oil destined for further processing (e.g. straight run fuel oil or vacuum gas oil) excluding blending. With further processing, it will be transformed into one or more components and/or finished products.

This definition also covers returns from the petrochemical industry to the refining industry (e.g. pyrolysis gasoline, C4 fractions, gasoil and fuel oil fractions).

Additives/oxygenates

Additives and oxygenates 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 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.

Biofuels

Report under this category the following. Please note that 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.

- **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%).
- **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 pressed biooil (oil produced from oil seed through mechanical processing only) and all other liquid biofuels which are added to, blended with Gas/diesel oil.
- **Bio jet kerosene:** Liquid biofuels derived from biomass and blended with Jet kerosene.

All biofuels which have not been blended with transport fuels (i.e. in their pure form) should **not** be reported here. The biofuels blended as part of transport fuels **should be** reported in the appropriate product (i.e. motor gasoline or transport diesel) indicating the biofuel portion.

Other hydrocarbons

This category includes synthetic crude oil from tar sands, shale oil, etc., liquids from coal liquefaction, output of liquids from natural gas conversion, hydrogen and emulsified oils (e.g. Orimulsion).

Note on the reporting of emulsified oils: All imports of emulsified oils (e.g. Orimulsion) should be reported as imports of 'Other hydrocarbons' (reference F5 in Table 1). As these oils do not need further processing in a refinery, report these quantities as Direct use (reference F7 in Table 1) and Primary product receipts in the 'Other products' category of the Supply of Oil Products report (reference Y1 in Table 2). Any production of emulsified oils should appear as Indigenous production of 'Other hydrocarbons' (reference F1 in Table 1). Report all quantities in physical weight of the emulsion (i.e. including the water content).

Note on the reporting of shale oil: Only the production of shale oil (secondary product) is to be reported here (as Receipts from other sources in the Other hydrocarbons category) not the production of oil shale (which is a primary solid fuel).

Refinery gas

Refinery gas includes a mixture of non-condensed gases mainly consisting of hydrogen, methane, ethane and olefins obtained during distillation of crude oil or treatment of oil products (e.g. cracking) in refineries. This also includes gases which are returned from the petrochemical industry.

Ethane

A naturally gaseous straight-chain hydrocarbon (C₂H₆), extracted from natural gas and refinery gas streams.

Liquefied petroleum gases (LPG)

LPG are light saturated paraffinic hydrocarbons derived from the refinery processes, crude oil stabilisation and natural gas processing plants. They consist mainly of propane (C₃H₈) and butane (C₄H₁₀) or a combination of the two. They should also include propylene, isobutene and isobutylene. LPG are normally liquefied under pressure for transportation and storage.

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.

Naphtha imported for blending is reported as an import of naphtha, then shown on the Interproduct transfers row, as a negative entry for naphtha, and a positive entry for the corresponding oil product (e.g. gasoline).

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 (tetraethyl lead) and TML (tetramethyl lead).

This category includes motor gasoline blending components, e.g. alkylates, isomerate, reformat, cracked gasoline destined for use as finished motor gasoline.

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%).

Non-biogasoline

This category covers Motor gasoline as defined above excluding Biogasoline.

Aviation gasoline

This is motor spirit prepared especially for aviation piston engines, with an octane number suited to the engine, a freezing point of -60°C and a distillation range usually within the limits of 30°C and 180°C.

Gasoline type jet fuel (naphtha type jet fuel or JP4)

This includes all light hydrocarbon oils for use in aviation turbine power units, distilling between 100°C and 250°C. They are obtained by blending kerosene and gasoline or naphtha 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.

Kerosene type jet fuel

This is a distillate used for aviation turbine power units. It has the same distillation characteristics between 150°C and 300°C (generally not above 250°C) and flash point as kerosene. In addition, it has particular specifications (such as freezing point) which are established by the International Air Transport Association (IATA).

This category includes kerosene blending components.

Bio jet kerosene

Liquid biofuels derived from biomass and blended with Jet kerosene.

Non-bio jet kerosene

This category covers jet kerosene as defined above excluding Bio jet kerosene.

Other kerosene

Kerosene comprises refined petroleum distillate and is used in sectors other than aircraft transport. It distils between 150°C and 300°C.

Gas/diesel oil (distillate fuel oil)

Gas/diesel oil is primarily a medium distillate, distilling between 180°C and 380°C. Several grades are available depending on uses:

Road diesel:

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

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°C and 540°C and which are used as petrochemical feedstocks.

The Gas/diesel oil category includes blending components.

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 pressed biooil (oil produced from oil seed through mechanical processing only) and all other liquid biofuels which are added to, blended with Gas/diesel oil.

Non-bio gas/diesel oil

This category consists of gas diesel oil as defined above excluding Biodiesel.

Note: Where a full balance for Road diesel and Heating and other gasoil is not available, please use the total Gas/diesel oil column, while reporting the partial information in the respective rows/columns.

Fuel oil

This covers all residual (heavy) fuel oils (including those obtained by blending). Kinematic viscosity is above 10cSt at 80°C. The flash point is always above 50°C and density is always more than 0.90 kg/l.

- ***Low sulphur content:*** Heavy fuel oil with sulphur content lower than 1%.
- ***High sulphur content:*** Heavy fuel oil with sulphur content of 1% or higher.

Note: Where a full balance for low and high sulphur content is not available, please use the total fuel oil column, while reporting the partial information in the respective rows/columns.

Petroleum coke

Petroleum coke is a black solid residue, obtained mainly by cracking and carbonising residue feedstock, tar and pitches in processes such as delayed coking or fluid coking. It consists mainly of carbon (90 to 95%) and has 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". This category also includes "catalyst coke" deposited on the catalyst during refining processes; this coke is not recoverable and is usually burned as refinery fuel.

Other oil products

The category Other products includes the following:

- **White spirit and SBP**

White spirit and SBP are defined as refined distillate intermediates with a distillation in the naphtha/kerosene range. They are sub-divided as:

- i **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).

- ii. White spirit: Industrial spirit with a flash point above 30°C. The distillation range of white spirit is 135° to 200°C.

- **Lubricants**

Lubricants are hydrocarbons produced from distillate or residue; they are mainly used to reduce friction between bearing surfaces. This category includes all finished grades of lubricating oil, from spindle oil to cylinder oil, and those used in greases, including motor oils and all grades of lubricating oil base stocks.

- **Bitumen**

Bitumen is a 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. This category includes fluidized and cut back bitumen.

- **Paraffin waxes**

These are saturated aliphatic hydrocarbons. These waxes are residues extracted when dewaxing 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.

- **Other**

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

3. INSTRUCTIONS FOR COMPLETING INDIVIDUAL TABLES IN THE QUESTIONNAIRE**TABLE 1****SUPPLY OF CRUDE OIL, NGL, REFINERY FEEDSTOCKS,
ADDITIVES AND OTHER HYDROCARBONS**

This table covers all flows of Crude oil, NGL, Refinery feedstocks, Additives/oxygenates and Other hydrocarbons. For individual definitions see section 2 above.

- 1. Indigenous production:** Report all production within national boundaries including offshore production. Production should only include marketable production, excluding volumes returned to formation. Such production should include all crude oil, NGL, condensates and oil from shale and tar sands, etc. It should also include the receipts of additives/oxygenates by refineries and blending plants, from outside the refinery sector.
- 2. Receipts from other sources:** Report supplies of additives/oxygenates, biofuels and other hydrocarbons, the production of which has already been covered in other fuel balances e.g. in NZ the manufacture of synthetic gasoline requires natural gas as feedstock. The amount of gas for methanol manufacture is accounted for in the natural gas balance, while the receipts of methanol are reported as Receipts from other sources in the oil balance.
- 3. Backflows:** These are 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. For integrated petrochemical industries this flow should be estimated. Transfers from one refinery to another within the country should be excluded. Total backflows in Table 1 (reference G3) must be equal to Total Backflows from petrochemical sector to refineries (reference Z19) in Table 2.
- 4. Products transferred:** These are usually imported petroleum products, which are reclassified as feedstocks for further processing in the refinery, without delivery to final consumers. For example, naphtha imported for upgrading would be first reported as imports of naphtha (reference F5 in Table 2), and then appear also as products transferred of naphtha (reference F9 in Table 2). The sum of the references for Products transferred (reference Z9 in Table 2) should be reported in reference C4, Table 1.
- 5/6. Imports and Exports (Balance):** Data should reflect amounts having crossed the national territorial boundaries, whether customs clearance has taken place or not. Quantities of crude oil and products imported or exported under processing agreements (i.e. refining on account) should be included. 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. Any gas liquids (e.g. LPG) extracted during the regasification process of imported LNG should be reported under inputs "Receipts from other sources" of "Other hydrocarbons" in this questionnaire. Petroleum products imported or exported directly by the petrochemical industry should be included.

Note: Imports or exports of ethanol (reported in the Additives/oxygenates column) should relate to the quantities destined for fuel use.

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.

Imports and exports reported in Tables 1 and 2 should correspond to Total Imports, line 165 in Table 3 and to Total Exports, line 165 in Table 4.

7. **Direct use:** Crude oil, NGL and Other hydrocarbons which are used directly without being processed in oil refineries are reported as Direct use. This includes, for example, crude oil burned for electricity generation. Such quantities will also be reported in the supply of products under Primary product receipts in line 1 of Table 2 (see notes for Table 2).
8. **Stock changes:** Stock changes should reflect the difference between closing stock level and opening stock level for stocks held on national territory, as given in category (a) (lines 1 and 2 of Table 5). A stock build is shown as a positive number, and a stock draw as a negative number.
9. **Refinery intake (Calculated):** This is defined as the total amount of oil calculated to have entered the refinery process. It is defined as:

$$\begin{aligned}
 &+ \text{Indigenous production} \\
 &+ \text{Receipts from other sources} \\
 &+ \text{Backflows} \\
 &+ \text{Products transferred} \\
 &+ \text{Imports (Balance)} \\
 &- \text{Exports (Balance)} \\
 &- \text{Direct use} \\
 &- \text{Stock changes} \\
 &= \text{Refinery intake (Calculated)}
 \end{aligned}$$

10. **Statistical difference:** This is the difference between calculated and observed refinery intake. Reasons for any major differences should be stated in the section provided for remarks.
11. **Refinery intake Observed:** This is defined as the total amount of oil (including Other hydrocarbons and Additives) observed to have entered the refinery process.
12. **Memo item: Refinery losses:** These are the differences between Refinery intake (Observed) (reference G11) and Refinery gross output (reference Z2 of Table 2). Losses may occur during the distillation processes due to evaporation.

TABLE 2

SUPPLY OF OIL PRODUCTS

These tables cover the supply of oil products. Oil products comprise: Refinery gas, Ethane, LPG, Naphtha, Motor gasoline, Aviation gasoline, Gasoline type jet fuel, Kerosene type jet fuel, Other kerosene, Gas/diesel oil, Fuel oil, Petroleum coke and Other products (white spirit and SBP, lubricants, bitumen, paraffin waxes and other). In addition, crude oil and NGL used for direct burn should be included in the deliveries of oil products. For definitions of individual products, see section 2.

1. **Primary product receipts:** Quantities of indigenous or imported crude oil (including condensate) and indigenous NGL which are *used directly* without being processed in an oil refinery. For example, crude oil used to generate electricity should be placed in Primary product receipts of crude oil (reference A1). Quantities of indigenous NGL which are not included in refinery intake should be reported in Primary product receipts of NGL (reference B1), then transferred through the Interproduct transfers row to the allocated product type. Please note that this flow includes the amounts of Backflows which, although not primary fuel, are used directly.

2. **Refinery gross output:** This is the production of oil petroleum products at a refining or blending plant. It excludes Refinery losses, but includes Refinery fuel. The total (reference Z2) must be equal to Refinery intake (Observed) minus Refinery losses (references G11 and G12 respectively of Table 1).
3. **Recycled products:** These are 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 (see definitions).
4. **Refinery fuel:** These are all petroleum products consumed in support of the *operation* of a refinery. This should not include products used by oil companies outside the refining process, e.g. bunkers or oil tankers.
5. **Imports:** See definitions under Table 1.
6. **Exports:** See definitions under Table 1.
7. **International marine bunkers:** Bunkers cover the quantities of fuels delivered to sea-going ships of all flags, including warships. Consumption by ships engaged in transport in inland and coastal waters is not included. Note that fuel delivered for deep-sea fishing should not be included.
8. **Interproduct transfers:** Result from the reclassification of products either because their specification has changed, or because they are blended into another product. For example, quantities of kerosene may be reclassified as gasoil after blending with the latter in order to meet its winter diesel specification. A negative entry for one product must be compensated by a positive entry (or several entries) for one or several products and vice versa. The total net effect (reference Z8) should be zero.
9. **Products transferred:** See definitions under Table 1.
10. **Stock changes:** See definitions under Table 1.
11. **Gross inland deliveries (Calculated):** This is defined as:
 - + Primary product receipts
 - + Refinery gross output
 - + Recycled products
 - Refinery fuel
 - + Imports (Balance)
 - Exports (Balance)
 - International marine bunkers
 - + Interproduct transfers
 - Products transferred
 - Stock changes
 - = Gross inland deliveries (Calculated)
12. **Statistical difference:** This is the difference between calculated and observed gross inland deliveries. Reasons for any major differences should be stated in the section provided for remarks.

- 13. Gross inland deliveries (Observed):** These are the observed deliveries of oil 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.
- 14. Deliveries to international aviation:** Report all deliveries of aviation fuels other than for domestic aircraft activities.
- 15. Deliveries to main activity producer power plants:** Report quantities of oil products used for electricity and heat generation in main activity producer power plants.
- 16. Deliveries of automotive LPG:** Report all deliveries of LPG used for road transport vehicles.
- 17. Deliveries of rail and marine diesel:** Report marine diesel and diesel used in rail traffic.
- 18. Gross deliveries to the petrochemical industry** Report only those quantities of fuels delivered to the petrochemical sector.
- 19. Backflows to refineries:** Total product Backflows to refineries reported in reference Z19 must be equal to total Backflows reported in reference C3 in Table 1 (See Backflows in Table 1). Those quantities of backflows returned to refinery should be shown as Backflows in Table 1 and subsequently as a part of Refinery intake, Refinery gross output and Gross inland deliveries of the relevant products.

Quantities of backflows that are used directly as finished products should be included in the data reported under Backflows and subsequently as Direct use in Table 1 and Primary product receipts in Table 2.

Example: 500 units of naphtha are input to the petrochemical industry. Of the 500, 300 are used as feedstock for the production of petrochemicals, 200 units are returned directly to refineries for further processing of which 120 are pyrolysis gasoline and 80 are fuel oil. This should result in an entry of 500 under Gross inland deliveries, 200 under Backflows to refineries (fully included in Backflows in Table 1), 120 for Motor gasoline and 80 for Fuel oil. The 200 in backflows to refineries will be included in Refinery gross output divided between products.

- 20. Net deliveries of Total products:** This is defined as Gross inland deliveries (Observed) minus Backflows to refineries.

TABLES 3 AND 4

IMPORTS BY ORIGIN AND EXPORTS BY DESTINATION

Geographical notes:

- Australia excludes the overseas territories
- Denmark includes the Danish Faroes and Greenland;
- France includes Monaco and excludes the overseas territories Guadeloupe, Martinique, French Guyana, 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 the Netherlands Antilles;

- Portugal includes the Azores and Madeira;
- Spain includes the Canary Islands, the Balearic Islands and Ceuta and Melilla;
- Switzerland includes Liechtenstein;
- United Kingdom includes Jersey, Guernsey and the Isle of Man;
- The United States includes the 50 States, District of Columbia, Puerto Rico, Guam, the US Virgin Islands and the Hawaiian Foreign Trade Zone.

Statistical differences may arise if only total imports and exports are available (from customs or refinery surveys) while the geographical breakdown is based on a different survey, source or concept. In this case, report the differences in the 'Non-specified/Other' category.

Import origins or export destinations not listed individually in the trade tables should be reported under the appropriate 'Other' category (Other Africa, Other Asia, etc.). Where no origin or destination can be reported, the category 'Non-specified/Other' should be used.

TABLE 5, TABLE 5b and TABLE 5c

STOCK LEVELS

(Please note that Table 5 is to be completed by all reporting countries (OECD and EU), while Table 5b and Table 5c need to be completed only by the EU Member States and the EnC Contracting Parties)

Please note that the instructions provided below concerning the reporting of emergency stock levels under the Directive 2009/119/EC are applicable to EU Member States, and also to Energy Community (EnC) Contracting Parties.

The EnC Contracting Parties can hold emergency stocks counting towards their stockholding obligation under the Directive on their national territory and/or on the territory of the other EnC Contracting Parties and/or on the territory of EU Member States.

Report in the Table 5 categories a to l, in Table 5b and in Table 5c stocks in the following locations: refinery tanks, bulk terminals, pipeline tankage, barges and intercoastal 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 military stocks, stocks held in pipelines, in rail tanks cars, in truck tanks cars, in sea-going ships' bunkers, in service stations, in retail stores and in tankers at sea.

Specific categories of stocks in Table 5, Table 5b and Table 5c are set out below.

TABLE 5**STOCK LEVELS**

- a. Stocks on national territory (Category a):** This is the sum of categories b to i below. Include stocks held by all importers, refiners, stock holding organisations, governments, and major consumers, whose stocks are subject to government control. Line 8 in Table 1 and line 10 in Table 2, should correspond to line 2 minus line 1 in Table 5.
- b. Stocks held for other countries under official agreement (Category b):** Include stocks in your national territory which belong to another country and to which the access is guaranteed by an agreement between the respective governments or, in case of EU Member States, by arrangements in line with Directive 2009/119/EC. Line 4 in Table 5 should correspond to line 57 "Total" in Table 6.

It is noted that bilateral agreements are not necessary for an EU Member State holding stocks in its national territory which belong to another EU Member State; the modalities for an EU Member State holding stocks on behalf of another Member State are stipulated in articles 7 and 8 of the Directive 2009/119/EC.

- c. Stocks with known foreign destination (Category c):** Include stocks (not included in category b) in your national territory which belong to and are destined for another country. These stocks may be located inside or outside bonded areas. Line 6 in Table 5 should correspond to line 57 "Total" in Table 7.
- d. Stocks held in bonded areas and not included in b or c (Category d):** Include stocks which are eligible under IEA commitments (irrespective of whether they have received customs clearance or not), not included in categories b or c.
- e. Stocks held by major consumers, obligated by law (Category e):** Include stocks held by large consumers as required by law or otherwise controlled by the government. This definition does not include other consumer stocks.
- f. Stocks held on board incoming ocean vessels in port or at mooring (Category f):** Include stocks irrespective of whether they have been cleared by customs or not. This category excludes stocks on board vessels at high seas. It includes oil in intercoastal tankers if both their port of departure and destination are in your country. In the case of incoming vessels with more than one port of unloading, only report the amount to be unloaded in your country.
- g. Stocks held by government on national territory (Category g):** Include non-military stocks held within the national territory by government, which are government owned or controlled and held exclusively for emergency purposes. It does not include stocks held by central stockholding entities (CSEs), state oil companies or electric utilities; neither does it include stocks held directly by industry to fulfil mandatory stock obligations. Government stocks held outside of national territory, in other countries, should not be included here but reported instead under categories j and o (see below).
- h. Stocks held by stock holding organisations on national territory (Category h):** Include stocks held by both public and private corporations established to maintain stocks exclusively for emergency purposes, including central stockholding entities (CSEs) defined by Directive 2009/119/EC. It does not include mandatory stocks held by private companies.

- i. All other stocks held on national territory (Category i):** Include all other stocks satisfying the conditions described in category a above.
- j. Stocks held abroad under official agreement: (Category j):** Include stocks belonging to your country but held in another country, to which access is guaranteed by an agreement between the respective governments or, in case of EU Member States, other arrangements in line with Directive 2009/119/EC. This category is comprised of stocks abroad owned by your government, stocks abroad held by stock holding organisations, and all other types of stocks belonging to your country but held in another country under bilateral government agreements or, in case of EU Member States, other arrangements in line with Directive 2009/119/EC. Please provide the breakdown of these stocks by type under categories o, p and q (see below). Line 20 in Table 5 should correspond to the country specific breakdown (line 57 "Total") in Table 8.

It is noted that bilateral agreements are not necessary for an EU Member State holding stocks in another EU Member State and the modalities are stipulated in articles 7 and 8 of the Directive 2009/119/EC. In the EU, emergency stocks may be held abroad pursuant to a delegation of the government, the Central Stockholding Entity or obligated Economic Operators.

- k. Stocks held abroad designated definitely for import into your country (Category k):** Include stocks (not included in category j) belonging to your country, which are held in another country and which are awaiting import into your country. Line 22 in Table 5 should correspond to line 57 "Total" in Table 9.
- l. Total Stocks (Category l):** Include all stocks belonging to your country, whether on national territory or in the territory of another country. This should be equal to the following from the above categories: a-b-c+j+k.
- m. Memo Item (not included above) - Other stocks in bonded areas (Category m):** Include other stocks in the national territory not eligible under IEA commitments and which are not included in the above categories.
- n. Memo Item (not included above) - Pipeline Fill (Category n):** Include oil (crude oil and oil products) contained in pipelines, necessary to maintain the flow in the pipelines.
- o. Memo Item - Government stocks held abroad under official agreement (Category o):** This is the portion of category j stocks above, which are government stocks. Report your government's stocks held in another country, to which access is guaranteed by an agreement between the respective governments or, in case of EU Member States, other arrangements in line with Directive 2009/119/EC.
- p. Memo Item - Holding organisation's stocks held abroad under official agreement (Category p):** This is the portion of category j stocks above, which are held by stock holding organisations. Include stocks held by both public and private corporations established to maintain stocks exclusively for emergency purposes, including central stockholding entities (CSEs) defined by Directive 2009/119/EC; these are stocks belonging to your country but held in another country, to which access is guaranteed by an agreement between the respective governments or, in case of EU Member States, other arrangements in line with Directive 2009/119/EC.

- q. Memo Item - Other stocks held abroad under official agreement (Category q):** This is the portion of category j stocks above, which are not already included in categories o and p above. Include all other stocks belonging to your country, but held in another country, to which access is guaranteed by an agreement between the respective governments or, in case of EU Member States, other arrangements in line with Directive 2009/119/EC.

(Please note that Table 5b and 5c are to be completed only by the EU Member States and the EnC Contracting Parties)

Please note that the instructions provided below concerning the reporting of emergency stock levels under the Directive 2009/119/EC are applicable to EU Member States, and also to Energy Community (EnC) Contracting Parties.

The EnC Contracting Parties can hold emergency stocks counting towards their stockholding obligation under the Directive on their national territory and/or on the territory of the other EnC Contracting Parties and/or on the territory of EU Member States.

TABLE 5b

EUROPEAN UNION EMERGENCY STOCK LEVELS

UNDER DIRECTIVE 2009/119/EC

This table includes emergency stocks which meet all the relevant requirements of Directive 2009/119/EC. In particular, only stocks that are available and physically accessible at all times will be included (article 5, paragraph 1 of the Directive). Oil stocks that are subject to a seizure order or owned by companies that are bankrupt or entered in arrangement with creditors (article 12, paragraph 3 of the Directive) will not be included.

EU-a. Emergency stocks (Total) on national territory (Category EU-a): These are the stocks on your national territory held by the Government, the Central Stockholding Entity and the obligated and delegated Economic Operators, in accordance with Directive 2009/119/EC. These quantities are calculated as the Sum of the categories EU-b, EU-c, EU-g, EU-h and EU-ie. They represent the emergency stocks held on the national territory of your country that count towards the stockholding obligation of all the EU Member States (including your country).

EU-b. Stocks held for other EU Member States under official agreement (Category EU-b): Include stocks in your national territory which are held for another EU Member State and to which access is guaranteed in accordance with the provisions of Directive 2009/119/EC. In the EU, emergency stocks may be held for another EU Member State pursuant to a delegation request of the Government, the Central Stockholding Entity or the obligated Economic Operators of the other Member State. The necessary modalities for holding stocks within the EU are stipulated in articles 7 and 8 of the Directive 2009/119/EC.

Line 4 in Table 5b should correspond to line 58 "Total EU MS" of the country specific breakdown in Table 6.

EU-c. Stocks with known foreign EU destination (Category EU-c): Include stocks (not included in category EU-b) in your national territory which belong to and are destined for another EU Member State. These stocks may be located inside or outside bonded areas. Line 6 in Table 5b should correspond to line 58 "Total EU MS" in Table 7.

EU-g. Stocks held by government on national territory (Category EU-g): Include non-military stocks held within the national territory by government, which are government owned or controlled and held exclusively for emergency purposes. It does not include stocks held by Central Stockholding Entities (CSEs), state oil companies or electric utilities, neither does it include stocks held directly by industry to fulfil mandatory stock obligations. Government stocks held outside of national territory, in other countries, should not be included here but reported instead in Table 8 and Table 9. Stocks held by the government on behalf of other countries should not be

included here but reported instead in the category EU–b and in Table 6.

In principle, these stocks are identical to those reported in category g in Table 5. Any difference is due to government held stocks that at the time of the survey were physically located in bonded areas or on board incoming ocean vessels in port or at mooring and were reported in those categories in Table 5.

EU-h. Stocks held by the Central Stockholding Entity (CSE) on national territory (Category EU-h): Include stocks held by the central stockholding entity (CSE) as defined by the Directive 2009/119/EC. It does not include mandatory stocks held by private companies. CSE stocks held outside the national territory, in other countries, should not be included here but reported instead in Table 8 and Table 9. Stocks held by the CSE on behalf of other countries should not be included here but reported instead in the category EU–b and in Table 6.

In principle, these stocks are identical to those reported in category h in Table 5. Any difference is due to CSE held stocks that at the time of the survey were physically located in bonded areas or on board incoming ocean vessels in port or at mooring and were reported in those categories in Table 5. A difference could also occur in the case of a stockholding organisation which does not qualify as a CSE.

EU-ie. Stocks held by Economic Operators on national territory (Category EU-ie): Include stocks held on national territory by the obligated Economic Operators (Economic Operators on which the Member State has imposed a stockholding obligation) and the delegated Economic Operators (Economic Operators holding stocks as a result of a delegation granted by the government or CSE of your country as well as by other domestic obligated economic operators - articles 7 and 8 of the 2009/119/EC Directive). Only emergency stocks held by the Economic Operators on national territory as required by the Member State under Directive 2009/119/EC will be reported here. Also, stocks held by a stockholding organisation which does not qualify as a CSE should be reported here. Stocks held by the Economic Operators abroad will be reported in category EU-j and in Table 8 and Table 9 while stocks maintained by the Economic Operators on behalf of other countries should be reported in the category EU–b and in Table 6. Stocks held by economic operators which are not a requirement under the Directive should be reported in Table 5c.

The stocks held by the Economic Operators correspond to the Categories i & e stocks in Table 5. A difference may arise because the obligated and delegated Economic Operators - under Directive 2009/119/EC - may represent a different set of operators as compared to the one of the IEA reporting system, as well as because these Economic Operators will report here only the emergency stocks held under the national stockholding obligation under Directive 2009/119/EC [commercial stocks are excluded]. Additional differences may arise due to Economic Operators' stocks that at the time of the survey were physically located in bonded areas or on board incoming ocean vessels in port or at mooring and were reported in those categories in Table 5.

EU-j. Stocks held abroad in other EU Member States under official agreement (Category EU-j): Include stocks that belong to your country but are held in another EU country to which access is guaranteed in accordance with the provisions of Directive 2009/119/EC.

In the EU, emergency stocks may be held abroad, in other EU Member States pursuant to a delegation of the Government, the Central Stockholding Entity or the obligated Economic Operators. The necessary modalities for holding stocks within the EU are stipulated in articles 7 and 8 of the Directive 2009/119/EC.

Line 14 in Table 5b should correspond to line 58 "Total EU MS" of the country specific breakdown in Table 8.

EU-k. Stocks held abroad in EU designated definitely for import into your country (Category EU-k): Include stocks (not included in category EU-j) belonging to your country, which are held in another EU country and which are awaiting import into your country.

Line 16 in Table 5b should correspond to line 58 "Total EU MS" of the country specific breakdown in Table 9.

EU-l. Emergency Stocks held in accordance with the Directive 2009/119/EC (Category EU-l): These are the emergency stocks maintained by the Member State in accordance with the Directive 2009/119/EC, held by the Government, the CSE and the obligated / delegated economic operators either on the national territory or in other EU Member States. This quantity is calculated as the Sum of the stocks reported under EU-g, EU-h, EU-ie, EU-j and EU-k.

TABLE 5c

EUROPEAN UNION COMMERCIAL STOCKS HELD BY ECONOMIC OPERATORS ON NATIONAL TERRITORY UNDER DIRECTIVE 2009/119/EC

"Commercial stocks" means those oil stocks held by economic operators which are not a requirement under Directive 2009/119/EC [see Article 2 (k) and Article 14 (1) thereof].

Commercial stocks may be calculated on the basis of the reported stock categories in Table 5 and Table 5b as

Table 5 Categories (d + e + f + g + h + i)

minus

Table 5b Categories { (EU-g) + (EU-h) + (EU-ie) }

TABLE 6

CLOSING STOCKS HELD FOR OTHER COUNTRIES UNDER OFFICIAL AGREEMENT, BY BENEFICIARY

This is a breakdown by beneficial country of the data contained in Line 4 (Category b) of Table 5 and line 4 (Category EU-b) of Table 5b.

Line 57 "Total" must be equal to Line 4 on Table 5 and Line 58 "Total EU MS" must be equal to line 4 of Table 5b.

TABLE 6b**CLOSING STOCKS HELD FOR OTHER COUNTRIES UNDER OFFICIAL AGREEMENT,
OF WHICH HELD AS STOCK TICKETS, BY BENEFICIARY**

Please report in Table 6b, the amount of the stocks reported in Table 6 which are held as tickets, detailed by beneficiary country. The ticket reservation is a system whereby oil is reserved with the option to buy at a market price set out in an agreement. This does not entail the buying and selling of physical oil but rather oil stock reservations, referred to as tickets.

TABLE 7**CLOSING STOCKS WITH KNOWN FOREIGN DESTINATION,
BY BENEFICIARY**

This is a breakdown by beneficial country of the data contained in Line 6 (Category c) of Table 5 and line 6 (Category EU-c) of Table 5b.

Line 57 "Total" must be equal to Line 6 of Table 5 and line 58 "Total EU MS" must be equal to line 6 of Table 5b.

TABLE 8**CLOSING STOCKS HELD ABROAD
UNDER OFFICIAL AGREEMENT, BY LOCATION**

This is a breakdown by location of the data contained in Line 20 (Category j) of Table 5 and line 14 (Category EU-j) of Table 5b.

Line 57 "Total" must be equal to the Line 20 of Table 5 and line 58 "Total EU MS" must be equal to line 14 of Table 5b.

TABLE 8b**CLOSING STOCKS HELD ABROAD UNDER OFFICIAL AGREEMENT,
OF WHICH HELD AS STOCK TICKETS, BY LOCATION**

Please report in Table 8b, the amount of the stocks reported in Table 8 which are held as tickets, detailed by the host country. The ticket reservation is a system whereby oil is reserved with the option to buy at a market price set out in an agreement. This does not entail the buying and selling of physical oil but rather oil stock reservations, referred to as tickets.

(Please note that Table 8c is to be completed only by the EU Member States and the EnC Contracting Parties)

Please note that the instructions provided below concerning the reporting of emergency stock levels under the Directive 2009/119/EC are applicable to EU Member States, and also to Energy Community (EnC) Contracting Parties.

The EnC Contracting Parties can hold emergency stocks counting towards their stockholding obligation under the Directive on their national territory and/or on the territory of the other EnC Contracting Parties and/or on the territory of EU Member States.

TABLE 8c

**EMERGENCY STOCKS - CLOSING STOCKS HELD ABROAD, OF WHICH PURSUANT TO
GOVERNMENT / CSE DELEGATION, BY LOCATION**

Modalities for an EU Member State holding emergency stocks in the territory of another EU MS are stipulated in articles 7 and 8 of the Directive 2009/119/EC. Emergency stocks may be held abroad pursuant to a delegation of the government, the Central Stockholding Entity or obligated Economic Operators.

Please report in Table 8c emergency stocks held in other EU Member States, pursuant to a delegation of the Government or the CSE of your country.

TABLE 9

**CLOSING STOCKS HELD ABROAD DESIGNATED
DEFINITELY FOR IMPORT INTO YOUR COUNTRY, BY LOCATION**

This is a breakdown by location of the data contained in Line 22 (Category k) of Table 5 and Line 16 (Category EU-k) of Table 5b.

REPORTING INSTRUCTIONS

NATURAL GAS

1. UNITS AND CONVERSION FACTORS

Report all figures in million cubic metres (mcm) at 15°C and 760 mmHg, i.e Standard Cubic Metres, rounded to three (3) decimal places, and in Terajoules (TJ), on the basis of gross calorific values (1 TJ = 10¹²J).

(A consistent reporting scheme should be used (of 0, 1, 2 or 3 decimal places), and communicated in the Remarks page in order to ensure understanding that 18.130 is 18.130, rather than 18.132, rounded to 18.13, thus displayed as 18.130. Reporting should be consistent across all time-series for any given year, avoiding any inconsistencies between flows or products or technologies.)

▪ Normal Cubic Metres to Standard Cubic Metres

Normal cubic metres (0°C and 760 mmHg) should be converted to standard cubic metres by multiplying by a factor of 1.0548.

2. DEFINITION OF NATURAL GAS

Natural gas comprises gases, occurring naturally 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 and shale gas). Manufactured gas (produced from municipal or industrial waste, or sewage) and quantities vented or flared should not be included.

3. INSTRUCTIONS FOR COMPLETING INDIVIDUAL TABLES IN THE QUESTIONNAIRE

TABLE 10

SUPPLY OF NATURAL GAS

1. **Indigenous production:** Report dry marketable production within national boundaries, including offshore production. Production is measured after purification and extraction of NGL and sulphur. It should not include quantities re-injected, extraction losses or quantities vented or flared. It should include quantities used within the natural gas industry, in gas extraction, pipeline systems and processing plants.
2. **Receipts from other sources:** Report supplies of fuel of which production is covered in other fuel energy balances, but which are blended with natural gas, and consumed as a blend.

Note for countries reporting to EUROSTAT: this element is not mandatory under Regulation 1099/2008/EC on energy statistics

- 3/4. **Imports (Entries) and Exports (Exits):** Report all natural gas volumes which have physically crossed the national boundaries of the country, whether customs clearance has taken place or not. This includes quantities transiting your country: transit volumes should be included as an import and as an export.

Please note that this is different from the definition of natural gas trade in the annual gas questionnaire and from the definition in the previous monthly oil and gas questionnaire (Version 2007.2 as used until the end of 2012).

Imports of liquefied natural gas should cover only the dry marketable equivalent, including amounts used as own consumption in the regasification process. The amounts used as own consumption during regasification should be reported under Own use and losses of the natural gas industry (see 12)

Any gas liquids (e.g. LPG) extracted during the regasification process of imported LNG should be reported under inputs "Receipts from other sources" of "Other hydrocarbons" in the monthly oil questionnaire.

Imports and exports (Entries and Exits) reported in Table 10 should correspond to total imports and total exports (line 165) in Tables 11 and 12 respectively.

- 5. International marine bunkers:** Report the quantities of LNG or natural gas used by 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. 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.

Note for countries reporting to EUROSTAT: this element is not mandatory under Regulation 1099/2008/EC on energy statistics

- 6. Stock changes on national territory:** Stock changes should reflect the difference between the closing stock level (Line 11 of Table 10) and the opening stock level of recoverable gas (Line 10 of Table 10) on national territory. A stock build is shown as a positive number, and a stock draw as a negative number.

Note that additions to and withdrawals from LNG storage should also be included here.

- 7. Gross inland deliveries (Calculated):** This is defined as:

+ Indigenous Production
 + Receipts from other sources
 + Imports
 – Exports
 – International marine bunkers
 – Stock changes (National territory)
 = Gross inland deliveries (Calculated)

- 8. Statistical difference:** This is the difference between the calculated and observed Gross inland deliveries. Reasons for any major differences should be stated in the section provided for remarks.

- 9. Gross inland deliveries (Observed):** This category represents deliveries of marketable gas to the inland market, including 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); losses in transport, distribution and storage should also be included.

- 10/11. Stocks held on national territory (Lines 10 and 11 of Table 10):** 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. Please report all natural gas stored on your national territory whether it belongs to your country or to another country.

12/13. Stocks held abroad (Lines 12 and 13 of Table 10): Please report all natural gas that is stored in a third country but belongs to your country. These quantities are not included in the stock levels reported in ‘Stocks held on national territory’.

14. Own use and losses of the natural gas industry: This covers own use 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). Losses in transport, distribution and storage should also be included in this category.

15. Deliveries to power and heat generation: please report the amounts of gas delivered to Main Activity Producers of Electricity, CHP and Heat Plants.

16. Memo item Gas vented: The volume of gas released into the air on the production site or at the gas processing plant.

Note for countries reporting to EUROSTAT: this element is not mandatory under Regulation 1099/2008/EC on energy statistics

17. Memo item Gas flared: The volume of gas burned in flares on the production site or at the gas processing plant.

Note for countries reporting to EUROSTAT: this element is not mandatory under Regulation 1099/2008/EC on energy statistics

TABLES 11 and 12

NATURAL GAS IMPORTS (ENTRIES) BY ORIGIN AND EXPORTS (EXITS) BY DESTINATION

Geographical definitions:

- Australia excludes the overseas territories;
- Denmark excludes the Danish Faroes and Greenland;
- France includes Monaco and excludes the overseas territories Guadeloupe, Martinique, French Guyana, 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 Azores and Madeira;
- Spain includes the Canary Islands, the Balearic Islands, and Ceuta and Melilla;
- Switzerland includes Liechtenstein;
- The United States includes the 50 States, District of Columbia, Puerto Rico, Guam, the US Virgin Islands and the Hawaiian Foreign Trade Zone.

Please report all natural gas which has physically crossed the national boundaries of your country, whether customs clearance has taken place or not. This includes quantities in transit: transit volumes should be included as an import and as an export.

The origin for imports (entries) is the country of entry through which the natural gas has been received (imports/entry). The destination for exports (exits) is the country of exit to which the natural gas has been sent (exports/exit). Physical quantities should be given.

For example: Dutch gas transiting Belgium with final destination France should be reported by France as an import from Belgium. It should be reported by the Netherlands as an export to Belgium. Belgium reports an import (entry) from the Netherlands and an export (exit) to France.

The following particular points should also be noted:

- **Imports of LNG** should be reported as coming from the country of origin, as this is considered the entry point for LNG. **Regasified LNG destined for a third country:** imported LNG which is regasified in your country and subsequently exported to another country should be considered as an import of LNG into your country and as an export of gas to the country of exit to which the gas has been sent.
- **Swap deals:** Where a country has agreed to swap gas with another country then both countries are to report the import of the gas physically entering the country, indicating the country of entry as origin. For example, country A has a contract with Algeria to import gas, but swaps this gas with country B for gas from Norway. Country A reports imports of gas from the entry point of the Norwegian gas, country B reports the imports from Algeria.

See geographical notes for country definitions. Where no origin or destination can be reported, or where the country is not specified in the table, the category 'Non-Specified/Other' may be used.

Statistical differences may arise if only total imports and exports are available, while the geographical breakdown is based on a different survey, source or concept. In this case, report the differences in the 'Non-Specified/Other' category.