NATIONAL TERRITORY

Definition: The national territory for the purposes of energy statistics consists of the geographic territory within the effective economic control of the national government and it comprises:
(a) the land area;
(b) airspace;
(c) territorial waters, including areas over which jurisdiction is exercised over fishing rights and rights to fuels or minerals; and
(d) in a maritime territory, islands that are subject to the jurisdiction of the national government.

*Explanation:*The national territory includes any free trade zones, bonded warehouses or factories operated by enterprises under customs control within the areas described above.
Territorial enclaves (embassies, consulates, military bases, scientific stations, etc.) are part of the national territory where they are physically located.

SUPPLY

Definition: The net flow of fuel or energy into the national territory from its various sources of production, external trade, international bunkers and changes in stocks during the statistical reporting period.

Remark: For the purposes of constructing balances for fuels, electricity and heat, supply is calculated using the formula:
Supply = Production + Imports - Exports - International Bunkers ± Stock Change.
where International Bunkers = International Marine and Aviation Bunkers
The sign of the stock change will depend on the convention used for stock build and stock draw.

Consultant's comments
The formula for supply has been qualified to make clear that it is for use in constructing commodity balances. It is hoped that this will meet the point relating to the possible sensitivity of apparently recommending a definition of supply of general applicability.
The possible misreporting of deliveries of fuels for International Bunkers as Exports has not been mentioned in the definition. It is strictly a reporting point but will mentioned in the definitions for the specific flows.

PRODUCTION

Definition: The capture, extraction or manufacture of fuels or energy in forms which are ready for general use.

Explanation: In energy statistics two types of production are distinguished, primary and secondary.
Primary production is the capture or extraction of fuels or energy from natural energy flows, the biosphere and natural reserves of fossil fuels within the national territory in a form suitable for use. Inert matter removed from the extracted fuels and quantities reinjected, flared or vented are not included. The fuels and energy produced are termed 'primary' fuels and energy.
Production of secondary fuels or energy is their manufacture through the process of transformation of primary fuels or energy.
The quantities of secondary fuels reported as production include quantities lost through venting and flaring during and after production. In this manner the mass, energy and carbon within the primary source(s) from which the fuels are manufactured may be balanced against the secondary fuels produced.

Remark: Fuels and energy produced are usually sold but may be partly or entirely consumed by the producer.

RECEIPTS FROM OTHER SOURCES

Definition: Additions to supply from hydrocarbons or other substances which are not recognised fuels within the energy statistics or which arise from recoveries of fuels produced in an earlier reporting period.

Explanation: Examples:

Substitute Natural Gas (SNG)

SNG from methanation of Coke Oven Gas would not be added to Natural gas production in the commodity balance but added to supply of Natural Gas through "Receipts from other sources".

The energy content of the Coke Oven Gas has its origins in the energy content of the coal from which it was made. If the SNG were added to Natural Gas production and total energy in coal and gas production were summed a double count of the SNG contribution would take place. (Simplifying assumption is that the coal came from production in the national territory).

Shale Oil

Shale oil produced (*ex situ*) from oil shale (the primary fuel) would be added to the supply of Crude Oil (or Other Hydrocarbons) as 'Receipts from other sources'. However, Shale Oil produced *in situ* would be added to Crude Oil (or Other Hydrocarbons) production.

Other examples are:

Coal from waste tips

Recycled lubricants

Consultant's comments

The name of the flow has been changed as it is thought a more accurate description of the coverage of the definition.

The proposal that recovered coal could be included as part of production is open to the objection that double counting of the recovered quantity takes place when production figures are summed over several reporting periods. However, the objection assumes that the coal which is subsequently put to 'waste' has been recorded as produced. This is not always the case.

Inclusion of recycled lubricants in production of lubricants is open to the same objection but, unlike for waste coal, all lubricant production is reported.

Maintaining a balance with the primary oils from which lubricants are made is essential and inclusion of recycled lubricants with production would make this impossible.

Furthermore, separate identification of recycled quantities would probably be valuable for policy reasons.

IMPORTS AND EXPORTS

Definition: For the purposes of energy statistics, imports comprise all fuel and energy entering the national territory and exports comprise all fuel and energy leaving the national territory with the exception that exports exclude quantities of fuels delivered for use by merchant ships and civil aircraft, of all nationalities, during international transport of goods and passengers.

Explanation: Goods simply being transported through a country (goods in transit) and goods temporarily admitted/withdrawn are excluded but re-exports that is, foreign goods exported in the same state as previously imported, and reimports that is, domestic goods exported but subsequently readmitted, are included.

Consultant's comments

The proposed definition makes no reference to 'General Trade' and 'Special Trade' bases for the collection of external trade statistics. The Special Trade basis is applied when reporting to customs for trade in crude oil and products which enter refineries and bonded areas but as these flows are to be reported for energy statistics the definition above does not need to distinguish between the two types of trade.

A number of the UNSD proposals have been accepted and, in particular, the suggestion that all transit trade should be excluded irrespective of the difficulty of identifying electricity in transit. The request to countries to mention explicitly when electricity in transit has not been excluded is left for the reporting instructions.

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INTERNATIONAL MARINE BUNKERS

Definition: Quantities of fuels delivered to merchant ships, of any nationality, for consumption during international voyages transporting goods or passengers.

Explanation: International voyages take place when the ports of departure and arrival are in different national territories.

Remark: Fuels consumed by ships during domestic transportation, fishing or military use are not included here.
For the purposes of energy statistics Internal Marine Bunkers are not classified as exports.

INTERNATIONAL AVIATION BUNKERS

Definition: Quantities of fuels delivered to civil aircraft, of any nationality, for consumption during international flights transporting goods or passengers.

Explanation: International flights take place when the ports of departure and arrival are in different national territories.

Remark: For the purposes of energy statistics Internal Aviation Bunkers are not classified as exports.

STOCKS

Definition: For the purposes of energy statistics, stocks are quantities of fuels that can be held and used to

- maintain service under conditions where supply and demand are variable in their timing or amount due to normal market fluctuations, or

- supplement supply in the case of a supply disruption.

Remark: Stocks used to manage a supply disruption may be called 'Strategic' or 'Emergency' stocks and are often held separately from stocks designed to meet normal market fluctuations.

Consultant's comments

The definitions of stocks and stock change have been separated.
Emergency stocks have been included in order to ensure that oil product balances can be constructed.
Final consumers' stocks are not normally included. The conditions under which they are included should be specified in the reporting instructions.

STOCK CHANGES

Definition: The increase (*stock build*) or decrease (*stock draw*) in the quantity of stock over the reporting period.

TRANSFERS

Definition: Transfers are essentially statistical devices to overcome practical classification and presentation issues resulting from changes in use or identity of a product.

- Products transferred

Covers the reclassification (renaming) of petroleum products which is necessary when finished petroleum products are imported for use as feedstock in refineries.

- Inter product transfers

Covers the movements of fuels between product categories because of reclassification of a product which no longer meets its original specification.

Consultant's comments

Recycled products have been removed from the definition and are now included within 'Receipts from other sources'.

Wastes (Municipal/Industrial) are not identifiably recycled products because (in contrast to recycled lubricants) they do not contribute again to one of the recognised fuels or non-energy products made from fuels.

STATISTICAL DIFFERENCE

Definition: The numerical difference between the total supply of a fuel/energy and the total use of it.

Explanation: It arises from various practical limitations and problems related to the collection of the data which make up supply and demand. The data may be subject to sampling or other collection errors and/or be taken from different data sources which use different time periods, different spatial coverage, different fuel specifications or different conversions from volume to mass or from mass to energy content in the supply and demand sides of the balance.

TRANSFORMATION PROCESSES

Definition: From the point of view of energy statistics, a transformation process is the transfer of part or all of the energy content of a product entering the process to one or more different products leaving the process.

Explanation: There are two groups of processes.

(a) The physical or chemical conversion of a product into another product or products whose intrinsic properties differ from those of the original product.
Examples are:

- Chemical or physical changes to the input product(s) resulting in the creation of products containing new chemical compounds. (For example, refining)
- Physical changes to the input which involve separation into several different products with intrinsic physical properties which are different from those of the input material. (For example, Coke oven carbonisation of coal).
- Conversion of heat into electricity.
- Production of heat from combustion, fission or electricity.

And

(b) The separation or blending of products sometimes involving a change of physical shape.
Examples are:

- Separation of the component gases and liquids in wet natural gas.
- Blending gases to meet safety and quality requirements before distribution to consumers.
- Briquetting of peat and brown coal.

TRANSFORMATION PROCESSES

Remark: The transformation processes are currently identified by the plants in which they occur.

Electricity only plants
Combined heat and power plants
Heat only plants
Coke Ovens
Patent fuel plants
Blast furnaces
Gas Works (Gas coke and Town gas plants)
Petroleum refineries
Petrochemical plants
Coal liquefaction plants
Gas to Liquid (GTL) plants
Charcoal plants
Brown coal briquette plants
Peat briquette plants
Natural Gas blending plants
Gas separation plants
Other transformation processes

TRANSFORMATION PROCESSES

Consultant's comments

The definition specifies the nature of the various processes which fall within the scope of transformation and, for electricity and heat generation, the types of plant within which these energies are produced. The two-way classification of electricity and heat generation by plant type and type of producer does not further define the processes involved but permits division of the generation across plant types and the isolation of heat supplied to third parties.

Separation and blending processes are no longer a separate classification as no statistical or clarifying advantages were seen in the separation. Use of the word 'sector' has been avoided.

The transformation processes are usually identified by the names of the plants in which they occur but it is the processes themselves which should be defined. The plant names were used in the first proposals made for the October 2008 meeting, the January report and have been maintained here. However, the revised definitions proposed here describe the process involved and it is suggested that the names used to identify the processes should reflect this.

ELECTRICITY PLANTS

Definition: Electricity plants produce electricity only.

*Explanation:*The electricity may be generated

- from turbines driven by steam or from gas turbines or internal combustion engines. The steam may be produced from the combustion of fuels, from nuclear reactors or from solar and geothermal sources.

- from the conversion of kinetic energy in moving water and wind or from the direct conversion of sunlight into electricity.

Remark: If one or more of the generating units in an electricity plant is a CHP unit then the whole plant is designated a CHP plant (see below).

Consultant's comments

The revision takes into account the wish to see primary electricity included in the definition of Electricity Plants. The *Remark* could be removed a sit sits poorly in the definition and is really a warning against misclassification better suited to reporting instructions.

COMBINED HEAT AND POWER PLANTS

Definition: Combined heat and power (CHP) plants produce both heat and electricity from at least one generating unit.

Remark: They are sometimes referred to as ‘co-generation’ plants.

HEAT PLANTS

Definition: Heat plants refers to plants (including heat pumps and electric boilers) designed to produce heat only for disposal to third parties.

Remark: Heat generated by an establishment for its own use is classified within final consumption.

PRODUCER TYPES

Principal Activity Producers

Definition: Enterprises which produce electricity or heat as their principal activity.

Remark: Formerly known as *public utilities* the enterprises may be privately or publicly owned companies.

Autoproducers

Autoproducers (Electricity)

Definition: Enterprises which produce electricity but for whom the production is not their principal activity.

Autoproducers (Heat)

Definition: Enterprises which produce heat for sale but for whom the production is not their principal activity.

BLAST FURNACES

Definition: Blast furnaces produce blast furnace gas as a by-product when making pig iron from iron ore.

Explanation: Carbon, mainly in the form of coke, is added to the blast furnace to support and reduce the iron oxide charge and provide heat. Blast furnace gas is produced from the carbon monoxide and other gases formed during the heating and reduction process.

Consultant's comments

Basic oxygen steel furnace (BOSF) gas is a recognised fuel within the energy statistics. However, gas produced from arc furnaces is not recognised within the energy statistics. In integrated steel plants all recovered gases (blast furnace gas, BOSF gas and arc furnace gas) are usually combined within the gas and dust collection system and cleaned for use and so, for such plants, arc furnace gas appears as the production of another gas, probably as blast furnace gas. The carbon input into arc furnaces comprises small amounts of coke and the carbon anodes. The coke use is recorded but, as carbon anodes are not a 'fuel', their consumption by the iron and steel industry is not apparent within the energy statistics. The carbon used to make them will appear as final consumption of (usually) petroleum coke by the manufacturer.

GAS WORKS

Definition: Gas works produce Gas Works Gas and Gas Works Coke by the high temperature carbonisation of coal for distribution to consumers.

Remark: Gas Works Gas is also known as Town Gas. The process is very similar to that used for the production of Coke Oven Coke but the quality of coal used differs from the coking coal used for Coke Oven Coke as the primary purpose is to produce gas and coke produced does not have to be of metallurgical quality.

Consultant's comments

The previous definition for Gas Works Gas, given in the section 'Solid fuels and derived products', grouped together two types of gas production and blending activities. The revised definition in that chapter limits Gas Works Gas to the gas produced as described above. Consequently, the second type of process requires definition as 'Substitute Natural Gas (SNG)" plants.

SUBSTITUTE NATURAL GAS (SNG) PLANTS

Definition: Plants which manufacture methane by thermochemical processing of gases derived from coals and oil products.

Remark: The SNG is blended with natural gas for distribution or supplied direct to consumers. Substitute Natural Gas is also known as Synthetic Natural Gas.

COKE OVENS

Definition: Large ovens within which coke oven coke, coke oven gas and coal tars are produced by high temperature carbonisation of coking coal.

PATENT FUEL PLANTS

Definition: Plants manufacturing patent fuels.

PETROLEUM REFINERIES

Definition: Petroleum refineries are plants which transform the feedstock of crude oil and other hydrocarbons into finished petroleum products.

*Explanation:*Typical finished products are Liquefied Petroleum Gases, Naphtha, Motor Gasoline and Gas Oils for diesel engines and heating, Aviation fuels and other kerosenes and Fuel Oils for heating.

PETROCHEMICAL PLANTS

Definition: Petrochemical plants convert hydrocarbon feedstock into organic chemicals, intermediate compounds and finished products such as plastics, fibres, solvents and surfactants.

Explanation: Feedstock used by the plant is usually obtained from the refinery and includes naphtha, ethane, propane and middle distillate oils (for example, gas oil). The carbon and hydrogen in the feedstock is largely transferred to the basic chemicals and products subsequently made from them. However, certain by-products are also created and returned to the refinery (such as pyrolysis gasoline) or burned for fuel to provide the heat and electricity required for the cracking and other processes in the petrochemical plant.

COAL LIQUEFACTION PLANTS

Definition: Coal Liquefaction plants are where coal is used to produce liquid fuels (usually for vehicles) by hydrogenisation or carbonisation.

GAS TO LIQUIDS (GTL) PLANTS

Definition: Plants in which natural gas is used as feedstock for the production of vehicle fuels.

Remark: Note that the gas-to-liquid plants are quite different from LNG plants which convert gaseous natural gas into liquid natural gas.

CHARCOAL PLANTS

Definition: Plants in which wood or other vegetal matter is carbonised through slow pyrolysis.

BROWN COAL BRIQUETTES PLANTS

Definition: Plants manufacturing brown coal briquettes.

Consultant's comments
The section on 'Separation and Blending' has been removed.

PEAT BRIQUETTE PLANTS

Definition: Plants manufacturing peat briquettes.

NATURAL GAS BLENDING PLANTS

Definition: Plants where the calorific value and density of natural gas for distribution is adjusted through blending with nitrogen, gases from oil and/or coal, Substitute Natural Gas or with biogases.

GAS TREATMENT PLANTS

Definition: Plants in which wet natural gas is processed to reduce the hydrocarbons heavier than methane to levels which meet the gas specification for disposal or use.

*Explanation:*The hydrocarbon gases extracted are referred to as Natural Gas Liquids although not all are necessarily liquid at normal temperature and pressure.

Remark: In addition to the adjustment of hydrocarbon content inert gases and impurities are also removed.

OTHER TRANSFORMATION

Other separation and blending

Definition: Separation and blending activities not elsewhere specified.

ENERGY SECTOR

Definition: Consumption of fuels and energy for the direct support of the production, and preparation for use of fuels and energy.

Explanation: Quantities of fuels which are transformed into other fuels or energy are not included here but within the transformation use. Neither are quantities which are used within parts of the energy industry not directly involved in the activities listed in the definition. These quantities are reported within final consumption.

Remark: The headings listed in Energy Industry Own Use are:

- Coal mines
- Oil and Gas extraction
- Patent fuel plants
- Coke Ovens
- Gas Works
- Blast furnaces
- Brown Coal Briquette plants
- Petroleum refineries
- Coal liquefaction plants
- LNG regasification plants
- Gas to Liquids plants
- Biogas production plants
- Electricity and Heat plants
- Pumped storage plants
- Nuclear fuel manufacture
- Charcoal plants
- Not elsewhere specified

ENERGY SECTOR

Consultant's comments

It has not been possible to provide a complete listing of ISIC/NACE codes which define the specific parts of the enterprises involved in the plant activities with sufficient precision to make them helpful.

Fuels and energy used at SNG plants would be reported under 'Not Elsewhere Specified' as the use is assumed very small at present.

'Biogas production plants' is proposed as a more accurate description of 'Gasification plants for biogas' used in the previous report. The category covers the use of fuels to maintain the temperature of anaerobic fermentation of wastes for the production of biogas.

DISTRIBUTION LOSSES

Definition: Losses during the transmission, distribution and transport of fuels and electricity. Distribution losses also include venting and flaring of manufactured gases and pilferage of fuels or electricity.

Remark: Production of secondary gases includes quantities subsequently vented or flared. This ensures that a balance can be constructed between the use of the primary fuels from which the gases are derived and the production of the gases.

FINAL CONSUMPTION

Definition: Final consumption is all fuel and energy that is delivered to consumption sectors for both their energy and non–energy needs. Consumption sectors comprise:

- Industry (excluding the energy industry)
- Transport
- Residential
- Commerce and public services
- Agriculture, Forestry
- Fishing
- Not elsewhere specified (includes military consumption)

Explanation: Energy needs are for heat raising, transportation and electricity. Non-energy needs are those for fuels used for chemical feedstocks and non-energy products.

- Chemical feedstocks are fuels used as raw materials for the manufacture of products which contain the hydrogen and/or carbon taken from the fuel.
- Non-energy products are fuel products used for their physical and chemical properties. Examples are lubricants, paraffin waxes, coal tars and oils as timber preservatives, etc.

Remark: Any fuel use for a transformation process should not be classified as final consumption. Studies of the non-energy use of fuels also classify reductants as non-energy use.

- Reductants are carbon from fuels (usually cokes) which are heated with metal oxides. During the process the formation of carbon monoxide removes the oxygen from the metal oxides and produces the pure metal.

This use (mostly for the manufacture of iron and steel) is considered as use for energy purposes within energy statistics because the gases created by the reduction process, and which contain most of the carbon from the reductant, are used as fuels to sustain the process or for other heat raising purposes.

FINAL CONSUMPTION

Consultant's comments

1- In an ideal world the lower part of the statistical boundary would be actual consumption of fuels and energy, that is the point of use where the energy content is finally lost as irrecoverable heat. In practice deliveries of stockable fuels are used as a proxy for their consumption as data for consumption of stockable fuels are available for only a few classes of consumer. For distributed gas and electricity deliveries closely approximate consumption.

2- The use of the term 'final consumption' instead of 'intermediate consumption' reflects the main uses for fuels and energy.
When considering the use of fuels for energy purposes 'intermediate consumption' occurs only for transformation processes in which fuels or heat are transformed to other fuels, heat or electricity. These processes (including autoproducer generation) are not part of final consumption. Within almost all industry fuels and electricity are finally consumed in the sense that they do not enter other products but are dissipated into the atmosphere after they have done their work. In this respect industrial use of fuels and energy is identical to households' use.
Final consumption of fuels for chemical feedstock use and for non-energy products is a mixture of intermediate and final use as described above. A significant portion of the fuel supplied to the petrochemical plants is used for heat and electricity and the remainder embodied in products sold for non-energy purposes.

3- The definition needs to define the non-energy uses. It seems appropriate and natural to do it here rather than define it separately elsewhere and introduce a cross reference. Nevertheless, a separate definition has been provided for consideration if it is thought desirable to have one.

4- The *remark* has been edited to make explicit the use of reductants for the manufacture of iron and steel.

INDUSTRY

Definition: Use of fuels within the manufacturing and construction industries.

Remark: Energy industry own use is excluded as is fuel use for coke manufacture and in blast furnaces within the iron and steel sector. Consumption of fuels for transport of goods is classified under transport.

INDUSTRY

Branch	Activity Classification
Iron and steel	ISIC Group 241 and Class 2431 (NACE Groups 24.1, 24.2, 24.3, and Classes 24.51, and 24.52). Consumption in coke ovens and blast furnaces are defined as part of the transformation sector and the energy sector.
Chemical and petrochemical	ISIC/NACE Divisions 20 and 21
Non-ferrous metals	ISIC Group 242 and Class 2432 (NACE Group 24.4, and Classes 24.53 and 24.54).
Non-metallic minerals	ISIC/NACE Division 23. Report glass, ceramic, cement and other building materials industries.
Transport equipment	ISIC/NACE Divisions 29 and 30.
Machinery	ISIC/NACE Divisions 25, 26, 27 and 28. Fabricated metal products, machinery and equipment other than transport equipment.
Mining and quarrying	ISIC Divisions 07 and 08 and Group 099. This excludes the mining of uranium and thorium ores (Class 0721) and the extraction of peat (Class 0892).
Food and tobacco	ISIC/NACE Divisions 10, 11 and 12.
Paper, pulp and print	ISIC/NACE Divisions 17 and 18. Includes production of recorded media.
Wood and wood products (Other than pulp and paper)	ISIC/NACE Division 16.
Textile and leather	ISIC/NACE Divisions 13, 14 and 15.
Construction	ISIC/NACE Divisions 41, 42 and 43.
Industries not elsewhere specified	ISIC Divisions 22, 31, 32 as well as any manufacturing industry not listed above.

TRANSPORT

Definition: Consumption of fuels and electricity used in transport of goods or persons between points of departure and destination within the national territory irrespective of the economic sector within which the activity occurs.

Remark: Classification of the consumption of fuels by merchant ships and civil aircraft undertaking transport of goods or persons beyond the national territory is covered under the definitions for International Marine and Aviation Bunkers and are therefore excluded from this definition. However, deliveries of fuels to road vehicles going beyond national borders cannot be readily identified and by default are included here.

DOMESTIC AVIATION

Definition: Quantities of aviation fuels delivered to all civil aircraft undertaking a domestic flight transporting passengers or goods or for purposes such as crop spraying and the bench testing of aero engines.

Explanation: A domestic flight takes place when the departure and landing airports are on national territory. In cases where distant islands form part of the national territory this may imply long flights through the air space of other countries but the flights are, nevertheless, part of domestic aviation.

Remark: Military use of aviation fuels should not be included in domestic aviation but included under 'not elsewhere specified'. The use of fuel by airlines for ground transport is also excluded here but included under 'Commerce and Public Services'. Domestic aviation is part of ISIC Division 51.

ROAD

Definition: Fuels and electricity delivered to vehicles using public roads.

Explanation: Fuels delivered for 'off-road' use and stationary engines should be excluded. Off-road use comprises vehicles and mobile equipment used primarily on commercial, industrial sites or private land, or in agriculture or forestry. The deliveries of fuels related to these uses are included under the appropriate final consumption heading. Deliveries for military uses are also excluded here but included under 'not elsewhere specified'.
The road fuel use by ISIC 4923 (Freight transport by road) is included here.

Consultant's comments
The purpose of this definition is to obtain data for fuels used to transport goods and people on roads open for general use. Fuels delivered for similar use on sites dedicated to an economic activity are part of the fuel consumption for that activity. As the ISIC Class 4923 is only part of this transport mode its mention may not help.

RAIL

Definition: Fuels and electricity delivered for use in rail vehicles, including industrial railways.

Remark: This includes urban rail transport (including trams) and is part of the fuel and energy consumption by ISIC Group 491 (Transport via Railways).

Consultant's comments
Urban rail transport has been included as the case for continuing to omit it is not evident.

DOMESTIC NAVIGATION

Definition: Fuels delivered to vessels transporting goods or people and undertaking a domestic voyage.

Explanation: A domestic voyage is between ports of departure and destination in the same national territory without intermediate ports of call in foreign ports. Note that this may include journeys of considerable length between two ports in a country (e.g. San Francisco to Honolulu).

Remark: Fuels delivered to fishing vessels are excluded here but included under 'Fishing'. Domestic navigation is part of ISIC Division 50.

PIPELINE TRANSPORT

Definition: Fuels and electricity used in the support and operation of pipelines transporting gases, liquids, slurries and other commodities between points within the national territory.

Explanation: It comprises the consumption at pumping stations and for maintenance of the pipeline. Consumption for maintaining the flow in pipelines carrying water, natural gas, manufactured gas, hot water and steam in *distribution* networks is excluded here but included under the appropriate heading within 'Energy Industry Own Use'. Consumption for the transport of natural gas in *transmission* networks is included.

Remark: Pipelines carrying fuels may use some of the fuel carried to provide the energy required for the transport.
Pipeline transport is classified as ISIC Group 493 (Transport via pipeline).

TRANSPORT NOT ELSWHERE SPECIFIED

Definition: Deliveries of fuels or electricity used for transport activities not covered within the modes of transport defined elsewhere.

Remark: Most of the forms of transport listed in ISIC Class 4922 (Other land transport) are included in the modes of transport defined elsewhere. However, consumption of electricity for téléphériques (telfers), and ski and cable lifts would be included here.

RESIDENTIAL

Definition: Fuels and energy consumed by all households.

Remark: Includes households with employed persons or producing undifferentiated goods and services. (ISIC/NACE Divisions 97 and 98).
Exclude fuels and electricity used by households for transport.

COMMERCIAL AND PUBLIC SERVICES

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

Explanation: The activities covered are those listed within the following ISIC divisions: 33, 36-39, 45-47, 52-53, 55-56, 58-66, 68-75, 77-82, 84-88, 90-96 and 99.

AGRICULTURE

Definition: Deliveries of fuels and energy for agriculture, hunting and forestry.

Remark: It includes fuels and energy consumed for traction or for power or heating (ISIC Divisions 01 and 02).

FISHING

Definition: Deliveries to all vessels engaged in ocean, coastal and inland fishing as well as for aquaculture and fisheries (ISIC/NACE Division 03). Include also fuel and energy use in gathering of marine materials; natural pearls, sponges, coral and algae; and service activities incidental to fishing.

NOT ELSEWHERE SPECIFIED

Definition: Consumption for activities not classified elsewhere.

Remark: This category includes fuels and electricity delivered to military services based in the national territory. The energy consumption is 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 nation's military services or for the military services of another country based on the national territory.

NON-ENERGY USE

Definition: Fuels used for chemical feedstocks and non-energy products.

- Chemical feedstocks are fuels used as raw materials for the manufacture of products which contain the hydrogen and/or carbon taken from the fuel.

- Non-energy products are fuel products used for their physical and chemical properties. Examples are lubricants, paraffin waxes, coal tars and oils as timber preservatives, etc.

Remark: Studies of the non-energy use of fuels also classify reductants as non-energy use, however, in energy statistics the use of reductants is considered an energy use.

- Reductants are carbon from fuels (usually cokes) which are heated with metal oxides. During the process the formation of carbon monoxide removes the oxygen from the metal oxides and produces the pure metal.

This use (mostly for the manufacture of iron and steel) is considered as use for energy purposes within energy statistics because the gases created by the reduction process, and which contain most of the carbon from the reductant, are used as fuels to sustain the process or for other heat raising purposes.