

# 2018 Energy Statistics Yearbook



# Department of Economic and Social Affairs

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#### INTRODUCTION

The Energy Statistics Yearbook 2018 is a comprehensive collection of international energy statistics prepared by the United Nations Statistics Division. It is the sixty-second in a series of annual compilations which commenced under the title World Energy Supplies in Selected Years, 1929-1950.1 It updates the statistical series shown in the previous issue. Supplementary series of monthly data on production of energy may be found in the Monthly Bulletin of Statistics.2

The principal objective of the Yearbook is to provide a global framework of comparable data on long-term trends in the supply of both primary and secondary forms of energy. Data for each energy product and aggregated data for the total energy supply are shown for individual countries and territories, and are summarized into regional and world totals. The data are compiled primarily from the annual energy questionnaire distributed by the United Nations Statistics Division and supplemented by official national statistical publications, as well as publications from international and regional organizations. Where official data are not available or are inconsistent, estimates are made by the Statistics Division based governmental, professional on commercial materials. Estimates include, but are not limited to, extrapolated data based on partial year information, use of annual trends, trade data based on partner country reports, breakdowns of aggregated data and analysis of current energy events. 3

This issue of the *Yearbook* contains data in original and common energy units (tons of coal equivalent and joules) for the years 2015-2018.<sup>4</sup>

This publication presents energy statistics consistent with the International Recommendations for Energy Statistics (IRES), which were endorsed by the United Nations Statistical Commission in 2011. IRES contains the Standard International Energy Product Classification (SIEC), the first definitive standard classification for energy products. It has been

unstats.un.org/unsd/energystats/pubs/yearbook/

built on a set of internationally harmonized definitions of energy products developed by the Intersecretariat Working Group on Energy Statistics (InterEnerStat) as mandated by the United Nations Statistical Commission. The adoption of SIEC as an international standard classification for energy products represents a significant step forward for energy statistics at the international level. SIEC not only provides a unified set of product definitions, but also uses a standard coding scheme, a common hierarchy of categories, and provides links to other internationally agreed product classifications, such as the Central Product Classification (CPC) and the Harmonized Commodity Description and Coding System (HS).

Within this methodological framework:

- a) Table 1 shows a more historical perspective of total energy supply, with data for selected years going back to 1990.
- b) Table 2 provides more detail on the components of total energy supply, namely primary production (broken down by type), trade, international bunkers and stock changes. Total energy supply is also shown on a per capita basis.
- c) Table 3 provides more detail on total final consumption of energy products, broken down by consuming sector (including non-energy use), and also shows total final consumption per capita.

By referring to previous volumes of the publication, time series can be established from 1950 to the present for the shown products. In addition to the basic tables showing production, trade, stock changes, international bunkers, supply and consumption, information is included on various other topics such as:

- (a) The principal importers and exporters of hard coal, crude oil and natural gas for the years 2017 and 2018:
- (b) The capacity of oil refineries and electricity generating plants by type;
- (c) The ratio of crude oil and natural gas liquids reserves to crude oil and natural gas liquids production (R/P ratio);
  - (d) The electricity generated from different

<sup>&</sup>lt;sup>1</sup>Statistical Papers, Series J, No. 1 (United Nations publication, Sales No. 1952.XVII.3).

<sup>&</sup>lt;sup>2</sup> Statistical Papers, Series Q, *Monthly Bulletin of Statistics*, (United Nations publication).

<sup>&</sup>lt;sup>3</sup>For details, see

 $<sup>^4\</sup>mathrm{Table}$  1 shows data back to 1990 to give a more historical perspective.

sources (including both electricity-only and combined heat and power (CHP) plants) such as from combustible fuels, nuclear, hydro, wind, and solar:

(e) The heat produced (from both heat-only and CHP plants) from combustible fuels, geothermal, solar thermal, nuclear, chemical heat, heat pumps and electric boilers, and direct use of solar thermal and geothermal.

The information contained in the *Yearbook* is also available in electronic format<sup>5</sup>. Requests for information should be directed to United Nations Publications at: order@un.org.

Acknowledgement is due to the following specialized and intergovernmental agencies whose publications have been utilized in supplementing our statistics: African Energy Commission (AFREC), Asia-Pacific Economic Cooperation (APEC), Food and Agriculture Organization of the United Nations (FAO), International Atomic Energy Agency (IAEA), International Energy Agency of the Organisation

for Economic Co-operation and Development (IEA/OECD), International Renewable Energy Sugar Agency (IRENA), International Organization Organization of (ISO), Arab Petroleum Exporting Countries (OAPEC). Organization of the Petroleum **Exporting** Countries (OPEC), Organización Latinoamericana de Energía (OLADE), Statistical Office of the European Union (Eurostat), World Energy Council (WEC). Acknowledgement is also made to governmental, energy and statistical authorities of the Member States which have been cooperative in providing data.

The annual energy data are being collected and processed by the Energy Statistics Section of UNSD, headed by Mr. Leonardo Souza. The processing of the energy data and preparation for publication was carried out by Ms. Agnieszka Koscielniak, Mr. Man Soni, Ms. Costanza Giovannelli, Ms. Peng Guo and Mr. Graham Osborn.

Enquiries, comments and suggestions for improving this publication are welcome and should be addressed to: energy\_stat@un.org.

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<sup>&</sup>lt;sup>5</sup> For details, see unstats.un.org/unsd/energystats/pubs/yearbook/

# ABBREVIATIONS AND SYMBOLS

The following symbols and abbreviations have been used:

cSt centistoke

m<sup>3</sup> cubic metre

°C degree Celsius

GJ gigajoule (10<sup>9</sup> joules)

GWh gigawatt-hour (10<sup>6</sup> kWh)

IRES International Recommendations for Energy Statistics

kcal kilocalorie

kg kilogramme

kg/cm<sup>2</sup> kilogramme per square centimetre

kJ kilojoule (10<sup>3</sup> joules)

kWh kilowatt-hour

LPG liquefied petroleum gas

mg/g milligramme per gramme

MJ megajoule (10<sup>6</sup> joules)

MW megawatt

NGL natural gas liquids

PJ petajoule (10<sup>15</sup> joules)

t metric ton

TCE ton of coal equivalent

TJ terajoule (10<sup>12</sup> joules)

estimate by the United Nations Statistics Division

.. data not applicable or not available

# **ENERGY PRODUCT DEFINITIONS**

This section provides definitions of energy products utilized in the publication. These definitions correspond to SIEC. Some tables may include names or concepts not included in these product definitions. See the specific table's notes for how its product definitions relate to SIEC definitions.

#### **SOLID FOSSIL FUELS**

Hard coal – Coals with a gross calorific value (moist, ash-free basis) which is not less than 24 MJ/kg or which is less than 24 MJ/kg provided that the coal has a vitrinite mean random reflectance greater than or equal to 0.6 per cent. Hard coal comprises anthracite and bituminous coals.

**Brown coal** – Coals with a gross calorific value (moist, ash-free basis) less than 24 MJ/ kg and a vitrinite mean random reflectance less than 0.6 per cent. Brown coal comprises subbituminous coal and lignite.

**Peat** – A solid fuel formed from the partial decomposition of dead vegetation under conditions of high humidity and limited air access (initial stage of coalification). It is available in two forms for use as a fuel, sod peat and milled peat. Only peat used as fuel is included.

**Patent fuel** – A composition fuel made by moulding hard coal fines into briquette shapes with the addition of a binding agent such as pitch.

**Brown coal briquettes** – A composition fuel made of brown coal produced by briquetting under high pressure with or without the addition of a binding agent. Either sub-bituminous coal or lignite may be used, including dried lignite fines and dust.

**Peat products** – This includes products such as peat briquettes derived directly or indirectly from sod peat and milled peat.

Coal coke – This group includes the solid, cellular, infusible material remaining after the carbonisation of certain coals. Various cokes are defined according to the type of coal carbonised and their conditions of carbonisation or use: coke oven coke, gas coke, coke breeze and semi cokes. For collection purposes coke breeze and

semi cokes are included with coke oven coke.

**Coal tar** – The liquid by-product of the carbonization of coal in coke ovens. Coal tar may be separated by distillation into several liquid products which may be used for pharmaceutical or wood preservative purposes.

Other coal products – coal products not elsewhere specified (if any).

Oil shale – A sedimentary rock which contains organic matter in the form of kerogen. Kerogen is a waxy hydrocarbon-rich material regarded as a precursor of petroleum. Oil shale may be burned directly or processed by heating to extract shale oil. Note that this product was formerly included under Lignite by the IEA.

#### LIQUID FOSSIL FUELS

Conventional crude oil – A mineral oil of fossil origin extracted by conventional means from underground reservoirs, and comprises liquid or near-liquid hydrocarbons and associated impurities such as sulphur and metals. Conventional crude oil exists in the liquid phase under normal surface temperature and pressure, and usually flows to the surface under the pressure of the reservoir. This is termed "conventional" extraction. Crude oil includes condensate from condensate fields, and "field" or "lease" condensate extracted with the crude oil.

The various crude oils may be classified according to their sulphur content ("sweet" or "sour") and API gravity ("heavy" or "light"). There are no rigorous specifications for the classifications, but a heavy crude oil may be assumed to have an API gravity of less than 20° and a sweet crude oil may be assumed to have less than 0.5% sulphur content. For simplicity, this publication often refers to conventional crude oil as simply crude oil.

**Natural gas liquids (NGL)** – Natural gas liquids are a mixture of ethane, propane, butane (normal and iso), (iso) pentane and a few higher alkanes collectively referred to as pentanes plus.

NGL are produced in association with oil or natural gas. They are removed in field facilities or

gas separation plants before sale of the gas. All of the components of NGL except ethane are either liquid at the surface or are liquefied for disposal.

The definition given above is the most commonly used. However, there is some use of terms based on the vapour pressure of the components which are liquid at the surface or can be easily liquefied. The three resulting groups are in order of increasing vapour pressure: condensates, natural gasoline and liquefied petroleum gas.

NGL may be distilled with crude oil in refineries, blended with refined oil products or used directly. NGL differs from LNG (liquefied natural gas) which is obtained by liquefying natural gas from which the NGL has been removed.

Additives and oxygenates – Compounds added to or blended with oil products to modify their properties (octane, cetane, cold properties, etc.). Examples are: (a) oxygenates such as alcohols (methanol, ethanol) and ethers [MTBE (methyl tertiary butyl ether), ETBE (ethyl tertiary butyl ether), TAME (tertiary amyl methyl ether)]; (b) esters (e.g., rapeseed or dimethylester, etc.); and (c) chemical compounds (such as TML, TEL and detergents). Some additives/oxygenates may be derived from biomass while others may be of fossil hydrocarbon origin.

Other hydrocarbons - This includes nonhvdrogen. conventional oils and conventional oils refer to oils obtained by nonconventional production techniques, that is oils which are extracted from reservoirs containing extra heavy oils or oil sands which need heating or treatment (e.g., emulsification) in situ before they can be brought to the surface for refining/processing. They also include the oils extracted from oil sands, extra heavy oils, coal and oil shale which are at, or can be brought to, the surface without treatment and require processing after mining (ex situ processing). Nonconventional oils may also be produced from natural gas.

The oils may be divided into two groups: (i) oils for transformation (e.g., synthetic crudes extracted from extra heavy oils, oil sands, coal and oil shale); and (ii) oils for direct use (e.g., emulsified oils such as orimulsion and GTL liquids).

Oil products – Products obtained from crude oil, non-conventional oils or gases from oil and gas fields. They may be produced through the refining of conventional crude and non-conventional oils or during the separation of natural gas from gases extracted from oil or gas fields. This category includes Aviation gasoline, Motor gasoline, Gasoline-type jet fuel, Kerosene-type jet fuel, Other kerosene, Gas/diesel oil, Fuel oil, LPG, Feedstocks, Naphtha, White spirit and SBP, Lubricants, Bitumen, Paraffin waxes, Petroleum coke, Refinery gas, Ethane, and Other oil products.

**Aviation gasoline** – Gasoline prepared especially for aviation piston engines with additives which assure performance under flight conditions. Aviation gasolines are predominantly alkylates (obtained by combining C4 and C5 isoparaffins with C3, C4 and C5 olefins) with the possible addition of more aromatic components including toluene. The distillation range is 25°C to 170°C.

**Motor gasoline** – A mixture of some aromatics (e.g., benzene and toluene) and aliphatic hydrocarbons in the C5 to C12 range. The distillation range is 25°C to 220°C.

Additives are blended to improve octane rating, improve combustion performance, reduce oxidation during storage, maintain cleanliness of the engine and improve capture of pollutants by catalytic converters in the exhaust system. Motor gasoline may also contain biogasoline products when blended.

**Gasoline-type jet fuel –** Light hydrocarbons 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 per cent in volume, and the vapour pressure is between 13.7 kPa and 20.6 kPa. Gasoline-type jet fuel is also known as "aviation turbine fuel".

**Kerosene** – Mixtures of hydrocarbons in the range C9 to C16 and distilling over the temperature interval 145°C to 300°C, but not usually above 250°C and with a flash point above 38°C.

The chemical compositions of kerosenes

depend on the nature of the crude oils from which they are derived and the refinery processes that they have undergone. Kerosenes obtained from crude oil by atmospheric distillation are known as straight-run kerosenes. Such streams may be treated by a variety of processes to produce kerosenes that are acceptable for blending as jet fuels.

Kerosenes are primarily used as jet fuels. They are also used as domestic heating and cooking fuels, and as solvents. Kerosenes may include components or additives derived from biomass when blended.

**Kerosene-type jet fuel –** A blend of kerosenes suited to flight conditions with particular specifications, such as freezing point.

The specifications are set down by a small number of national standards committees, most notably ASTM (U.S.), MOD (UK), GOST (Russia).

Other kerosene – Kerosene which is used for heating, cooking, lighting, solvents and internal combustion engines. Other names for this product are burning oil, vaporizing oil, power kerosene and illuminating oil.

**Gas oil/diesel oil –** Gas oils are middle distillates, predominantly of carbon number range C11 to C25 and with a distillation range of 160°C to 420°C. The principal marketed products are fuels for diesel engines (diesel oil), heating oils and marine fuel. Gas oils are also used as middle distillate feedstock for the petrochemical industry and as solvents. Also included here is heavy gasoil, which is a mixture of predominantly gas oil and fuel oil which distills in the range of approximately 380°C to 540°C.

**Fuel oil –** Comprises residual fuel oil and heavy fuel oil. Residual fuel oils have a distillation range of 350°C to 650°C and a kinematic viscosity in the range 6 to 55 cSt at 100°C. Their flash point is always above 60°C and their specific gravity is above 0.95. Heavy fuel oil is a general term describing a blended product based on the residues from various refinery processes. Other names commonly used to describe fuel oil include: bunker fuel, bunker C, fuel oil No. 6, industrial fuel oil, marine fuel oil and black oil.

Residual and heavy fuel oil are used in medium to large industrial plants, marine

applications and power stations in combustion equipment such as boilers, furnaces and diesel engines. Residual fuel oil is also used as fuel within the refinery.

**Liquefied petroleum gases (LPG) –** LPG refers to liquefied propane (C3H8) and butane (C4H10) or mixtures of both. Commercial grades are usually mixtures of the gases with small amounts of propylene, butylene, isobutene and isobutylene stored under pressure in containers.

The mixture of propane and butane used varies according to purpose and season of the year. The gases may be extracted from natural gas at gas separation plants or at plants regasifying imported liquefied natural gas. They are also obtained during the refining of crude oil. LPG may be used for heating and as a vehicle fuel.

See also the definition for natural gas liquids. Certain oil field practices also use the term LPG to describe the high vapour pressure components of natural gas liquids.

**Ethane** – A naturally straight-chain hydrocarbon ( $C_2H_6$ ). Ethane is obtained at gas separation plants or from the refining of crude oil. It is a valuable feedstock for petrochemical manufacture.

Refinery gas – Includes a mixture of noncondensable 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 or from nearby petrochemical plants. It is used mainly as a fuel within the refinery.

Feedstocks – This includes refinery feedstocks, i.e. oils or gases from crude oil refining or the processing of hydrocarbons in the petrochemical industry which are destined for further processing in the refinery excluding blending. Typical feedstocks include naphthas, middle distillates, pyrolysis gasoline and heavy oils from vacuum distillation and petrochemical plants.

Naphtha – Light or medium oils distilling between 30°C and 210°C which do not meet the specification for motor gasoline. Different naphthas are distinguished by their density and the content of paraffins, isoparaffins, olefins, naphthenes and aromatics. The main uses for naphthas are as feedstock for high octane

gasolines and the manufacture of olefins in the petrochemical industry.

White spirit and SBP industrial spirits – White spirit and special boiling point industrial spirits (SBP) are refined distillate intermediates with a distillation in the naphtha/kerosene range. They are mainly used for non-fuel purposes and sub-divided as: (a) white spirit - an industrial spirit with a flash point above 30°C and a distillation range of 135°C to 200°C; and (b) industrial spirit (SBP) - light oils distilling between 30°C and 200°C.

There are 7 or 8 grades of industrial spirits, depending on the position of the cut in the distillation range. The grades are defined according to the temperature difference between the 5 per cent and 90 per cent volume distillation points (which is not more than 60°C). White spirit and Industrial spirits are mostly used as thinners and solvents.

**Lubricants** – Oils, produced from crude oil, for which the principal use is to reduce friction between sliding surfaces and during metal cutting operations.

Lubricant base stocks are obtained from vacuum distillates which result from further distillation of the residue from atmospheric distillation of crude oil. The lubricant base stocks are then further processed to produce lubricants with the desired properties.

**Bitumen** – A solid, semi-solid or viscous hydrocarbon with a colloidal structure, being brown to black in color. It is obtained as a residue in the distillation of crude oil and by vacuum distillation of oil residues from atmospheric distillation. It should not be confused with the nonconventional primary extra heavy oils which may also be referred to as bitumen.

In addition to its major use for road pavements, bitumen is also used as an adhesive, a waterproofing agent for roof coverings and as a binder in the manufacture of patent fuel. It may also be used for electricity generation in specially designed power plants.

Bitumen is also known in some countries as asphalt but in others asphalt describes the mixture of bitumen and stone aggregate used for road pavements.

**Paraffin waxes –** Residues extracted when dewaxing lubricant oils. The waxes have a crystalline structure which varies in fineness according to the grade, and are colourless, odourless and translucent, with a melting point above 45°C.

Paraffin waxes are also known as "petroleum waxes".

**Petroleum coke** – Petroleum coke is a black solid obtained mainly by cracking and carbonizing heavy hydrocarbon oils, tars and pitches. It consists mainly of carbon (90 to 95 per cent) and has a low ash content.

The two most important categories are "green coke" and "calcined coke".

Green coke (raw coke) is the primary solid carbonization product from high boiling hydrocarbon fractions obtained at temperatures below 630°C. It contains 4-15 per cent by weight of matter that can be released as volatiles during subsequent heat treatment at temperatures up to approximately 1330°C.

Calcined coke is a petroleum coke or coalderived pitch coke obtained by heat treatment of green coke to about 1330°C. It will normally have a hydrogen content of less than 0.1 per cent by weight.

In many catalytic operations (e.g., catalytic cracking) carbon or catalytic coke is deposited on the catalyst, thus deactivating it. The catalyst is reactivated by burning off the coke which is used as a fuel in the refining process. The coke is not recoverable in a concentrated form.

Other oil products – Products (including partly refined products) from the refining of crude oil and feedstocks which are not specified above. These products will include basic chemicals and organic chemicals destined for use within the refinery or for sale to or processing in the chemical industry such as propylene, benzene, toluene and xylene.

#### **GASEOUS FOSSIL FUELS**

**Natural gas** – A mixture of gaseous hydrocarbons, primarily methane, but generally also including ethane, propane and higher

hydrocarbons in much smaller amounts and some non-combustible gases such as nitrogen and carbon dioxide.

The majority of natural gas is separated from both "non-associated" gas originating from fields producing hydrocarbons only in gaseous form, and "associated" gas produced in association with crude oil.

The separation process produces natural gas by removing or reducing the hydrocarbons other than methane to levels which are acceptable in the marketable gas. The natural gas liquids (NGL) removed in the process are distributed separately.

Natural gas also includes methane recovered from coal mines (colliery gas) or from coal seams (coal seam gas) and shale gas. When distributed it may also contain methane from anaerobic fermentation or the methanation of biomass.

Natural gas may be liquefied (LNG) by reducing its temperature in order to simplify storage and transportation when production sites are remote from centres of consumption and pipeline transportation is not economically practicable.

Gas works gas (and other manufactured gases for distribution) – This includes gases obtained from the carbonisation or gasification of carbonaceous material of fossil or biomass origins in Gas Works. The gases comprise: (a) gases obtained from carbonisation or gasification of coals, cokes, biomass or waste; and (b) substitute natural gas (a methane-rich gas) made from synthesis gas.

Synthesis gas is a mixture of mainly hydrogen and carbon monoxide obtained by cracking hydrocarbons with high temperature steam.

**Coke oven gas** – A gas produced from coke ovens during the manufacture of coke oven coke.

Blast furnace gas – The by-product gas of blast furnace operation consisting mainly of nitrogen, carbon dioxide and carbon monoxide. The gas is recovered as it leaves the furnace. Its calorific value arises mainly from the carbon monoxide produced by the partial combustion of coke and other carbon bearing products in the blast furnace. It is used to heat blast air and as a

fuel in the iron and steel industry. It may also be used by other nearby industrial plants. Note that where carbonised biomass (e.g., charcoal or animal meal) is used in blast furnaces, part of the carbon supply may be considered renewable.

Other recovered gases - Combustible gases of solid carbonaceous origin recovered from manufacturing and chemical processes not elsewhere defined. Examples of fuel gas production from metals and chemicals processing are in the production of zinc, tin, lead, ferroalloys, phosphorus and silicon carbide.

#### **BIOFUELS AND WASTE**

Fuelwood, wood residues and byproducts – Fuelwood or firewood (in log, brushwood, pellet or chip form) obtained from natural or managed forests or isolated trees. Also included are wood residues used as fuel and in which the original composition of wood is retained. Charcoal and black liquor are excluded.

**Bagasse** – The fuel obtained from the fibre which remains after juice extraction in sugar cane processing. It is often used as a fuel within the sugar milling industry.

**Charcoal** – The solid residue from the carbonisation of wood or other vegetal matter through slow pyrolysis.

**Animal waste –** Excreta of animals, meat and fish residues which, when dry, are used directly as a fuel.

This excludes waste used in anaerobic fermentation plants. Fuel gases from these plants are included under biogases.

**Vegetal waste** – Refers to SIEC's 'Other vegetal materials and residues', which are solid primary biofuels not specified elsewhere, including straw, vegetable husks, ground nut shells, pruning brushwood, olive pomace and other wastes arising from the maintenance, cropping and processing of plants.

**Municipal waste –** Household waste and waste from companies and public services that resembles household waste and which is collected at installations specifically designed for the disposal of mixed wastes with recovery of combustible liquids, gases or heat.

Municipal wastes can be divided into renewable and non-renewable fractions.

**Industrial waste –** Non-renewable waste which is combusted with heat recovery in plants other than those used for the incineration of municipal waste.

Examples are used tires, specific residues from the chemical industry and hazardous wastes from health care. Combustion includes co-firing with other fuels.

The renewable portions of industrial waste combusted with heat recovery are classified according to the biofuels which best describe them.

**Black liquor** – The alkaline-spent liquor obtained from the digesters during the production of sulphate or soda pulp required for paper manufacture. The lignin contained in the liquor burns to release heat when the concentrated liquor is sprayed into a recovery furnace and heated with hot gases at 900°C. Black liquor is used as a fuel in the pulping process.

**Biogasoline –** Liquid fuels derived from biomass and used in spark-ignition internal combustion engines.

Common examples are: bioethanol (including both hydrous and anhydrous ethanol); biomethanol; biobutanol; bio ETBE (ethyl-tertio-butyl-ether); and bio MTBE (methyl-tertio-butyl-ether). Biogasoline may be blended with petroleum gasoline or used directly in engines. The blending may take place in refineries or at or near the point of sale.

**Biodiesels** – Liquid biofuels derived from biomass and used in diesel engines.

Biodiesels obtained by chemical modification alkyl ester made are linear transesterification of vegetable oils or animal fats methanol. The transesterification distinguishes biodiesel from straight vegetable and waste oils. Biodiesel has a flash point of around 150°C and a density of about 0.88 kg/litre. Biological sources of biodiesel include, but are not limited to, vegetable oils made from canola (rapeseed), soybeans, corn, oil palm, peanut or sunflower. Some liquid biofuels (straight vegetable oils) may be used without chemical modification and their use usually

requires modification of the engine.

A further category of diesel fuels can be produced by a range of thermal processes (including for example gasification followed by Fischer Tropsch synthesis, pyrolysis followed by hydrogenation, or conversion of sugar to hydrocarbons using microorganisms (e.g. yeast)). A wide range of biomass feedstocks, including cellulosic materials and algal biomass could be used in such processes.

Biodiesels may be blended with petroleum diesel or used directly in diesel engines.

Bio jet kerosene – Liquid biofuels derived from biomass and blended with or replacing jet kerosene. Bio jet kerosene can be produced by a range of thermal processes (including for example gasification followed by Fischer-Tropsch synthesis, pyrolysis followed by hydrogenation, or conversion of sugar to hydrocarbons using microorganisms (e.g. yeast). A wide range of biomass feedstocks, including cellulosic materials and algal biomass could be used in such processes.

Other liquid biofuels – Includes liquid biofuels not elsewhere specified.

**Biogases** – Gases arising from the anaerobic fermentation of biomass and the gasification of solid biomass (including biomass in wastes).

The biogases from anaerobic fermentation are composed principally of methane and carbon dioxide and comprise landfill gas, sewage sludge gas and other biogases from anaerobic fermentation.

Biogases can also be produced from thermal processes (by gasification or pyrolysis) of biomass and are mixtures containing hydrogen and carbon monoxide (usually known as syngas) along with other components. These gases may be further processed to modify their composition and can be further processed to produce substitute natural gas.

The gases are divided into two groups according to their production: biogases from anaerobic fermentation and biogases from thermal processes.

Biogases are used mainly as a fuel but can

be used as a chemical feedstock.

#### **ELECTRICITY AND HEAT**

**Electricity** –The transfer of energy through the physical phenomena involving electric charges and their effects when at rest and in motion.

Electricity can be generated through different processes such as: the conversion of energy contained in falling or streaming water, wind or waves; the direct conversion of solar radiation through photovoltaic processes in semiconductor devices (solar cells); or by the combustion of fuels.

Electricity production in this Yearbook refers to gross production, which is the sum of the electrical energy production by all the generating units/installations concerned (including pumped storage) measured at the output terminals of the main generators.

Editorial note: as of the 2012 edition of the Yearbook, Table 1 changed in scope as described in the introduction. The total energy supply figure is now consistent with energy balances as defined within IRES and published in the Energy Balances and Electricity Profiles<sup>6</sup> that are complementary to this publication. As such, see the changes in presentation for electricity from non-combustible fuels described below under General Notes.

**Primary electricity** refers to electrical energy from hydro, solar photovoltaics, wind, tide, wave and ocean sources.

**Secondary electricity** is defined as electricity derived from a product already accounted for within energy statistics. This includes electricity generated from combustible fuels, in addition to electricity coming from solar heat, nuclear heat, geothermal heat and heat from chemical sources.

Main activity producers - These are

enterprises which produce electricity or heat as their principal activity. Formerly known as public utilities, these enterprises may be privately or publicly owned companies.

**Autoproducers (electricity) –** These are enterprises which produce electricity but for whom the production is not their principal activity.

Autoproducers (heat) – These are enterprises which produce heat for sale but for whom the production is not their principal activity. Deliveries of fuels for heat generated by an establishment for its own purposes are classified within the part of final consumption where they are consumed, and not as transformation inputs.

**Heat –** The energy obtained from the translational, rotational and vibrational motion of the constituents of matter, as well as changes in its physical state.

Heat can be produced by different production processes, both primary and secondary. It is usually sold in the form of steam or hot water, and for the purposes of energy statistics it is important to note that heat only represents quantities of energy for sale (or generated and consumed directly by direct use of solar thermal or geothermal). This means that any quantities "generated" at an end-use site (for example through the combustion of coal to power a boiler, or an electric filament heating a kettle) are not considered within the scope of heat production.

In Tables 1 and 2, which follow energy balance methodology, the heat column includes primary heat from sources such as nuclear, solar thermal and geothermal which are used to generate electricity. These quantities are not taken into account in Table 34.

**Uranium production –** Comprises the U content of uranium ores and concentrates intended for treatment for uranium recovery.

<sup>&</sup>lt;sup>6</sup> Statistical Papers, Series W (United Nations publication).

### **ENERGY FLOW DEFINITIONS**

**Production** is defined as the capture, extraction or manufacture of fuels or energy in forms which are ready for general use. 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 resulting products are referred to as "primary" products.

Secondary production is the manufacture of energy products 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. Fuels, electricity and heat produced are usually sold but may be partly or entirely consumed by the producer (but see the definition of autoproducer heat plants for an important exception.)

When considering complete energy balances (such as in Table 1, where total energy supply is displayed), or indeed adding together a mix of primary and secondary fuels (like Table 4), the distinction between primary and secondary production is crucial. Within a complete energy balance (or a coal table showing both primary and secondary energy), only primary energy is shown to avoid double counting of quantities transformed into secondary products. For the product-specific tables however, this distinction is not necessary as double counting does not apply. and so primary and/or secondary production is included under production to give a complete idea of the "supply" of that product. See individual table notes for details.

**Imports** of energy products comprise all fuel and other energy products entering the national territory. Goods simply being transported through a country (goods in transit) and goods temporarily admitted are excluded but re-imports, which are domestic goods exported but subsequently

readmitted, are included. The bunkering of fuel outside the reference territory by national merchant ships and civil aircraft engaged in international travel is excluded from imports. Fuels delivered to national merchant ships and civil aircraft which are outside of the national territory and are engaged in international travel should be classified as "International Marine" or "Aviation Bunkers", respectively, in the country where such bunkering is carried out. Note that the "country of origin" of energy products should be recorded as a country from which goods were imported.

**Exports** of energy products comprise all fuel and other energy products leaving the national territory with the exception that exports exclude quantities of fuels delivered for use by merchant (including passenger) ships and civil aircraft, of all nationalities, during international transport of goods and passengers. Goods simply being transported through a country (goods in transit) and goods temporarily withdrawn are excluded but re-exports, foreign goods exported in the same state as previously imported, are included. Fuels delivered to foreign merchant ships and civil aircraft engaged in international travel are classified as "International Marine" or "Aviation Bunkers", respectively. Note that "country of destination" of energy products (that is country of the last known destination as it is known at the time of exportation) should be recorded as a country to which these products are exported to.

For electricity, trade data include "goods in transit", i.e. electricity transmitted through the country from one neighbour to another, as there is no practical way of discerning which quantities are re-exported and which are consumed by the transit country.

International Marine Bunkers are quantities of fuels delivered to merchant (including passenger) ships, of any nationality, consumption during international vovages transporting goods or passengers. International voyages take place when the ports of departure and arrival are in different national territories. Fuels delivered for consumption by ships during domestic transportation, fishing or military uses are not included here. For the purposes of energy statistics International Marine Bunkers are not included in exports.

International Aviation Bunkers are quantities of fuels delivered to civil aircraft, of any nationality, for consumption during international flights transporting goods or passengers. International flights take place when the ports of departure and arrival are in different national territories. Fuels delivered for consumption by aircraft undertaking domestic or military flights are not included here. For the purposes of energy statistics International Aviation Bunkers are not included in exports.

Stocks – For the purposes of energy statistics, stocks are quantities of energy products that are held on the national territory and can be used to: (a) maintain service under conditions where supply and demand are variable in their timing or amount due to normal market fluctuations, or (b) supplement supply in the case of a supply disruption. 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. Stock changes are defined as the increase (stock build) or decrease (stock draw) in the quantity of stock over the reporting period and are thus calculated as the difference between the

closing and opening stocks.

Energy supply – is defined as energy production plus imports minus exports minus international marine bunkers minus international aviation bunkers minus stock changes. Depending on the table in this Yearbook, production can refer to either primary, secondary, or both primary and secondary production (see the note under production above).

Energy industries own use refers to consumption of fuels and energy for the direct support of the production, and preparation for use of fuels and energy. 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.

**Final Consumption** refers to all fuel and energy that is delivered to users for both their energy and non-energy uses which do not involve a transformation process.

### CAPACITIES AND OTHER DEFINITIONS

#### **CAPACITIES**

**Refinery capacity** is the theoretical maximum capacity of crude oil refineries available for operation at the end of the reference year.

Net maximum electrical capacity is the maximum active power that can be supplied continuously, with all plants running, at the point of outlet (i.e., after taking the power supplies for the station auxiliaries and allowing for the losses in those transformers considered integral to the This assumes no restriction of station). interconnection to the network. Does not include overload capacity that can only be sustained for a short period of time (e.g., internal combustion engines momentarily running above their rated capacity). The net maximum electricity-generating capacity represents the sum of all individual plants' maximum capacities available to run continuously throughout a prolonged period of operation in a day. For annual data, the net maximum electrical capacity is considered as measured at the end of the reference year.

#### ENERGY RESOURCES AND RESERVES7

#### Hard Coal, Brown coal and Peat

**Proved amount in place** is the resource remaining in known deposits that has been carefully measured and assessed as exploitable under present and expected local economic conditions with existing available technology.

**Proved recoverable reserves** are the tonnage within the proved amount in place that can be recovered in the future under present and expected local economic conditions with existing available technology.

Estimated additional amount in place is the indicated and inferred tonnage additional to the proved amount in place that is of foreseeable economic interest. It includes estimates of amounts which could exist in unexplored extensions of known deposits or in undiscovered deposits in known coal-bearing areas, as well as amounts inferred through knowledge of

favourable geological conditions. Speculative amounts are not included.

#### **Crude Oil and Natural Gas Liquids**

**Proved recoverable reserves** are the quantity within the proved amount in place that can be recovered in the future under present and expected local economic conditions with existing available technology. Proved amount in place is the resource remaining in known natural reservoirs that has been carefully measured and assessed as exploitable under present and expected local economic conditions with existing available technology.

The ratio of crude oil reserves to production (R/P ratio) is used to show the length of time those reserves would last in years if production continued at the then-current level and there were no further increases in the proved recoverable reserves. The ratio is calculated by dividing the proved recoverable crude oil and NGL reserves (which for the most part refer to reserves at the end of 2014) by the production. These R/P ratios should be viewed with caution. The definition used for proved recoverable reserves is very restrictive and confined to those known reserves which can be recovered with reasonable certainty under existing economic conditions. The R/P ratios, therefore, can frequently give a very pessimistic impression of the expected life of a country's reserves. In addition, for some of those countries whose R/P ratios appear very large, it can reasonably be assumed that the figures for proved recoverable reserves include some unproved reserves.

#### Oil Shale and Bituminous Sands

**Proved recoverable reserves** are the amount, expressed as tonnage of recoverable synthetic oil that has been both carefully measured and has also been assessed as exploitable under present and expected local economic conditions with existing available technology.

<sup>&</sup>lt;sup>7</sup>World Energy Resources 2016. World Energy Council (WEC)

#### **Natural Gas**

**Proved recoverable reserves** are the volume within the proved amount in place that can be recovered in the future under present and expected local economic conditions with existing available technology.

#### Uranium

Reasonably assured resources refer to recoverable uranium that occurs in known mineral deposits of delineated size, grade and configuration such that the quantities which could be recovered within the given production cost ranges with currently proven mining and processing technology can be specified. Estimates of tonnage and grade are based on specific sample data and measurements of the deposits and on knowledge of deposit characteristics.

Inferred Resources refer to recoverable uranium (in addition to reasonably assured resources) that is inferred to occur, based on direct geological evidence, in extensions of well-explored deposits and in deposits in which geological continuity has been established, but where specific data and measurements of the deposits and knowledge of their characteristics are considered to be inadequate to classify the resource as reasonably assured resources.

#### Hydropower

Gross theoretical capability is the annual energy potentially available in the country if all natural flows were turbined down to sea level or to the water level of the border of the country (if the water course extends into another country) with 100% efficiency from the machinery and driving water-works. Unless otherwise stated, the figures have been estimated on the basis of atmospheric precipitation and water runoff.

#### **GENERAL NOTES**

# Calculation of primary energy equivalent for electricity and heat

As mentioned previously, the publication now treats electricity and heat consistently with IRES energy balances. Notably, this leads to the following notional efficiencies applying to electricity and heat generation (to back calculate the primary energy):

- 100% for electricity from hydro, wind, tide, wave, ocean and solar PV;
- 33% for electricity from nuclear heat or solar thermal;
- 100% for solar thermal heat;
- 50% for heat produced from geothermal heat:
- 10% for electricity from geothermal heat.

#### Consumption

Consumption throughout the *Yearbook* is defined consistently with the definition of final consumption in IRES, namely the sum of flows reflecting energy consumption by energy consumers, as well as non-energy use of energy products. As such, the publication should no longer have the same issues with negative consumption figures that previous versions did, when consumption was calculated based on supply flows and as such negative figures could appear for countries that exported secondary products.

#### **Negative Supply**

Negative supply can represent a residual or statistical difference between production and exports when a particular product is mainly exported, or when a transferred product is subsequently exported.

#### **Time Period**

The period to which the data refer is the calendar year, with the exception of the data of the following countries which refer to the fiscal year:

Afghanistan and Iran (Islamic Rep. of) - beginning 21 March of the year stated;

Australia, Bangladesh, Bhutan, Egypt (for the latter two, electricity only), Nepal - ending June of the year stated;

Pakistan - starting July of the year stated

India, Japan and Myanmar - beginning April of the year stated.

#### Trade data

Figures displayed for international trade by partner country in Tables 6, 15 and 28 are based on data from the International Energy Agency and from the United Nations Statistics Division COMTRADE (Commodity Trade Statistics). The total of all exports will likely differ from the figures given in other tables because not all of the importers are included, and also possibly because of definitional differences between data sources.

#### Per Capita Data

Data on a *per capita* basis use population data from the United Nations Population Division as a denominator. These indicators may sometimes show differences for certain years compared to previous versions of this publication, due to revisions made by the Population Division rather than changes to the underlying energy data.

#### Coverage

As Table 1 contains data back to 1990, data are included for former countries such as the Union of Soviet Socialist Republics, and older versions of countries such as Ethiopia which have since had territories split from them.

#### **GEOGRAPHICAL NOTES**

**Australia** – Data exclude the overseas territories.

**Bonaire, Sint Eustatius, Saba** – Data prior to 2012 are included in Netherlands Antilles (former).

**China** – Data exclude Hong Kong and Macao Special Administrative Regions (Hong Kong SAR and Macao SAR) and Taiwan Province.

**Curaçao** – Data prior to 2012 are included in Netherlands Antilles (former).

**Czechoslovakia** – prior to 1993, refers to the former Czechoslovakia composed of Czechia and Slovakia.

**Denmark** – Data exclude Greenland and the Danish Faroes.

France - Data up to 2010 include Monaco and exclude the following overseas departments and territories: Guadeloupe, French Guiana, Martinique, Mayotte, New Caledonia, French Polynesia, Réunion, Saint Barthélemy, Saint Martin, St. Pierre and Miguelon, and Wallis and Futuna. From 2011 onwards, data include overseas Monaco and the departments (Guadeloupe, Martinique, French Guiana, Mayotte and Réunion), excluding the overseas collectivities: New Caledonia, French Polynesia, Saint Barthélemy, Saint Martin, St. Pierre and Miguelon, and Wallis and Futuna.

French Guiana – Data after 2010 are included in France.

Germany – Through the accession of the German Democratic Republic to the Federal Republic of Germany with effect from 3 October 1990, the two German States united to form one sovereign state. Data for 1990 are shown separately for the former states.

**Guadeloupe** – Data after 2010 are included in France.

**Indonesia** – Data include Timor-Leste until 2001.

**Italy** – Data include San Marino and the Holy See.

**Japan** – Data include Okinawa.

**Kuwait** – The data for crude oil production include 50 per cent of the output of the Neutral Zone.

**Martinique** – Data after 2010 are included in France.

**Mayotte** – Data after 2010 are included in France.

**Netherlands** – Data exclude Suriname and the Netherlands Antilles (former).

Netherlands Antilles (former) – The country, comprising Bonaire, Curaçao, Saba, Sint Eustatius and Sint Marteen (Dutch part), was dissolved on 10 October 2010. For the purposes of this yearbook, data up to 2011 refer to the former territory of the Netherlands Antilles as it was known prior to 10 October 2010.

Pacific Islands – Until 1991, Trust Territory comprising Federated States of Micronesia, Marshall Islands, Northern Mariana Islands and Palau.

**Portugal** – Data include the Azores and Madeira.

**Republic of Moldova** – Data exclude Transnistria and the municipality of Bender.

**Réunion** – Data after 2010 are included in France.

**Saudi Arabia** – Data for crude oil production include 50 per cent of the output of the Neutral Zone.

**Serbia** – Data exclude Kosovo, which is shown separately.

**Serbia and Montenegro** – Data exclude Kosovo from 2000 onwards. As a former country/area, it appears in this edition only in Table 1.

**Sint Maarten (Dutch part)** – Data prior to 2012 are included in Netherlands Antilles (former).

**South Sudan** – Data prior to 2012 are included in Sudan (former).

Spain - Data include the Canary Islands.

**Sudan** – Data prior to 2012 are included in Sudan (former).

**Sudan** (former) – South Sudan became an independent state on 9 July 2011. This country represents the whole territory of Sudan as it was on 1 January 2011 for data up to and including 2011.

**Switzerland** – Data include Liechtenstein for oil statistics.

**Ukraine** – The Government of Ukraine has informed the United Nations that it is not in a position to provide statistical data concerning the Autonomous Republic of Crimea and the city of Sevastopol.

Union of Soviet Socialist Republics – Referred to as USSR, comprised up to 1990 Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Republic of Moldova, Russian Federation,

Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

**United Kingdom** – Shipments of coal and oil to Jersey, Guernsey and the Isle of Man from the United Kingdom are not classed as exports. Supplies of coal and oil to these islands are, therefore, included as part of UK supply. Exports of natural gas to the Isle of Man are included with the exports to Ireland.

United States – Includes the 50 states and the District of Columbia. Oil statistics as well as coal trade statistics also include Puerto Rico, Guam, the U.S. Virgin Islands, American Samoa, Johnston Atoll, Midway Islands, Wake Island and the Northern Mariana Islands.

Yemen – On 22 May 1990 Democratic Yemen and Yemen Arab Republic merged to form a single State. Since that date they have been represented as one Member with the name 'Yemen'. Data for 1990 are shown separately for the former states.

**Yugoslavia** – Data until 1991 refer to the former Socialist Federal Republic of Yugoslavia, namely Bosnia and Herzegovina, Croatia, North Macedonia, Montenegro, Slovenia and Serbia (including Kosovo).

# COUNTRY-SPECIFIC INFORMATION

**Armenia** – Other vegetal material and residues data are available from 2012 onward, animal waste production and consumption are available from 2015 onward.

**Belarus** – Prior to 2013, kerosene-type jet fuel is reported under other oil products.

**China** – Data for other kerosene include kerosene-type jet fuel until 2013.

In the 2018 edition, the newly released data for 2018 only were included, but the revisions for the years 1990-2017 were not available on time for the publication.

**China, Hong Kong SAR** – Data on kerosene-type jet fuel include aviation gasoline and other kerosene.

**China, Macao SAR** – For confidentiality reasons, some data on coal and coal products, petroleum products and biomass are not available.

**Egypt** – Data for lubricants are included with other oil products for 2011-2013.

**Estonia** – There are breaks in the series of coke oven gas and gas works gas, as from 2018 onward these products include the breakdown of oil shale gases. Revisions are pending.

**Eswatini** – There are breaks in the series of heat, fuelwood and bagasse, following the reclassification of input for non-sold heat in autoproducers heat plants. This consumption is now reported under final use

**France** – For confidentiality reasons, the category blast furnace gas also includes coke oven gas and other recovered gases for 2018 and 2019.

**Germany** – From 2018 onward, due to a change in the reporting methodology, Imports and Exports do not include transit volumes.

**Greenland** – Data for kerosene-type jet fuel include other kerosene.

**Israel** – For confidentiality reasons, data on electricity from hydro and wind are not available

for 2016.

**Kazakhstan** – The Committee of Statistics of Kazakhstan constantly works on improving data quality and aligning their data collection and dissemination system with the International Recommendations for Energy Statistics.

Supply of some oil products for 2016 and 2017 as well as coke oven throughputs from 2014 until 2018 are under verification.

**Lesotho** – In 2017, the Bureau of Statistics conducted the "Household Energy Consumption Survey 2017" in order to establish a baseline for energy consumption in households. The data on supply and consumption of animal waste and fuelwood for 2017 are based on the results of this new survey. Supply and consumption data of animal waste and fuelwood from 2009 to 2016 were estimated by UNSD to avoid breaks in the time series. Revisions are pending.

**Madagascar** – Data for bitumen include petroleum coke.

**Morocco** – There is a break in the series of primary oil and oil products, following the refinery closure in August 2015.

**Pakistan** – Data on wind and solar electricity and on electricity from other sources are all reported as wind electricity.

Russian Federation – The main source of Russian trade statistics is the Federal Customs Service of the Russian Federation. As a result, some of the figures may not include the mutual trade with the Member States of the Eurasian Economic Union. Some of the crucial trade datapoints were estimated by UNSD in order to avoid undercounting on the world level and for international comparison purposes.

Kerosene-type jet fuel statistics are confidential, and as such were estimated by UNSD.

Ethane figures are under investigation and should be treated with caution.

**Senegal** – The sources of trade data for 2017 are the Bureaux de change au Sénégal and

this may lead to breaks in time series between 2016 and 2017.

Manantali dam and Félou hydro electricity plants are situated in Mali, but are owned by Mali, Senegal and Mauritania, supplying electricity to these three countries. Following the *International Recommendations for Energy Statistics*, electricity obtained by Senegal from these plants are counted as imports, and not as Senegalese hydro electricity production.

**Tajikistan** – The Agency on Statistics under President of the Republic of Tajikistan is constantly working on increasing transparency and improving the quality of energy data.

Starting with 2016, more granular data on coal consumption are available. This leads to breaks in time series between 2015 and 2016 data.

New information on quantities of fuelwood consumed for energy purposes in Tajikistan are

available for 2016 as a result of a survey conducted by the Agency on Statistics. For historical data, revisions are pending.

Ukraine – For confidentiality reasons, data on the following products (mainly on production) may not be available or may be included with other products: anthracite (included with other bituminous coal), sub-bituminous coal (included with other bituminous coal), lignite (included with peat), patent fuel (included with peat briquettes), aviation gasoline, kerosene-type jet fuel, other kerosene, petroleum coke, paraffin waxes and white spirit (the latter three included with other oil products), gasworks gas (included with other recovered gases).

**Uzbekistan** – In 2019, the State Committee of the Republic of Uzbekistan on Statistics released more granular energy supply information, starting with 2013 data. As a result, there are breaks in time series for many products and flows. For historical data, revisions are pending.

#### UNITS OF MEASUREMENT AND CONVERSION

Metric units of measurement are used throughout the *Yearbook*. The following tables provide the necessary factors for converting energy data from one measurement system (mass, volume or heat) to another. Unless otherwise stated in the Table Notes, in the case of solid fuels, liquid fuels and gases, the conversions are based on the net calorific value.

The comparison between different fuels is presented in metric tons of coal equivalent (TCE, Table 4), and terajoules (Tables 1, 2, 3 and 12) on the basis of the heat energy which may be obtained from each of them. One TCE is defined as 0.0293076 TJ, or 29307.6 MJ. This is derived from the standard coal equivalency of 7000 calories per gram.

The procedure to convert from original units to the common unit terajoule is as follows:

 Data in original (mass) units multiplied by the factors in Table I will give data in terajoules.

Further, to convert electricity data to terajoules, the following energy equivalence is applied: 1 GWh = 3.6 TJ.

Data on natural gas are collected in terajoules on a gross calorific value basis by convention. When comparing natural gas with other energy sources, it is more appropriate to compare useful energy, and thus the data have been converted to be on a net calorific basis by multiplying them by 0.9.

Table I

NET CALORIFIC VALUES OF ENERGY PRODUCTS

GJ/ton

	2015	2016	2017	2018
Standard factor	25.8	25.8	25.8	25.8
Albania	14.3	14.3	20.4	20.4
Argentina	24.7	24.7	24.7	24.7
Australia	27.0	27.0	27.0	26.9
Austria	28.3	28.1	28.4	28.4
Azerbaijan	27.7	27.7	27.7	27.7
Bangladesh	20.9	20.9	20.9	20.9
Belarus	25.6	25.2	24.5	23.7
Belgium	27.8	27.8	29.4	29.4
Bosnia and Herzegovina	30.7	29.1	29.1	29.1
Botswana	23.6	23.6	23.6	23.6
Brazil	16.0	15.8	16.8	16.7
Bulgaria	27.8	28.0	25.2	27.4
Canada	25.0	25.0	25.0	25.0
Chile	27.8	16.8	17.0	16.7
China	20.4	20.8	20.8	20.8
China, Hong Kong SAR	26.4	26.4	26.4	26.4
Colombia	27.2	27.2	27.2	27.2
Croatia	25.1	25.1	25.1	25.1
Czechia	27.0	27.5	26.6	26.5
Denmark	24.1	24.3	24.3	26.6
Egypt	25.7	25.7	25.7	25.8
Estonia	27.2	27.2	22.0	22.0
Finland	26.4	26.7	26.6	26.8
Georgia	25.3	25.2	25.2	27.6
Germany	30.0	29.1	29.1	29.1
Greece	25.9	25.5	23.3	25.9
Guatemala	28.9	28.9	28.9	28.9
Hungry	29.6	31.1	29.4	30.0
Iceland	28.1	28.1	28.1	27.8
India	16.7	16.5	16.1	16.0
Indonesia	25.8	25.9	25.9	25.9
Iran (Islamic Republic of)	27.8	27.8	28.0	28.0
Ireland	25.7	25.1	25.8	25.8
Israel	25.0	24.9	24.9	24.9
Japan	25.6	21.4	24.4	23.2
Kazakhstan	18.6	18.6	18.6	18.9
Korea, Democratic People's Republic of	26.5	26.5	26.5	26.5
Korea, Republic of	18.6	18.6	19.4	19.4
Kyrgyzstan	18.6	18.6	18.6	18.6
Latvia	23.9	23.8	24.1	24.1
Lithuania	25.1	25.1	25.1	25.1
Malaysia	26.4	26.4	26.4	26.4

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

HARD COAL	2015	2016	2017	2018
Standard factor	25.8	25.8	25.8	25.8
Mauritius	25.8	25.8	26.0	26.0
Mexico	29.2	29.3	29.3	29.3
Mongolia	28.3	28.3	28.3	28.3
Morocco	27.6	27.6	27.6	27.6
Mozambique	27.3	27.0	26.9	26.8
Myanmar	23.3	23.3	23.3	23.3
Namibia	22.7	22.7	22.7	22.7
Nepal	25.1	25.1	25.1	25.1
Netherlands	25.0	25.3	26.2	26.4
New Caledonia	26.0	26.0	26.0	26.0
New Zealand	30.1	30.2	29.7	28.7
Niger	16.0	16.0	16.0	16.0
North Macedonia	26.1	26.1	26.2	27
Pakistan	18.8	18.8	18.8	18.8
Peru	28.3	27.3	27.1	26.9
Poland	24.0	24.0	23.9	23.9
Portugal	24.7	24.7	24.9	24.8
Republic of Moldova	23.9	23.9	24.2	24.9
Romania	25.8	25.7	25.6	25.6
Russian Federation	26.2	26.1	26.1	26.1
Serbia	25.7	25.7	25.6	27.4
Slovakia	28.9	29.0	29.0	28.9
Slovenia	27.0	27.3	27.4	27.3
South Africa	23.7	23.7	23.7	23.7
Spain	19.8	19.6	19.5	19.6
Sri Lanka	29.3	29.3	29.3	29.3
Sweden	28.9	29.1	29.0	28.7
Tajikistan	18.6	25.0	25.1	25.0
Thailand	26.4	26.4	26.4	26.4
Turkey	25.5	24.2	24.6	24.9
Ukraine	23.9	24.1	23.4	23.2
United Kingdom	24.9	25.1	25.1	25.1
United States	26.9	27.0	27.1	27.2
Uruguay	25.8	25.8	25.8	25.8
Uzbekistan	18.6	18.6	18.6	18.6
Venezuela (Bolivarian Republic of)	30.6	30.6	30.6	30.6
Viet Nam	23.4	23.4	23.4	23.4
Zambia	24.7	24.7	24.7	24.7
Zimbabwe	27.0	27.0	27.0	27.0

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

BROWN COAL	2015	2016	2017	2018
Standard factor	14.0	14.0	14.0	14.0
Armenia	7.8	7.8	7.8	11.9
Australia	12.0	12.4	12.6	13.1
Austria	20.6	20.5	20.3	21.1
Belgium	22.0	22.0	21.8	22.6
Bosnia and Herzegovina	10.1	10.8	10.7	10.6
Bulgaria	6.8	6.9	6.9	7.0
Cambodia Canada Croatia Czechia Georgia Germany	19.9	19.9	19.9	19.9
	16.9	16.7	16.7	16.5
	16.0	16.9	17.1	17.1
	12.6	12.5	12.5	12.6
	17.0	17.0	17.0	17.0
	9.0	9.0	9.0	9.0
Greece	5.1	5.1	5.1	4.9
Hungary	6.9	6.6	6.7	6.7
India	9.5	9.5	9.5	9.5
Indonesia	21.1	21.1	21.2	21.2
Kazakhstan	18.5	18.6	19.5	19.5
Korea, Democratic People's Republic of	17.6	17.6	17.6	17.6
Korea, Republic of	21.4	21.4	21.4	21.4
Kosovo	7.8	7.8	7.8	7.8
Kyrgyzstan	14.7	14.7	14.7	14.7
Lao, People's Democratic Republic	10.9	10.9	10.8	9.6
Lithuania	14.7	22.7	22.7	22.7
Mexico	20.0	19.8	19.6	19.6
Mongolia	14.4	14.4	14.4	14.4
Montenegro	9.2	9.2	9.2	9.6
Myanmar	16.3	16.3	16.3	16.3
Netherlands	20.0	20.0	20.0	20.0
New Zealand	19.6	19.2	19.5	19.7
North Macedonia	6.2	6.1	7.0	6.7
Philippines Poland Romania Russian Federation Serbia Slovakia	22.1	22.1	22.1	22.1
	8.2	8.1	8.3	8.3
	7.9	7.7	7.3	7.1
	14.9	14.9	14.9	14.9
	8.0	7.8	7.6	7.4
	10.7	13.8	10.2	10.2
Slovenia	11.4	10.2	11.6	11.7
Spain	13.4	13.5	13.5	13.4
Tajikistan	14.7	17.0	17.0	17.0
Thailand	10.7	10.6	10.6	10.6
Turkey	8.8	8.6	8.6	8.0
United States	18.3	18.1	18.2	18.3
Uzbekistan	14.7	14.7	14.7	14.7

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

COKE OVEN COKE	2015	2016	2017	2018
Standard factor	28.2	28.2	28.2	28.2
Argentina	28.5	28.5	28.5	28.5
Australia	27.0	27.0	27.0	27.0
Austria	28.6	28.9	28.6	27.9
Belgium	29.3	29.3	29.3	29.3
Bosnia and Herzegovina	28.5	28.5	28.5	28.5
Brazil	28.9	28.9	28.9	28.9
Bulgaria	28.5	28.5	28.5	28.5
Belarus	29.0	29.0	29.0	29.0
Canada	27.5	27.5	27.5	27.5
Chile	28.6	28.6	28.6	30.1
China	28.5	28.5	28.5	28.4
Colombia	20.1	20.1	20.1	20.1
Croatia	29.3	29.3	29.3	29.3
Czechia	28.6	28.7	28.9	28.5
Denmark	29.3	29.3	29.3	29.3
Estonia	28.5	28.5	28.5	28.5
Finland	29.3	29.3	29.3	29.3
Georgia	29.3	29.3	29.3	29.3
Germany	28.7	28.7	28.7	28.7
Hungary	29.8	29.9	29.6	29.4
Iceland	26.7	26.7	26.7	26.8
Japan	29.2	29.2	29.2	29.2
Kazakhstan	26.9	26.8	26.9	26.9
Korea, Republic of	28.9	28.9	28.9	28.9
Luxembourg	28.5	28.5	28.5	28.5
Mexico	28.7	28.4	28.4	28.4
Netherlands	28.5	28.5	28.5	28.5
New Zealand	29.5	29.5	29.5	29.5
Peru	28.2	28.2	28.2	28.2
Poland	28.0	28.0	28.0	28.0
Portugal	30.7	30.4	30.8	30.8
Romania	26.4	26.4	26.4	26.4
Russian Federation	29.0	29.0	29.0	29.0
Serbia	29.0	29.0	29.0	29.0
Slovakia	28.2	28.3	28.4	28.4
Slovenia	30.1	30.0	30.1	30.1
South Africa	26.5	26.5	26.5	26.5
Spain	26.8	26.8	27.3	27.3
Sweden	28.1	28.1	28.1	28.1
Turkey	27.2	27.0	27.0	27.0
Ukraine	25.1	25.1	25.1	25.1
United Kingdom	29.8	29.8	29.8	29.8
United States	28.9	28.9	28.9	28.9
Zimbabwe	25.1	25.1	25.1	25.1

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

PATENT FUEL	2015	2016	2017	2018
Standard factor	20.7	20.7	20.7	20.7
Austria Belgium Germany Korea, Republic of Luxembourg Poland	31.0	31.0	31.0	31.0
	30.5	30.5	30.5	30.5
	31.4	31.4	31.4	31.4
	18.6	18.6	19.4	19.4
	28.2	28.2	28.2	28.2
	23.8	23.2	23.2	23.2
Slovakia	28.0	28.0	28.0	28.0
United Arab Emirates	29.0	29.0	29.0	29.0
United Kingdom	28.3	28.3	28.3	28.3
Uzbekistan	29.0	29.0	29.0	29.0
BROWN COAL BRIQUETTES	2015	2016	2017	2018
Standard factor	20.7	20.7	20.7	20.7
Australia	21.0	21.0	21.0	21.0
Austria	19.8	19.8	19.8	19.8
Belgium	20.7	20.7	20.7	20.7
Bulgaria	13.4	11.6	12.6	12.9
Czechia	19.8	23.4	23.3	22.9
Germany	21.2	21.4	21.1	21.1
Hungary	19.1	19.0	19.6	19.3
India	20.0	20.0	20.0	20.0
Ireland	19.8	19.8	19.8	19.8
Luxembourg	22.2	22.2	22.2	22.2
Mexico	18.0	18.0	18.0	18.0
Netherlands	20.0	20.0	20.0	20.0
Poland	17.5	17.5	17.5	17.5
Serbia	17.7	17.7	17.6	17.8
Slovakia	17.9	17.2	17.6	17.6
PEAT	2015	2016	2017	2018
Standard factor	9.8	9.8	9.8	9.8
Belarus	10.1	10.0	9.4	9.7
Burundi	14.7	14.7	14.7	14.7
Estonia	10.7	10.7	10.1	10.1
Falkland Islands	9.5	9.5	9.5	9.5
Finland	10.1	10.0	9.9	9.9
Ireland	9.0	8.9	8.7	8.7
Latvia	10.1	10.1	10.1	10.1
Lithuania	11.7	11.7	11.7	11.7
Romania	8.8	8.8	8.8	8.8
Russian Federation	10.0	10.0	10.0	10.0
Sweden	12.5	12.5	12.5	12.5
Ukraine	9.7	9.7	9.7	9.7

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

OIL SHALE	2015	2016	2017	2018
Standard factor	8.9	8.9	8.9	8.9
Estonia	9.0	8.3	8.0	9.2
Israel	4.0	4.0	4.0	4.0
CRUDE OIL	2015	2016	2017	2018
Standard factor	42.3	42.3	42.3	42.3
Azerbaijan	43.1	43.1	43.1	43.1
Australia	44.0	44.0	44.0	44.0
Austria	42.5	42.5	42.5	42.5
Belgium	42.2	42.2	42.2	42.2
Brazil	42.2	42.2	42.3	42.3
Canada	42.8	42.8	42.8	42.8
Chile China Czechia Denmark Finland France	43.2	43.2	43.2	43.2
	41.9	41.9	41.9	41.9
	42.4	42.4	42.4	42.8
	43.0	43.0	43.0	43.0
	42.7	42.7	42.7	42.7
	42.8	42.8	42.8	42.8
Georgia	42.5	42.5	42.5	42.5
Germany	42.5	42.5	42.5	42.5
Greece	38.2	38.2	38.2	38.2
China, Hong Kong Special Administrative Region	42.4	42.5	42.5	42.5
Hungary	41.8	41.8	41.8	41.8
Ireland	42.8	42.8	42.8	42.8
Israel	42.5	42.5	42.5	42.5
Italy	41.9	41.9	41.9	41.9
Japan	42.1	42.1	42.0	42.0
Korea, Republic of	42.7	42.7	42.2	42.2
Lithuania	41.9	42.3	42.3	42.3
Mexico	43.5	43.5	43.5	43.5
Morocco	42.4	42.4	42.4	42.4
Netherlands	42.7	42.7	42.7	42.7
New Zealand	43.6	43.6	43.6	43.6
Norway	41.1	42.2	43.4	43.4
Peru	43.0	43.0	43.0	43.0
Poland	42.7	42.5	42.1	42.5
Portugal	43.0	43.0	43.0	43.0
Slovakia	41.2	43.2	43.3	43.3
Spain	42.3	42.3	42.3	42.3
Sweden	42.2	42.2	42.2	42.2
Switzerland	43.2	43.2	43.2	43.2
Turkey	44.2	44.3	44.3	44.3
United Kingdom	43.4	43.4	43.4	43.4
United States	42.6	42.7	42.7	42.6

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

NATURAL GAS LIQUIDS	2015	2016	2017	2018
Standard factor	44.2	44.2	44.2	44.2
Australia	45.4	45.4	45.4	45.4
Austria	42.5	42.5	42.5	42.5
Armenia	34.7	34.7	34.7	34.7
Belgium	45.2	45.2	45.2	45.2
Canada	45.2	45.2	45.2	45.2
Chile	48.1	48.1	48.1	48.1
Equatorial Guinea	47.3	47.3	47.3	47.3
Finland	44.0	44.0	44.0	44.0
France	42.0	42.0	42.0	42.0
Hungary	43.0	43.0	43.0	43.0
Japan	45.4	45.6	45.3	45.3
Mexico	41.2	41.3	41.4	41.4
Netherlands New Zealand Norway Peru Republic of Moldova Slovakia United Kingdom	44.0 45.8 43.8 42.1 42.0 37.0 45.3	44.0 45.8 43.8 42.1 42.0 42.4 45.3	44.0 45.8 43.8 42.1 42.0 42.0	44.0 45.8 43.8 42.1 42.0 42.0
United States  REFINERY FEEDSTOCKS	46.7 <b>2015</b>	45.3 46.4 <b>2016</b>	45.3 46.2 <b>2017</b>	45.3 44.8 <b>2018</b>
Standard factor	43.0	43.0	43.0	43.0
Australia	43.3	43.3	43.3	43.3
Austria	42.6	42.1	42.3	42.3
Belgium	42.2	42.2	42.2	42.1
Canada	42.5	42.5	42.5	42.5
Chile	44.8	44.8	44.8	44.8
Czechia	40.2	40.2	40.2	40.2
Denmark	42.7	42.7	42.7	42.7
Finland	42.5	42.5	42.5	42.5
France	41.9	41.9	41.9	41.9
Germany	42.5	42.5	42.5	42.5
Greece	41.3	41.3	41.3	41.3
Hungary	41.8	41.8	41.8	41.8
Ireland Israel Italy Japan Korea, Republic of Lithuania	44.6	44.6	44.6	44.6
	44.8	44.8	44.8	44.8
	42.5	42.5	42.5	42.5
	42.5	42.5	42.5	42.5
	44.8	44.8	47.2	47.2
	44.4	41.4	41.5	42.3
Mexico	42.4	42.4	42.4	42.4
Morocco	41.9	41.9	41.9	41.9

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

REFINERY FEEDSTOCKS	2015	2016	2017	2018
Standard factor	43.0	43.0	43.0	43.0
Netherlands	44.0	44.0	41.9	41.8
New Zealand	44.0	43.9	43.9	43.9
Norway	42.3	42.3	42.3	42.3
Poland	42.5	43.0	43.0	43.0
Portugal	42.6	42.6	42.6	42.6
Republic of Moldova	41.6	41.6	41.6	41.6
Slovakia	42.0	42.0	43.9	43.9
Spain	42.5	42.5	42.5	42.5
Sweden	44.2	44.2	44.2	44.2
Switzerland	43.7	43.7	43.7	43.7
Turkey	43.5	43.5	41.5	41.5
United Kingdom	42.0	42.0	42.0	42.0
United States	43.5	43.5	43.5	43.5
OTHER HYDROCARBONS	2015	2016	2017	2018
Standard factor	36.0	36.0	36.0	36.0
Canada	41.9	41.9	41.9	41.9
Estonia	39.4	39.4	39.4	39.4
Finland	49.1	49.1	49.1	49.5
Hungary	40.0	40.0	40.0	40.0
Ireland	46.7	47.2	47.2	47.5
Israel	41.9	41.9	41.9	41.9
Latvia	39.4	39.4	39.4	39.4
Mexico	41.9	41.9	41.9	41.9
Poland	42.5	42.5	42.5	42.5
Portugal	120.0	120.0	120.0	120.0
Serbia	120.0	120.0	120.0	120.0
Slovakia	41.5	41.5	41.5	41.5
Turkey	41.9	41.9	41.9	41.9
United Kingdom	28.2	28.2	28.2	28.2
United States	51.0	51.0	51.0	51.0
ADDITIVES/BLENDING COMPONENTS	2015	2016	2017	2018
Standard factor	30.0	30.0	30.0	30.0
Canada	25.1	25.1	25.1	25.1
Chile	22.7	22.7	22.7	22.7
Czechia	39.5	39.5	39.5	39.5
Equatorial Guinea	20.9	20.9	20.9	20.9
Finland	42.5	42.5	42.5	42.5
France	25.1	25.1	25.1	25.1
Germany	37.5	37.5	37.1	37.1
Greece	41.3	41.3	41.3	41.3

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

ADDITIVES/BLENDING COMPONENTS	2015	2016	2017	2018
Standard factor	30.0	30.0	30.0	30.0
Italy	37.0	37.0	37.0	37.0
Korea, Republic of	41.9	41.9	44.1	44.1
Lithuania	41.9	41.9	41.9	41.9
Mexico	37.0	38.7	34.1	34.1
Netherlands	38.4	38.7	37.4	38.8
Norway	36.8	36.8	36.8	36.8
Poland Portugal Slovakia Sweden Switzerland Turkey	40.2	40.2	40.2	40.2
	37.0	37.0	37.0	37.0
	42.1	42.0	42.0	42.0
	25.1	25.1	39.9	39.9
	41.3	41.3	41.3	41.3
	25.1	25.1	25.1	25.1
United Kingdom	31.9	32.1	32.1	33.3
United States	37.9	37.9	37.9	37.9

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

HARD COAL	2015	2016	2017	2018
Standard factor	25.8	25.8	25.8	25.8
Albania	25.2	25.2	25.2	25.2
Argentina	28.9	28.4	28.8	28.8
Armenia	26.7	26.7	26.7	26.7
Australia	27.8	27.6	28.1	27.9
Austria	28.3	28.1	28.4	28.4
Azerbaijan	27.7	27.7	27.7	27.7
Bangladesh	20.9	20.9	20.9	20.9
Belarus	25.6	25.2	24.5	23.7
Belgium	27.8	27.8	29.4	29.4
Bosnia and Herzegovina	30.7	29.1	29.1	29.1
Brazil	27.4	27.7	27.7	27.5
Bulgaria	27.8	28.0	25.2	27.4
Canada	28.0	28.0	27.9	28.0
Chile	24.0	23.9	24.1	23.9
China	17.9	18.5	18.3	17.8
China, Hong Kong SAR	26.4	26.4	26.4	26.4
Colombia	27.2	27.2	27.2	27.2
Croatia	25.1	25.1	25.1	25.1
Czechia	25.5	26.1	26.5	26.2
Denmark	24.1	24.3	24.3	26.6
Egypt	25.7	25.7	25.7	25.8
Estonia	27.2	27.2	22.0	22.0
Finland	26.4	26.7	26.6	26.8
Georgia	27.6	27.6	27.6	27.6
Germany	27.1	27.5	26.6	26.7
Greece	25.9	25.5	23.3	25.9
Guatemala	28.9	28.9	28.9	28.9
Hungary	29.6	31.1	29.4	30.0
Iceland	28.1	28.1	28.1	27.8
India	26.3	26.5	26.6	26.8
Indonesia	28.2	28.2	28.2	28.2
Iran (Islamic Republic of)	28.1	28.1	26.1	25.8
Ireland	25.7	25.1	25.8	25.8
Israel	25.0	24.9	24.9	24.9
Japan	25.6	25.5	25.9	25.9
Jordan	26.7	26.7	26.7	26.7
Kazakhstan	18.6	18.6	18.6	22.1
Korea, Democratic Republic of	25.8	25.8	25.8	26.5
Korea, Republic of	25.5	25.5	24.8	24.8
Kosovo	22.5	22.5	22.5	27.0
Kyrgyzstan	20.7	20.8	20.5	20.9
Latvia	23.9	23.8	24.1	24.1

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

HARD COAL	2015	2016	2017	2018
Standard factor	25.8	25.8	25.8	25.8
Lebanon	27.7	27.7	27.7	27.7
Lithuania	25.1	25.1	25.1	25.1
Luxembourg	24.7	24.7	24.6	24.6
Malaysia	26.4	26.4	26.4	26.4
Mauritius	25.8	25.8	26.0	26.0
Mexico	26.7	26.1	26.0	26.0
Mongolia	28.6	28.6	28.6	28.6
Morocco	27.6	27.6	27.6	27.6
Myanmar	23.3	23.3	23.3	23.3
Namibia	22.7	22.7	22.7	22.7
Nepal	25.1	25.1	25.1	25.1
Netherlands	25.0	25.3	26.2	26.4
New Caledonia	26.0	26.0	26.0	26.0
New Zealand	28.1	26.0	26.6	27.0
North Macedonia	26.1	26.1	26.2	27.0
Pakistan	27.6	27.6	27.6	27.6
Paraguay	28.1	28.1	28.1	28.1
Peru	30.5	30.5	30.5	30.5
Poland Portugal Republic of Moldova Romania Russian Federation Senegal	24.8	24.6	24.9	24.2
	24.7	24.7	24.9	24.8
	23.8	24.8	25.2	24.9
	25.8	25.7	25.6	25.6
	25.4	25.3	25.6	25.7
	25.9	25.9	25.9	25.9
Serbia	25.7	25.7	25.6	27.5
Slovakia	28.9	29.0	29.0	28.9
Slovenia	27.0	27.3	27.4	27.3
South Africa	31.0	31.0	31.0	31.0
Spain	24.0	24.1	24.1	24.0
Sri Lanka	29.3	29.3	29.3	29.3
Sweden	28.9	29.1	29.0	28.7
Switzerland	25.5	25.5	25.5	25.5
Tajikistan	18.6	25.0	25.0	25.0
Thailand	26.4	26.4	26.4	26.4
Turkey	26.7	26.8	26.7	26.2
Ukraine	25.0	25.8	25.5	26.0
United Arab Emirates	27.8	27.7	27.7	27.8
United Kingdom	26.2	26.9	26.9	26.5
United States	25.6	24.9	25.1	25.3
Uruguay	25.8	25.8	25.8	25.8
Uzbekistan	18.6	18.6	18.6	18.6
Viet Nam	23.4	23.4	23.4	23.4
Zimbabwe	27.0	27.0	27.0	27.0

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

BROWN COAL	2015	2016	2017	2018
Standard factor	14.0	14.0	14.0	14.0
Austria	20.6	20.5	20.3	21.1
Armenia	7.8	7.8	7.8	11.9
Belgium	22.6	22.6	22.6	22.6
Bosnia and Herzegovina	10.1	10.8	10.7	10.6
Cambodia	19.9	19.9	19.9	19.9
Canada	17.9	17.9	17.9	17.9
Croatia	16.0	16.9	17.1	17.1
Czechia	10.7	13.9	14.0	14.2
France	17.0	17.0	17.0	17.0
Georgia	17.0	17.0	17.0	17.0
Germany	18.7	18.4	18.4	18.4
Greece	5.1	5.1	5.1	4.9
Hungary	18.4	18.2	17.9	17.9
India	9.5	18.0	18.0	18.0
Italy	18.8	18.7	17.0	10.5
Kazakhstan	18.5	18.6	19.5	19.5
Korea, Democratic People's Republic of	17.6	17.6	17.6	17.6
Republic of Korea	21.4	21.4	21.4	21.4
Kosovo	7.8	7.8	7.8	7.8
Kyrgyzstan	14.7	14.7	14.7	14.7
Lao People's Democratic Republic	10.9	10.9	10.8	9.6
Lithuania	14.7	22.7	22.7	22.7
Mexico	18.6	19.0	19.0	19.0
Montenegro	9.2	9.2	9.2	9.6
Netherlands	20.0	20.0	20.0	20.0
New Zealand	20.6	20.3	20.2	20.2
Philippines	22.1	21.6	22.0	21.9
Poland	8.2	8.1	8.3	8.3
Romania	19.3	20.8	24.5	22.8
Russian Federation	14.9	14.9	14.9	14.9
Serbia Slovakia Slovenia Switzerland North Macedonia United States	8.1	8.1	8.1	8.1
	14.9	13.8	14.3	14.3
	18.6	13.8	19.0	19.0
	23.6	23.6	23.6	23.6
	18.2	20.8	22.1	19.4
	19.7	19.7	19.6	19.8
Uzbekistan	14.7	14.7	14.7	14.7

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

COKE OVEN COKE	2015	2016	2017	2018
Standard factor	28.2	28.2	28.2	28.2
Argentina	28.5	28.5	28.5	28.5
Australia	27.0	27.0	27.0	27.0
Austria	28.6	28.9	28.6	27.9
Belgium	29.3	29.3	29.3	29.3
Bosnia and Herzegovina	28.5	28.5	28.5	28.5
Brazil	28.9	28.9	28.9	28.9
Bulgaria	28.5	28.5	28.5	28.5
Belarus	29.0	29.0	29.0	29.0
Canada	27.5	27.5	27.5	27.5
China	28.5	28.5	28.5	28.4
Colombia	20.1	20.1	20.1	20.1
Croatia	29.3	29.3	29.3	29.3
Czechia	26.2	28.1	28.0	26.8
Denmark	29.3	29.3	29.3	29.3
Egypt	27.2	27.2	27.2	27.2
Finland	29.3	29.3	29.3	29.3
France	28.0	28.0	28.0	28.0
Georgia	29.3	29.3	29.3	29.3
Germany	28.7	28.7	28.7	28.7
Hungary	29.6	29.9	29.6	29.3
Iceland	26.7	26.7	26.7	27.8
Italy	29.0	28.4	28.4	28.8
Japan	29.2	29.2	29.2	29.2
Kazakhstan	26.9	26.8	26.9	26.9
Korea, Republic of	28.9	28.9	28.9	28.9
Lithuania	29.3	29.3	29.3	29.3
Luxembourg	28.5	28.5	28.5	28.5
Mexico	27.8	28.4	28.7	28.7
Netherlands	28.5	28.5	28.5	28.5
North Macedonia	25.8	27.7	26.9	29.1
Norway	28.5	28.5	28.5	28.5
Peru	28.2	28.2	28.2	28.2
Poland	28.0	28.0	28.0	28.0
Portugal	30.7	30.4	30.8	30.8
Romania	26.4	26.4	26.4	26.4
Russian Federation	29.0	29.0	29.0	29.0
Serbia	29.0	29.0	29.0	29.0
Slovakia	26.5	27.7	27.7	30.1
Spain	26.8	26.8	27.3	27.3
Sweden	28.1	28.1	28.1	28.1
Switzerland	25.5	25.5	25.5	25.5
Turkey	27.2	27.0	27.0	27.0
Ukraine North Macedonia United Kingdom United States	25.1 29.8 28.9	25.1 29.8 28.9	25.1 29.8 28.9	25.1 29.8 28.9

# NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

PATENT FUEL	2015	2016	2017	2018
Standard factor	20.7	20.7	20.7	20.7
Austria	31.0	31.0	31.0	31.0
Belgium	30.5	30.5	30.5	30.5
France	32.0	32.0	32.0	32.0
Germany Luxembourg	31.4 28.2	31.4 28.2	31.4 28.2	31.4 28.2
Poland	23.2	23.2	23.2	23.2
Slovakia	28.0	28.0	28.0	28.0
United Arab Emirates	29.0	29.0	29.0	29.0
United Kingdom	28.3	28.3	28.3	28.3
BROWN COAL BRIQUETTES	2015	2016	2017	2018
Standard factor	20.7	20.7	20.7	20.7
Australia Austria	21.0 19.8	22.0 19.8	21.0 19.8	22.0 19.8
Belgium	20.7	20.7	20.7	20.7
Czechia	19.8	20.0	20.7	20.3
France	16.9	16.9	16.9	16.9
Germany	25.5	22.1	25.6	25.6
Hungary	19.1	19.0	19.6	19.3
India	20.0	20.0	20.0	20.0
Ireland	19.8	19.8	19.8	19.8
Luxembourg	22.2	22.2	22.2	22.2
Mexico	18.0	18.0	18.0	18.0
Netherlands Poland	20.0 17.5	20.0 17.5	20.0 17.5	20.0 17.5
Serbia	17.3	15.8	15.8	15.8
Slovakia	17.9	17.2	17.6	17.6
PEAT	2015	2016	2017	2018
Standard factor	9.8	9.8	9.8	9.8
Finland	10.1	10.0	9.9	9.9
Latvia	10.1	10.1	10.1	10.1
Romania	8.8	8.8	8.8	8.8
Russian Federation	10.0	10.0	10.0	10.0
Sweden	12.9	12.9	12.9	12.9
Ukraine	9.7	9.7	9.7	9.7

## NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

CRUDE OIL	2015	2016	2017	2018
Standard factor	42.3	42.3	42.3	42.3
Azerbaijan	43.1	43.1	43.1	43.1
Australia	42.7	42.7	42.7	42.7
Austria	42.5	42.5	42.5	42.5
Belgium	42.2	42.2	42.2	42.1
Brazil	42.2	42.2	42.3	42.3
Canada	42.8	42.8	42.8	42.8
Chile	43.2	43.2	43.2	43.2
China	41.9	41.9	41.9	41.9
Czechia	42.4	42.4	42.4	42.8
Denmark	43.0	43.0	43.0	43.0
Finland	42.7	42.7	42.7	42.7
France	42.8	42.8	42.8	42.8
Georgia	42.5	42.5	42.5	42.5
Germany	42.5	42.5	42.5	42.5
Greece	41.5	41.5	41.5	41.5
China, Hong Kong Special Administrative Region	42.4	42.5	42.5	42.5
Hungary	41.8	41.8	41.8	41.8
Ireland	42.8	42.8	42.8	42.8
Israel	42.5	42.5	42.7	42.7
Italy	41.9	41.9	41.9	41.9
Japan	42.1	42.1	42.0	42.0
Korea, Republic of	42.7	42.7	42.2	42.2
Lithuania	41.9	42.3	42.3	42.3
Morocco	42.4	42.4	42.4	42.4
Netherlands	42.7	42.7	42.7	42.7
New Zealand	42.8	42.8	42.8	42.8
Norway	41.1	42.2	43.4	43.4
Peru	43.0	43.0	43.0	43.0
Poland	42.5	42.5	42.5	42.5
Portugal	43.0	43.0	43.0	43.0
Slovakia	42.0	42.0	42.0	42.0
Spain	42.3	42.3	42.3	42.3
Sweden	42.2	42.2	42.2	42.2
Switzerland	43.2	43.2	43.2	43.2
Turkey	44.4	44.3	44.3	44.3
United Kingdom	43.4	43.4	43.4	43.4
United States	43.7	43.6	43.6	43.7

## NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

NATURAL GAS LIQUIDS	2015	2016	2017	2018
Standard factor	44.2	44.2	44.2	44.2
Azerbaijan	39.1	39.1	39.1	39.1
Armenia	34.7	34.7	34.7	34.5
Belgium	45.2	45.2	45.2	45.2
Canada	45.2	45.2	45.2	45.2
Equatorial Guinea	47.3	47.3	47.3	47.3
Finland	44.0	44.0	44.0	44.0
France Japan Netherlands Peru Republic of Moldova United Kingdom	42.0	42.0	42.0	42.0
	45.4	45.6	45.3	45.3
	44.0	44.0	44.0	44.0
	42.1	42.1	42.1	42.1
	42.0	42.0	42.0	42.0
	45.3	45.3	45.3	45.3
United States	48.1	47.7	47.5	46.1
REFINERY FEEDSTOCKS	2015	2016	2017	2018
Standard factor	43.0	43.0	43.0	43.0
Australia	43.3	43.3	43.3	43.3
Austria	42.6	42.1	42.3	42.3
Belgium	42.2	42.2	42.2	42.1
Czechia	40.2	40.2	40.2	40.2
France	41.9	41.9	41.9	41.9
Greece	41.3	41.3	41.3	41.3
Hungary	41.8	41.8	41.8	41.8
Israel	44.8	44.8	44.8	44.8
Italy	42.5	42.5	42.5	42.5
Republic of Korea	44.8	44.8	47.2	47.2
Lithuania	44.4	41.4	41.5	42.3
Morocco	41.9	41.9	41.9	41.9
New Zealand	44.0	43.9	43.9	43.9
Poland	42.5	43.0	43.0	43.0
Portugal	42.6	42.6	42.6	42.6
Republic of Moldova	41.6	41.6	41.6	41.6
Spain	42.5	42.5	42.5	42.5
Sweden	44.2	44.2	44.2	44.2
Switzerland	43.7	43.7	43.7	43.7
United Kingdom	42.0	42.0	42.0	42.0
United States	43.5	43.5	43.5	43.5

## NET CALORIFIC VALUES OF ENERGY PRODUCTS GJ/ton

OTHER HYDROCARBONS	2015	2016	2017	2018
Standard factor	36.0	36.0	36.0	36.0
Latvia Serbia United States	39.4 120.0 51.0	39.4 120.0 51.0	39.4 120.0 51.0	39.4 120.0 51.0
ADDITIVES/BLENDING COMPONENTS	2015	2016	2017	2018
Standard factor	30.0	30.0	30.0	30.0
Canada Chile Czechia Finland France Greece	25.1 22.7 39.5 42.5 25.1 41.3	25.1 22.7 39.5 42.5 25.1 41.3	25.1 22.7 39.5 42.5 25.1 41.3	25.1 22.7 39.5 42.5 25.1 41.3
Italy Korea, Republic of Lithuania Mexico Netherlands Poland	37.0 41.9 41.9 37.0 38.4 40.2	37.0 41.9 41.9 38.7 38.7 40.2	37.0 44.1 41.9 34.1 37.4 40.2	37.0 44.1 41.9 34.1 38.8 40.2
Portugal Slovakia Switzerland Turkey United Kingdom United States	37.0 42.1 41.3 25.1 31.9 37.9	37.0 42.0 41.3 25.1 32.1 37.9	37.0 42.0 41.3 25.1 32.1 37.9	37.0 42.0 41.3 25.1 33.3 37.9

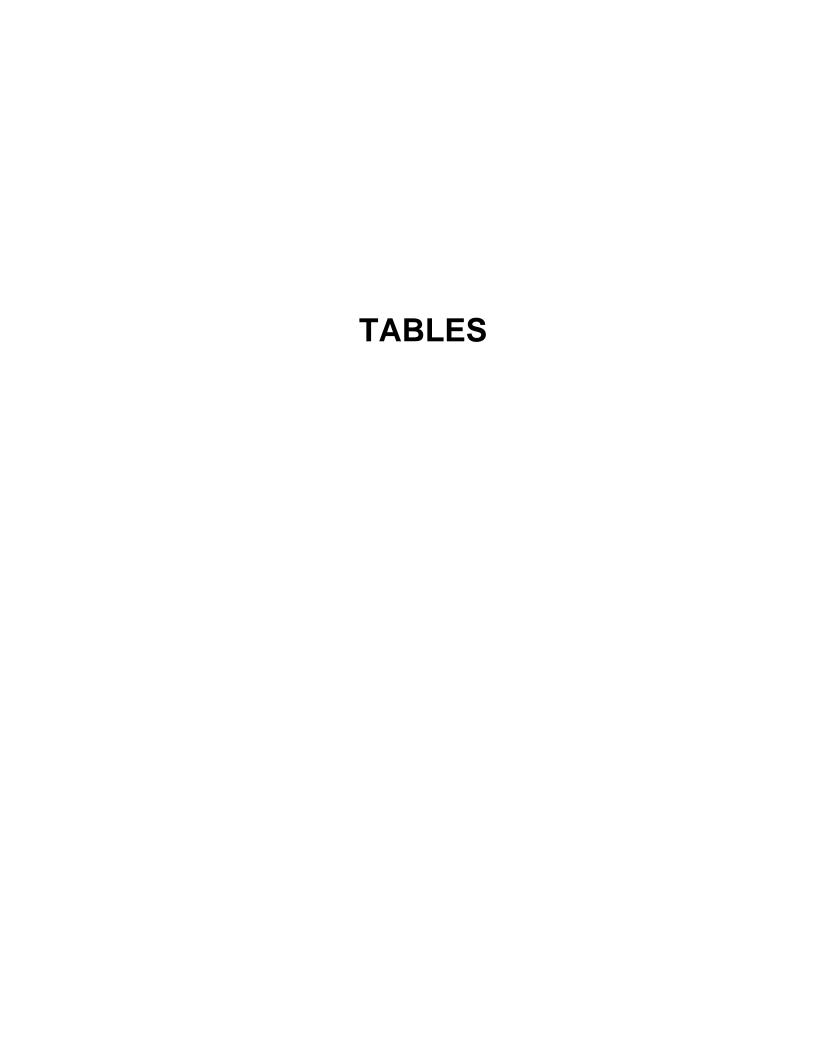
Table II

SELECTED CONVERSION FACTORS FOR CRUDE OIL

AND OIL PRODUCTS

(To convert from metric tons into the following units, multiply by the factor in the appropriate column)

Commodity	Litre	U.S. Gallon	Imperial Gallon	Barrel	Barrels / day	Cubic Metre
Conventional crude oil (average specific gravity)	1164	308	256	7.32	0.02005	1.164
Natural gas liquids (NGL)	1653	437	364	10.40	0.02849	1.653
Additives and oxygenates	1033	315	262	7.50	0.02055	1.033
Other hydrocarbons	1177	311	259	7.40	0.02027	1.177
Aviation gasoline	1370	362	301	8.62	0.02362	1.370
Motor gasoline	1351	357	297	8.50	0.02329	1.351
Gasoline-type jet fuel	1317	348	290	8.28	0.02270	1.317
Kerosene-type jet fuel	1235	326	272	7.77	0.02129	1.235
Other kerosene	1235	326	272	7.77	0.02129	1.235
Gas oil/diesel oil	1149	304	253	7.23	0.01981	1.149
Fuel oil	1053	278	232	6.62	0.01814	1.053
Liquefied petroleum gases (LPG)	1852	489	407	11.65	0.03192	1.852
Ethane	2679	708	589	16.85	0.04616	2.679
Refinery gas	1272	336	280	8.00	0.02192	1.272
Feedstocks	1177	311	259	7.40	0.02027	1.177
Naphtha	1389	367	306	8.74	0.02395	1.389
White spirit and SBP industrial spirits	1235	326	272	7.77	0.02129	1.235
Lubricants	1111	294	244	6.99	0.01915	1.111
Bitumen	962	254	212	6.05	0.01658	0.962
Paraffin waxes	1250	330	275	7.86	0.02153	1.250
Petroleum coke	877	232	193	5.52	0.01512	0.877
Other oil products	1099	290	241	6.91	0.01893	1.099



#### **Total energy supply**

Petajoules

#### **Table Notes**

#### For tables 1 to 3

Data on individual energy commodities are aggregated and presented in these tables. As discussed in the introduction, these tables follow the principles of energy balances as recommended in IRES.

Although both Table 1 and Table 2 display figures for total energy supply, there may be rounding differences for certain countries or regions in the same year. This is due to the different ways they are added up.

Instead of breaking energy supply down by flow, Table 1 gives a longer historical perspective back to 1990. As such, historical countries that existed in 1990 are included here. Due to the break-up of the Former Union of Soviet Socialist Republics, there is a reallocation between Europe and Asia between 1991 and 1992.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

Figure 1: Total energy supply by region, 1990

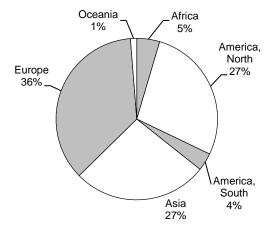
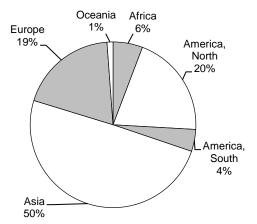
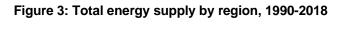
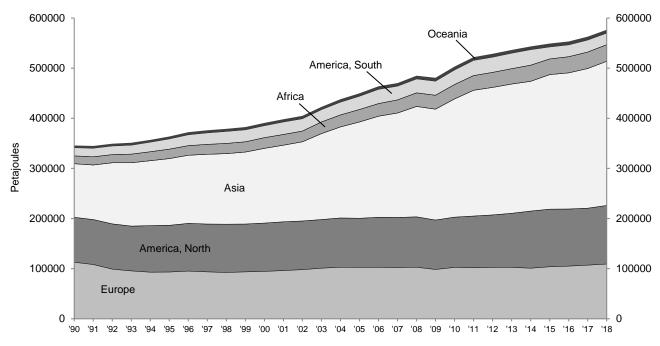


Figure 2: Total energy supply by region, 2018







Country or area	1990	1995	2000	2005	2010	2015	2018
World	349,825	373,713	406,186	464,565	518,411	549,127	576,588
Africa	16,037	18,994	21,061	24,482	28,196	31,346	33,038
Algeria	1,075	1,270	1,103	1,583	1,641	2,223	2,429
Angola	238	340	287	318	469	545	514
Benin	74	89	83	105	153	190	219
Botswana	39	44	57	65	74	80	101
Burkina Faso	93	104	83	114	145	172	193
Burundi	*52	*53	55	*56	*58	62	66
Cabo Verde	*2	*3	*5	8	9	*9	*10
Cameroon	203	237	264	295	291	382	404
Central African Rep.	31	31	22	22	21	21	22
Chad	48	54	62	71	80	79	86
Comoros	2	3	3	4	5	*6	*8
Congo	36	40	35	45	70	117	124
Côte d'Ivoire	204	245	278	418	425	543	434
Dem. Rep. of the Congo	489	595	635	698	831	1,209	1,149
Djibouti	*6	*7	8	*9	11	10	*10
Egypt	1,271	1,605	2,288	2,742	3,242	3,450	3,722
Equatorial Guinea	5	5	11	65	78	109	99
Eritrea		42	30	32	31	34	36
Eswatini	*32	*34	41	40	43	44	44
Ethiopia		918	1,022	1,132	1,293	1,462	1,563
Ethiopia, incl. Eritrea	543						
Gabon	49	56	61	72	93	111	106
Gambia	7	8	9	10	12	*14	*14
Ghana	187	277	271	251	267	339	353
Guinea	105	126	128	135	147	152	171
Guinea-Bissau	20	21	23	26	28	30	32
Kenya	439	518	*627	*686	*793	953	*972
Lesotho	*36	*41	*48	47	52	*46	*47
Liberia	38	31	49	62	75	92	98
Libya	468	653	695	815	870	781	745
Madagascar	99	126	*153	*168	*200	250	*331
Malawi	64	65	65	70	76	80	88
Mali	*61	*71	*86	120	*153	*195	*207
Mauritania	*23	*26	29	36	45	*61	74
Mauritius	33	41	49	57	63	67	69
Mayotte	*1	*2	*2	*3	4		
Morocco	345	423	478	606	762		871
Mozambique	248	264	293	366	311	451	444
Namibia	••	38	39	54	65	78	84
Niger	60	70	81	*77	70	94	*96
Nigeria	2,780	3,052	3,642	4,401	5,325	6,064	6,585
Reunion	24	31	42	49	58		••
Rwanda	35	54	54	71	84		*101
Sao Tome and Principe	*1	1	*2	*2	2		*3
Senegal	*81	*87	97	114	160	178	191
Seychelles	2	*3	4	5	6	7	8
Sierra Leone	51	46	54	56	59		68
Somalia	68	77	90	107	126	138	152
South Africa	4,179	4,750	4,921	5,202	5,920	5,760	5,916
South Sudan						35	26
Sudan	;;					503	528
Sudan (former)	451	506	556	654	711		
Togo	55	71	89	99	130	131	138
Tunisia	192	220	293	349	427	452	479
Uganda	351	390	396	516	645		915
United Rep. of Tanzania	409	463	564	649	721	825	875

Country or area	1990	1995	2000	2005	2010	2015	2018
Zambia	222	244	261	312	375	469	519
Zimbabwe	405	421	438	414	394	473	498
America, North	96,319	104,096	114,836	119,331	114,855	114,853	117,056
Anguilla	*1	*1	*1	*2	*2	*2	*2
Antigua and Barbuda	*3	*3	*4	*5	*6	*7	*7
Aruba	*7	*10	*54	58	*56	*13	*13
Bahamas	*28	*26	*28	*28	28	31	39
Barbados	16	12	16	17	20	17	17
Belize	8	10	11	11	13	16	16
Bermuda	*7	*8	*7	*8	*9	8	10
Bonaire, St Eustatius, Saba						*5	*6
British Virgin Islands	*1	*2	*2	*3	*3	*3	*2
Canada	8,838	9,783	10,609	11,441	10,902	11,810	12,446
Cayman Islands	4	*5	*7	7	8	8	9
Costa Rica	68	110	137	177	203	207	205
Cuba	604	414	459	388	505	459	375
Curaçao	••	••			••	101	58
Dominica	*1	1	2	*2	3	*3	*2
Dominican Republic	140	223	275	259	298	326	364
El Salvador	91	133	146	160	178	178	179
Greenland	6	6	7	9	11	9	*9
Grenada	2	2	3	3	4	4	5
Guadeloupe	18	*21	26	33	*32		
Guatemala	195	252	307	361	388	480	546
Haiti	101	107	128	138	159	176	192
Honduras	98	119	125	166	198	241	257
Jamaica	113	130	148	152	113	117	117
Martinique	21	*22	*23	30	29		
Mexico	5,179	5,516	6,314	7,559	7,557	7,830	7,634
Montserrat	0,770	0,818	0,011	1	1	1	0
Neth. Antilles (former)	82	*95	83	84	69		
Nicaragua	86	102	107	119	125	 165	167
Panama	60	71	105	122	144	171	183
Puerto Rico	*1	0	13	24	27	53	*50
Sint Maarten (Dutch part)						*12	*11
St. Kitts-Nevis	*2	*2	*3	*3	3	*3	*4
St. Lucia	*4	*5	*6	*7	*8	*8	*8
St. Pierre-Miguelon	1	1	*1	*1	*1	*1	*1
St. Vincent-Grenadines	*1	*2	2	*3	3	4	4
Trinidad and Tobago	251	251	420	676	833	797	715
Turks and Caicos Islands	0	*1	*1	*2	*3	*3	*3
United States	80,280	86,648	95,257	97,271	92,911	91,585	93,400
America, South	12,461	14,583	16,758	18,869	22,140	24,078	23,076
i i							
Argentina  Polivia (Plus State of)	1,928 106	2,194 155	2,564 168	2,919		3,423 364	3,288
Bolivia (Plur. State of)				207			404 12,196
Brazil	5,972	7,069	7,998	9,212		12,393	,
Chile	593	780	1,082	1,187		1,510	1,635
Colombia	983	1,104	1,103	1,180		1,701	1,630
Ecuador  Eciliford Io (Molvingo)	255	339 *1	328	470 *1	521 *1	603	596
Falkland Is. (Malvinas)	1		0			1	1
French Guiana	9	*9	8	10			
Guyana	28	31	34	32		35	38
Paraguay	*96	131	175	198		281	307
Peru	421	464	514	565		890	1,001
Suriname	29	34	36	26		43	41
Uruguay	96	107	119	126	173	213	223
Venezuela (Bolivar. Rep.)	1,944	2,167	2,629	2,737	3,087	2,622	1,716

Country or area	1990	1995	2000	2005	2010	2015	2018
Asia	94,358	124,496	141,252	183,088	234,751	268,316	287,605
Afghanistan	*46	*29	25	36	136	136	142
Armenia		69	85	106	*106	135	131
Azerbaijan		536	485	573	486	605	607
Bahrain	213	257	331	348	513	577	582
Bangladesh	769	918	998	1,191	1,493	1,803	1,964
Bhutan	37	39	44	48	57	64	71
Brunei Darussalam	107	71	73	76	136	114	156
Cambodia	121	119	142	144	223	295	344
China	30,398	39,163	42,461	68,833	101,618	119,870	129,651
China, Hong Kong SAR	316	398	570	579	544	576	589
China, Macao SAR	15	18	24	29	32	45	42
Cyprus	58	71	90	94	103	86	95
Georgia		88	120	135	140	198	204
India	 13,435	16,262	19,808	22,706	29,193	36,066	39,184
	•						
Indonesia	4,090	5,279	5,855	7,037	8,074	8,747	10,415
Iran (Islamic Rep. of)	2,819	3,887	5,386	7,221	8,579	9,901	10,992
Iraq	586	1,072	995	1,485	1,424	1,997	2,677
Israel	482	652	767	773	972	915	935
Japan	18,362	20,752	21,727	21,929	20,995	18,086	17,859
Jordan	138	172	205	289	303	368	382
Kazakhstan		2,185	1,551	2,352	3,363	3,018	3,103
Korea, Dem.Ppl's.Rep.	1,391	921	826	896	622	332	265
Korea, Republic of	3,868	6,121	7,912	8,822	10,498	11,428	11,826
Kuwait	566	835	824	1,133	1,350	1,389	1,460
Kyrgyzstan		101	101	114	115	167	192
Lao People's Dem. Rep.	60	63	58	69	100	169	239
Lebanon	*113	174	207	206	262	337	348
Malaysia	757	1,708	1,959	2,745	2,965	3,424	3,832
Maldives	2	4	6	9	13	19	25
Mongolia	116	89	87	104	164	272	541
Myanmar	449	498	538	618	662	848	991
Nepal	155	299	349	388	446	499	593
Oman	153	236	319	445	781	1,051	1,091
Other Asia	2,005	2,663	3,509	4,199	4,579	4,599	4,578
Pakistan	1,290	1,722	2,082	2,642	2,880	3,229	4,545
Philippines	1,039	1,264	1,551	1,469	1,631	2,050	2,393
Qatar	194	547	576	728	1,165	1,540	1,809
Saudi Arabia						· ·	
0444.7.445.4	3,178	3,881	4,487	6,047	7,707	10,307	9,950
Singapore	658	645	761	899	1,079	1,236	1,070
Sri Lanka	187	225	296	324	360	433	444
State of Palestine	*20	*22	38	58	54	72	74
Syrian Arab Republic	476	585	729	740	911	424	437
Tajikistan		146	141	148	143	167	199
Thailand	1,766	2,620	3,049	4,048	4,931	5,695	5,678
Timor-Leste				*4	*4	*8	*8
Turkey	2,211	2,578	3,182	3,529	4,442	5,390	6,030
Turkmenistan	••	574	625	805	951	1,160	1,160
United Arab Emirates	791	1,108	1,719	1,842	2,977	3,571	2,649
Uzbekistan		1,780	2,124	2,046	1,806	1,734	1,944
Viet Nam	791	908	1,262	1,756	2,334	2,985	2,975
Yemen		142	197	274	326	180	137
Yemen Arab Rep. (former)	*47	••	••			••	
Yemen, Dem. (former)	*84						
Europe	126,239	106,768	106,779	113,031	111,987	103,959	109,168
Albania	92	47	65	91	91	91	91
Andorra	*7	7	9	10	10	9	9
Austria	1,041	1,123	1,198	1,413	1,428	1,371	1,377

Country or area	1990	1995	2000	2005	2010	2015	2018
Belarus		1,038	1,029	1,121	1,152	1,067	1,139
Belgium	1,999	2,231	2,418	2,421	2,496	2,182	2,215
Bosnia and Herzegovina		62	179	206	269	250	312
Bulgaria	1,181	966	773	826	741	778	780
Croatia		325	349	407	390	350	354
Czechia		1,760	1,746	1,898	1,892	1,758	1,813
Czechoslovakia (former)	2,950						
Denmark	726	809	780	791	815	676	712
Estonia		215	195	220	237	230	263
Faeroe Islands	10	*8	*10	*10	*9	*9	*11
Finland	1,186	1,208	1,353	1,440	1,530	1,350	1,415
France	9,345	9,886	10,500	11,374	10,969	10,531	10,271
German Dem. R. (former)	*3,679						
Germany		14,083	14,081	14,156	13,791	12,931	12,645
Germany, Fed. R. (former)	11,391						
Gibraltar	2	4	5	6	7	9	11
Greece	899	954	1,131	1,265	1,155	965	935
Guernsey				1	1	1	1
Hungary	1,200	1,083	1,046	1,174	1,109	1,053	1,118
Iceland	87	90	139	158	278	313	366
Ireland	417	448	580	618	608	557	577
Isle of Man				1	4	4	4
Italy	6,138	6,668	7,183	7,797	7,277	6,374	6,289
Jersey	•••	. 1	1	3	3	3	3
Kosovo			65	82	105	106	109
Latvia		193	161	190	189	179	195
Liechtenstein	1	2	2	3	3	3	3
Lithuania		363	295	365	292	293	315
Luxembourg	143	133	142	185	178	158	165
Malta	29	30	29	37	35	27	28
Montenegro				42	48	42	45
Netherlands	2,771	3,042	3,106	3,318	3,443	2,987	3,033
North Macedonia		151	169	163	121	116	112
Norway	879	981	1,092	1,114	1,353	1,215	1,173
Poland	4,393	4,249	3,784	3,891	4,256	4,004	4,453
Portugal	703	846	1,031	1,109	983	918	919
Republic of Moldova		186	66	89	91	108	124
Romania	2,621	1,925	1,532	1,626	1,474	1,341	1,411
Russian Federation		26,720	25,994	27,338	28,932	28,943	33,226
Serbia				672	648	612	635
Serbia and Montenegro		522	556				
Slovakia		742	740	776	736	675	716
Slovenia		254	269	306	306	275	291
Spain	3,762	4,211	5,073	5,914	5,335	4,904	5,183
Sweden	1,965	2,086	1,968	2,135	2,109	1,836	2,052
Switzerland	1,018	1,004	1,041	1,080	1,085	1,013	997
Ukraine		7,073	5,574	5,872	5,491	3,753	3,968
United Kingdom	8,612	9,037	9,317	9,318	8,511	7,591	7,304
USSR (former)	55,194						,
Yugoslavia, SFR (former)	1,797						
Oceania	4,412	4,776	5,500	5,763	6,482	6,574	6,645
Australia	3,694	3,962	4,567	4,790	5,396	5,330	5,393
Cook Islands	*1	*1	*1	1	*1	*1	*1
Fiji	23	*23	22	24	21	25	*25
French Polynesia	*7	7	9	12	12	12	12
Kiribati	*1	*1	1	1	1	1	*2
Marshall Islands	••	*1	*2	*2	*2	*2	*2
Micronesia (Fed. States of)	••	*2	*2	2	2	2	*2
Nauru	*2	*1	*1	*1	*1	*1	*1

#### Table 1

Country or area	1990	1995	2000	2005	2010	2015	2018
New Caledonia	21	27	30	37	46	61	73
New Zealand	561	647	750	748	839	952	945
Pacific Islands (former)	*3						
Palau		*3	*3	*3	3	*3	*3
Papua New Guinea	88	89	99	126	141	166	*167
Samoa	*3	*4	4	4	4	5	5
Solomon Islands	*5	*6	*6	*7	*8	8	*8
Tonga	1	1	1	*2	2	2	2
Vanuatu	1	1	*2	2	3	3	3

#### Components of total energy supply

Petajoules and Gigajoules per capita

#### **Table Notes**

Included in the **Primary energy production** for **Solids** are hard coal, lignite, peat, oil shale, primary solid biofuels and wastes; **Liquids** are comprised of crude oil, natural gas liquids, other hydrocarbons, additives and oxygenates, and liquid biofuels; **Gas** comprises natural gas and biogas; **Electricity** is comprised of primary electricity generation from hydro, wind, tide, wave and solar sources; and **Heat** comprises primary heat from nuclear, geothermal, chemical and solar sources.

Stock changes, trade and International bunkers refer to all primary and secondary forms of energy.

**Supply** is calculated as primary energy production plus import minus exports minus International bunkers minus stock changes.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

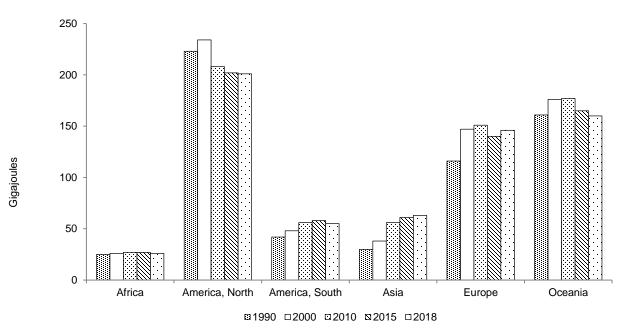


Figure 4: Total per capita energy supply by region, selected years

Figure 5: Production of solids by region, 2018

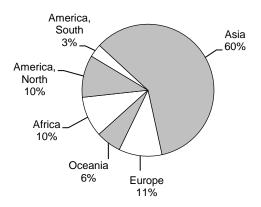


Figure 7: Production of gases by region, 2018

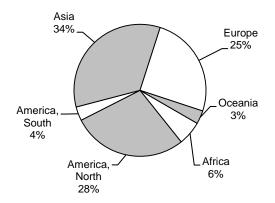


Figure 6: Production of liquids by region, 2018

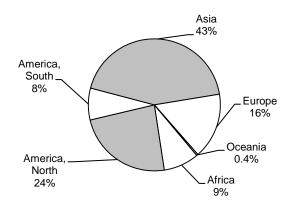
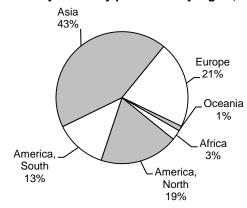


Figure 8: Primary electricity production by region, 2018



Country or area	Year	Takal	Calida	Primary energy		Electricity.	Lines
World	2015 2016 2017 2018	Total 570,407 569,793 581,831 599,931	Solids 207,411 200,144 204,973 212,279	Liquids 187,375 189,959 190,642 194,222	128,768 133,695	19,084 20,263	31,838 32,258
Africa	2015 2016 2017 2018	44,689 44,108 46,304 46,827	20,199 20,145 20,625 20,821	16,597 15,598 16,599 16,892	7,532 8,207	470 479 507	307 354 366
Algeria	2015 2016 2017 2018	5,883 6,283 6,285 6,254	0 0 0 1	2,891 2,947 2,877 2,816	3,406	1 *2	 !
Angola	2015 2016 2017 2018	4,030 3,998 4,087 3,793	257 262 267 270	3,728 3,656 3,595 3,279	58 198	21 28	
Benin	2015 2016 2017 2018	114 105 114 114	114 105 114 113	  	••	0 0 0 0	 
Botswana	2015 2016 2017 2018	56 51 59 65	56 51 59 65		- - -	0 0 0 0	
Burkina Faso	2015 2016 2017 2018	126 128 129 131	126 127 129 130	 	0	1 0	
Burundi	2015 2016 2017 2018	56 56 56 56	55 56 56 55			1	
Cabo Verde	2015 2016 2017 2018	*2 *2 *2 *2	*1 *1 *1 *1	  	  	0 0 0 0	
Cameroon	2015 2016 2017 2018	493 499 *476 502	260 267 *274 281	200 198 163 147	19 21	16 18	
Central African Rep.	2015 2016 2017 2018	19 19 19 19	18 18 18 18			1 1 1 1	
Chad	2015 2016 2017 2018	375 347 318 349	71 72 73 74	305 275 245 275		  	  
Comoros	2015 2016 2017 2018	*4 *4 4 4	*4 *4 4 4	  		   	
Congo	2015 2016 2017 2018	607 602 684 818	63 65 67 69	522 512 592 723	21 22	4 4	

Imports	Exports	International		Stock changes	Supp	
imports	LAPOITS	Aviation	Marine	Stock changes	Total	Per capita
223,215 230,127 240,495 243,096	226,002 235,896 244,345 248,790	7,411 7,782 8,141 8,447	8,614 8,654 9,044 8,877	2,469 -5,545 -1,982 326	549,127 553,132 562,778 576,587	74 74 75 76
7,430 7,590 7,615 7,479	20,271 19,202 20,489 20,671	298 325 369 350	246 161 145 219	-43 -85 72 29	31,346 32,093 32,844 33,038	27 26 26 26
189 167 169 60	3,852 4,225 4,129 3,846	20 *17 *16 *19	11 10 10 9	-36 -3 12 12	2,223 2,202 2,288 2,429	56 54 55 58
201 154 152 148	3,668 3,632 3,728 3,440	*6 *5 *11 *10	16 15 16 10	*-4 *-30 *-19 *-34	545 531 505 514	20 18 17 17
79 92 98 109	0  	2 1 1 1	 0 0	2 -3 -2 3	190 198 213 219	18 18 19 19
42 46 46 44	6 5 5 7	0 0 0 1	  	*11 0 	80 92 99 101	38 43 45 45
52 43 53 68	0 0 0 0	1 1 1	: : :	*4 -6 *-4 *4	172 176 185 193	10 9 10 10
6 7 *8 *10	0 0 	0 0 0 0	: : :	0 0 0	62 63 63 66	6 6 6 6
*12 *13 *14 *14	  	*2 *2 *2 *2	*3 *3 *3 *3		*9 *9 *10 *10	*17 *17 *18 *19
89 88 83 80	197 201 166 177	4 1 1 1	0 0 0	-1 0 	382 385 393 404	16 16 16 16
*3 *4 *4 *4	0 0 0 0	1 1 1 1		  	21 22 22 22	5 5 5 5
0 0 0 0	296 262 232 262	*1 *1 *1 *1	  	 0 	79 84 85 86	6 6 6 6
*3 *3 *4 *4	  	0 0 0 0	  	  	*6 *7 *8 *8	*8 *8 *9 *10
16 17 9 9	504 495 570 666	2 2 1 1	  	0 0  36	117 122 122 124	24 24 24 24

Country or area	Year			Primary energ		=	
	1	Total	Solids	Liquids	Gases	Electricity	Heat
Côte d'Ivoire	2015 2016 2017 2018	526 456 438 415	393 270 266 262	57 93 85 71	71 87 79 72	5 6 7 11	
Dem. Rep. of the Congo	2015 2016 2017 2018	1,218 1,256 1,264 1,173	1,141 1,181 1,180 1,077	44 42 51 56	0 0 0 0	32 33 34 40	
Djibouti	2015 2016 2017 2018	4 4 4 4	4 4 4 4	  		   	  
Egypt	2015 2016 2017 2018	3,051 3,105 3,418 3,364	223 225 225 228	1,465 1,369 1,341 1,362	1,310 1,455 1,795 1,718	54 56 56 56	
Equatorial Guinea	2015 2016 2017 2018	820 763 715 647	4 4 4 4	554 482 421 370	261 277 289 272	*1 *1 *1 *1	
Eritrea	2015 2016 2017 2018	26 26 26 27	26 26 26 27	  	  	0 0 0 0	
Eswatini	2015 2016 2017 2018	33 35 30 29	32 35 29 28	  		1 0 0 1	
Ethiopia	2015 2016 2017 2018	1,330 1,356 1,379 1,397	1,292 1,311 1,332 1,348	0 0 0 0		38 45 48 49	
Gabon	2015 2016 2017 2018	561 556 518 476	*53 *53 *54 *55	487 481 444 401	19 19 17 16	3 3 3 4	
Gambia	2015 2016 2017 2018	7 7 7 7	7 7 7 7	  	  	0 0 0 0	
Ghana	2015 2016 2017 2018	372 336 519 539	99 99 107 108	226 195 359 379	25 22 32 31	21 20 20 22	 
Guinea	2015 2016 2017 2018	116 117 117 118	112 113 113 113	  	0 0 0 0	3 4 4 4	
Guinea-Bissau	2015 2016 2017 2018	25 26 26 26	25 26 26 26	  		 0 0 0	 
Kenya	2015 2016 2017 2018	761 736 738 *754	585 560 556 *553	  	  0	*13 14 10 16	161 171

		Internationa	al bunkers	0	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
143 164 160 160	152 130	6 7 *7 7	3 3 3 3	-6 0 -1	543 457 458 434	23 19 19 17	
43 32 38 38	44 51	5 5 5 6	  	  	1,209 1,240 1,246 1,149	16 16 15 14	
12 12 11 *11	0	4 4 *4 *4	*1 *1 *1 *1	1 *1 0 0	10 10 10 *10	11 10 11 *11	
1,072 1,274 1,180 1,018	603 557	22 19 20 28	7 2 8 4	-1 -1 2 *2	3,450 3,756 4,012 3,722	37 40 42 38	
*13 *13 *14 *12	659 600	*2 *2 2 2	  	*-5 *-8 *-7 *22	109 123 134 99	93 101 106 76	
8 8 9 10	  	0 0 0 0	  	  	34 34 35 36	10 10 10 11	
18 19 17 18	12	0 0 0 0	  	 0 	44 43 42 44	40 39 37 38	
156 177 191 203	5 5	20 26 30 32	  	1 0 	1,462 1,503 1,535 1,563	14 15 14 14	
23 24 14 13	456 407	3 3 2 2	8 8 5 5	 13	111 113 105 106	57 56 51 50	
*8 *8 *8 *8	0	*1 *1 *1 *1	  	  	*14 *14 *14 *14	*7 *7 *6 *6	
196 229 188 199	205 366	4 6 7 8	0 0 4 0	1 14 16 -8	339 340 315 353	12 12 11 12	
38 41 49 55	0	*1 *1 *1 *1	  	  	152 156 165 171	13 13 14 14	
*5 *6 *6 *6	0	*1 *1 *1 *1	  	  	30 31 31 32	17 17 17 17	
434 310 301 252	77 73	13 31 34 30	0 0 0 2	-4 0 0	953 938 932 *972	20 19 19 *19	

Country or area	Year			Primary energy			
— Country of area	Tour	Total	Solids	Liquids	Gases	Electricity	Heat
Lesotho	2015	*20	*19			2	
	2016 2017	*19 18	*17 16	**		2 2	
	2018	*17	*15			2	
Liberia	2015	76	76			0	
Liberia	2016	79	79			0	
	2017 2018	81 84	81 84	**		0	
				··			
Libya	2015 2016	1,465 1,420	24 24	911 863	530 533	0	
	2017	2,429	25	1,915	489	0	
	2018	2,905	25	2,405	475	0	
Madagascar	2015	209	205			3	
	2016 2017	263 272	259 269			3	
	2018	*278	*274			3	
Malawi	2015	68	61			*7	
-	2016	68	61		 	*7	
	2017 2018	68 70	62 62			*7 *7	
. a. ii							
Mali	2015 2016	*153 *156	*150 *152			4	
	2017	*159	*155			4	
	2018	*161	*157			*4	
Mauritania	2015	30	19	11		0	
	2016 2017	30 24	19 19	10 4		1	
	2018	21	20	0		1	
Mauritius	2015	12	11		0	1	
	2016	11	10		0	1	
	2017 2018	10 10	10 9	••	0	1 1	
Morocco	2015		40	0	2	16	0
NOTOCCO	2015 2016	62 90	43 67	0	3	16 15	4
	2017	89	67	0	3	15	4
	2018	99	65	0	3	20	
Mozambique	2015 2016	720 673	485 440	2 2	171 175	62 56	
	2016	833	608		173	51	
	2018	854	629	2 2	173	50	
Namibia	2015	21	15			6	0
	2016 2017	20 21	15 15			5 6	0
	2017	22	17			5	0
liger	2015	100	68	32		0	
ilgo!	2016	105	71	35		0	
	2017 2018	*98 *107	*59 *71	39 35		0	
Nigeria	2015 2016	10,677 10,067	4,669 4,778	4,494 3,882	1,494 1,378	21 29	
	2017	10,410	4,897	3,942	1,542	28	
	2018	10,592	4,925	4,046	1,597	23	
Rwanda	2015	*85	*84		0	1	
	2016 2017	*86 *86	*84 *84		*1 *1	1 1	
	2018	*87	*85	••	*1	1	

Importo	Evporto	Internationa		Stock changes	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
*26 *26 *28 *30	0	0 0 0 0	  	  	*46 *45 *46 *47	*22 *22 *22 *22	
16 *19 *17 *14	0	0 0 0 0	0 0 0 0	  	92 97 97 98	21 21 21 20	
287 258 249 241	896	2 2 2 2	3 3 9 11	  	781 775 752 745	122 119 114 112	
44 48 53 51		*2 1 2 *2	0 0 0 0	1 3 -1 -5	250 306 325 *331	10 12 13 *13	
13 15 17 20	0	0 0 0 0			80 82 84 88	5 5 5 5	
*45 *48 *50 *52	*2 *2	*3 *3 *3 *3	 	*-2 *1 *1 0	*195 *198 *204 *207	*11 *11 *11 *11	
*43 38 54 71	*10 *4	*1 1 1	  	  *2 *16	*61 56 71 74	*15 14 17 17	
75 87 108 104	*4	6 6 7 7	12 14 19 24	3 6 22 14	67 67 69 69	53 53 55 54	
806 778 817 836	1 1	28 28 30 32	6 6 6	15 3 1 24	799 831 869 871	23 23 24 24	
96 127 135 103	414	*2 *2 2 0		*43 *-64 7 -26	451 448 458 444	17 16 16 15	
62 67 67 67	3	2 2 2 2		0	78 83 84 84	34 35 35 34	
8 6 8 7	13 *16	2 2 *3 *2	  	*1 0 *2 *2	94 97 *85 *96	5 5 *4 *4	
717 825 766 854	4,569	15 19 22 29	15 13 13 14	-88 45 26 -76	6,064 6,247 6,359 6,585	33 34 33 34	
14 14 14 15	0	*1 *1 *1 *1	  	 0 0 0	*98 *98 *99 *101	*9 *8 *8 *8	

Country or area	Year -	Total	Solids	Primary energy   Liquids	production Gases	Electricity	Heat
	10015		•	Liquius	Cases	•	ricat
Sao Tome and Principe	2015 2016	1 1	1 1			0	
	2017 2018	1 1	1	••	••	0	
				••	••	U	
Senegal	2015 2016	69 66	68 65		1 1	0	0
	2017	69	67		1	0	1
	2018	69	68	••	0	0	1
Seychelles	2015	0	0	••	••	0	
	2016 2017	0 0	0 0			0	
	2018	0	0			0	
Sierra Leone	2015	54	53	••	••	*1	••
	2016	54 55	54	••	••	*1	••
	2017 2018	55 55	54 54	••	···	*1 0	•• ••
Somalia	2015	129	129				
Milalia	2016	136	136		••		
	2017 2018	139 143	139 143				
				·•			
South Africa	2015 2016	6,640 6,530	6,421 6,294	17 3	43 26	20 25	139 182
	2017	6,565	6,321	4	23	33	184
	2018	6,618	6,399	4	35	39	141
South Sudan	2015	321	8	313		0	
	2016 2017	256 265	8 7	248 258		0	
	2018	278	7	271	••	0	
St. Helena and Depend.	2015	0	0			0	
	2016 2017	0 0	0 0			0	
	2018	0	0			ő	
Sudan	2015	461	202	229		30	
, 444	2016	432	204	200	··	29	
	2017 2018	412 404	205 207	173 162		34 35	
- -							
ōgo	2015 2016	112 116	112 115		••	0 1	
	2017 2018	108 114	107 114	••	••	1	••
				••	••	1	
Гunisia	2015 2016	260 252	40 45	108 103	105 95	2 2	5 5
	2017	230	45	87	90	2	6
	2018	225	46	85	86	2	7
Jganda	2015	745	734			11	
	2016 2017	773 802	761 789			12 13	
	2018	843	830	 		13	
Jnited Rep. of Tanzania	2015	723	685		31	8	
	2016	735	697		29	9	
	2017 2018	752 774	716 739		27 26	9 8	
Zambia	2015	411	364			47	
_aa	2016	419	380			40	
	2017 2018	447 469	403 424			44 46	

		Internationa	ll bunkers	0	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
*2 *2 *2 *2 *2	  	0 0 0 *1	  	  	*3 *3 *3 *3	*14 *14 *14 *14	
155 154 137 159	37 11	12 9 10 9	5 6 5 *6	-4 -6 *-6 *4	178 174 186 191	12 12 12 12	
15 17 18 16	0	*2 *2 *2 *1	*7 *7 7 *7	0 *1 0 0	7 7 8 8	71 78 80 80	
*13 *13 *13 *14		0 0 0 0	  	  	66 67 68 68	9 9 9	
*12 *12 *12 *12	0	2 2 2 2	*1 1 *1 *1	  	138 145 148 152	10 10 10 10	
1,368 1,299 1,396 1,424	1,885	65 73 95 58	142 67 32 111	-5   36	5,760 5,875 5,949 5,916	104 105 104 102	
27 24 21 18	310 245 255 268	3 3 3 3	  	  	35 32 27 26	3 3 3 2	
0 0 0 0	••			  	0 0 0 0	27 35 26 32	
94 113 140 136	47 12	*6 *7 *6 *5	1 1 1 *1	 0 	503 491 532 528	13 12 13 13	
19 24 24 26	  	1 2 2 3	0  1	-1 -1 -1 -1	131 138 130 138	18 18 17 17	
317 322 340 345	103 90	9 9 11 13	0 0 0 0	7 1 -5 -5	452 460 473 479	40 41 41 41	
65 68 76 78	1 1	5 4 4 5	  	  	804 836 872 915	21 21 21 21	
109 108 106 108		5 5 6 6	2 1 1 0	  	825 836 852 875	16 16 16 16	
65 70 61 56	3 4	2 1 1 1	  	  	469 485 502 519	30 30 30 30	

Country or area	Year			Primary energ			
——————————————————————————————————————	icai	Total	Solids	Liquids	Gases	Electricity	Heat
Zimbabwe	2015	450	431	1		18	
	2016 2017	381 427	369 411	1		10 14	
	2018	448	428	2		18	
America, North	2015	115,127	23,807	40,984	35,502	3,446	11,388
7	2016	110,388	20,230	39,814	35,147	3,740	11,458
	2017 2018	114,154 122,359	21,284 21,452	41,620 46,069	35,721 39,128	4,093 4,179	
Anguillo	l l			,,,,,,	,		
Anguilla	2015 2016	0	0			0	
	2017	0	0			0	
	2018	0	0			0	
Antigua and Barbuda	2015	0				0	
	2016 2017	0				0	
	2018	0				0	
Aruba	2015	*1	0			0	
	2016	*1 *1	0			*1 *1	
	2017 2018	*1	0	••		*1	
Bahamas	2015	0	0				
Dariaillas	2016	0	0		·· ··	···	···
	2017	0	0				
	2018	U	U	••	••	••	
Barbados	2015 2016	3 3	0 1	1 1	1 0	0	
	2010	2	1	1	0	0	
	2018	3	1	1	1	0	
Belize	2015	9	5	3	0	1	
	2016 2017	8 9	5 5	3 2	0	1 1	
	2018	8	5	2	ő	1	
Bermuda	2015	*1	*1				
Dominada	2016	*1	*1				
	2017 2018	*1 *1	*1 *1				
			·				
Bonaire, St Eustatius, Saba	2015 2016	0				0	
	2017	0	 			0	
	2018	0				0	
British Virgin Islands	2015	0	0			0	
	2016 2017	0	0			0	
	2018	Ō	0			0	
Canada	2015	19,766	1,825	9,514	5,843	1,483	1,101
	2016	20,053	1,713	9,495	6,234	1,513	1,097
	2017 2018	21,276 22,149	1,794 1,807	10,463 11,235	6,377 6,494	1,547 1,522	1,096 1,090
Cayman Islands	2015						
Gayman islanus	2016						
	2017 2018						
						••	
Costa Rica	2015 2016	110 108	27 26	1	0	33 33	
	2017	102	25	1	0	36	40
	2018	96	24	1_	0	37	35

		Internationa	al bunkers	· · · · · · · · · · · · · · · · · · ·	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
58 57 60 67	6	1 2 3 3		24 -38 13 7	473 465 465 498	34 33 33 34	
32,713 34,872 35,080 34,717	30,200 34,369	1,280 1,327 1,345 1,385	1,039 1,191 1,361 1,289	2,062 -1,345 -1,518 -847	114,853 113,888 113,677 117,056	202 199 197 201	
*2 *2 *2 *2	  	 		  	*2 *2 *2 *2	*154 *153 *139 *141	
*10 *10 *10 *10	0 0	*3 *3 *3 *3	0 0 0 0	  	*7 *7 *7 *7	*74 *75 *74 *75	
*16 *16 *16 *16		*4 *4 *4 *4	0 0 0 0	  	*13 *13 *13 *13	*122 *120 *120 *118	
32 22 28 38	0	*2 *1 *1 *2	*4 *1 *3 *2	*-5 -8 *-6 *-5	31 29 30 39	82 76 79 101	
22 22 21 20	1	*6 *5 *6 *5		1 1 1 0	17 17 16 17	59 60 55 59	
10 10 10 10	2 2	1 1 1 1	  	0 0 0 0	16 15 16 16	44 42 43 42	
8 9 10 11		*1 *1 *1 *1	0 0 0 0	-1 0 *1 0	8 9 9 10	127 145 147 165	
*14 *15 *15 *15		0 0 0 0	*9 *9 *9 *9		*5 *5 *6 *6	*214 *218 *220 *219	
*3 *3 *2 *2			  	  	*3 *3 *2 *2	*103 *102 *81 *76	
3,657 3,722 3,585 3,531	12,003 12,524	36 26 26 37	9 14 16 19	49 -203 -23 110	11,810 11,934 12,318 12,446	328 328 335 336	
9 9 10 10		1 2 2 2	  	  	8 8 8 9	130 126 131 136	
108 116 124 118	3	*7 *8 8 9	  	0 -1 2 -3	207 213 212 205	43 44 43 41	

Table 2

Country or area	Year			Primary energy			
	1001	Total	Solids	Liquids	Gases	Electricity	Heat
Cuba	2015	212	48	120	44	0	
	2016 2017	193 195	39 50	111 107	42 37	0 1	
	2018	197	57	105	34	*1	
Curaçao	2015	1				1	
	2016 2017	1 1				1	
	2018	1				1	
Dominica	2015	0	0			0	
	2016 2017	0	0 0			0	
	2018	Ö	Ö			0	
Dominican Republic	2015	23	19	<del></del>	0	5	
	2016 2017	27 32	20 22		0	7 10	
	2017	32	23		0	9	
El Salvador	2015	85	24		1	5	55
	2016	85	23		1	5	57
	2017 2018	89 87	25 24		1 0	7 7	
Greenland	2015	2	0			2	
	2016 2017	2 1	0	••	••	1	••
	2017	*2	0			*1	
Grenada	2015	0	0			0	
0.0	2016	0	0			0	
	2017 2018	0 0	0 0			0	
Guatemala	2015	311	266	21	0	15	9
	2016	354	309	19	0	16	10
	2017 2018	343 343	291 294	20 19	0	22 21	9 9
Haiti	2015	139	138	0		0	
	2016	141	140	0		0	
	2017 2018	143 145	142 144	0		0	
Honduras	2015	117	104			12	
Tionduras	2016	123	109	••		14	
	2017 2018	106 130	86 100			17 19	3 11
Januarian.					••		
Jamaica	2015 2016	10 9	9 8 7			1 1	••
	2017 2018	9 *8	7 *7	••	••	2 2	
Mexico	2015 2016	8,031 7,644	602 652	5,483 5,220	1,441 1,276	143 150	362 346
	2017	6,989	654	4,721	1,115	157	342
	2018	6,697	671	4,425	1,081	171	350
Montserrat	2015 2016						
	2017	···					
	2018						
Nicaragua	2015	92 93	64 64			4	24
	2016 2017	91	60			4	25 27
	2018	97	63	••		4	29

Imports	Exports	Internationa	bunkers	Stock changes	Supp	oly
	Exports	Aviation	Marine	Stock changes	Total	Per capita
327 294 266 237	*19 *31	5 8 7 3	27 26 *19 *18	 *-1 	459 435 404 375	41 38 36 33
509 469 298 246	165	3 3 3 3	66 65 65 65	  	101 86 66 58	630 534 408 356
*2 *3 *2 *2	0	0 0 0 0	0 0 0 0	0 0 0 0	*3 *3 *2 *2	*37 *38 *34 *34
325 345 337 355	0	22 22 24 24	 0 1 1	1 0 3 -2	326 350 341 364	32 34 32 34
101 106 101 108	1 7 8 8	7 7 7 8		  	178 177 176 179	28 28 27 28
8 8 8 *8	  	- - -	0 1 1 *1	1 0 0 0	9 9 9 *9	155 153 156 *159
4 4 4 5	••	0 0 0 0	  	0 0 0 0	4 4 4 5	37 38 39 43
249 250 250 257	38	3 3 4 5	16 17 18 18	24 9 4 -3	480 537 531 546	30 32 31 32
38 42 44 48		1 1 1 1	  	0	176 182 186 192	16 17 17 17
119 123 132 150	13	3 2 3 2	0 1 3 3	-30 -12 3 5	241 240 218 257	26 26 23 27
129 130 131 131	11 11 12 12	9 9 8 9	1 1 2 2	0 -2 2 0	117 120 115 117	41 41 39 40
2,954 3,530 3,935 4,302	3,025 3,151 3,066 3,077	143 154 165 181	36 38 34 35	-49 6 37 72	7,830 7,826 7,622 7,634	64 63 61 60
1 0 0 0		0 0 0 0	0 0 0 0	0 0 0	1 0 0 0	154 84 75 *77
72 74 76 72	1	1 1 1 1	  	-3 *-1 0 0	165 166 166 167	27 26 26 26

Country or area	Year			Primary energy			. 114		
— Gournity of area	i cai	Total	Solids	Liquids	Gases	Electricity	Heat		
Panama	2015	36	12			24			
	2016	39 42	13 13	••		26 28			
	2018	44	13			31			
Puerto Rico	2015	1				1			
Fuello Rico	2015	1				1			
	2017	1				1			
	2018	1				1			
Sint Maarten (Dutch part)	2015	••							
	2016 2017	••		••		••			
	2018								
Ct Kitta Navia	2015	0	0			0			
St. Kitts-Nevis	2015	0 0	0 0			0	••		
	2017	0	0			0			
	2018	0	0			0	••		
St. Lucia	2015	*1	*1						
	2016	*1	*1 *1						
	2017	*1 *1	*1 *1			0			
o. 5	i i								
St. Pierre-Miquelon	2015	0 0	0			0	••		
	2017	ő	ő						
	2018	0	0						
St. Vincent-Grenadines	2015	0	0			0			
	2016	0	0			0			
	2017 2018	0	0 0			0			
Trinidad and Tobago	2015	1,557 1,370	0	217 195	1,339 1,175	0			
	2017	1,367	0	197	1,170	0			
	2018	1,435	0	174	1,260	0			
Turks and Caicos Islands	2015	0	0						
	2016	0	0						
	2017	0 0	0 0						
	2010					••	••		
United States	2015 2016	84,620 80,132	20,662 17,105	25,624 24,768	26,834 26,419	1,714 1,965	9,787 9,874		
	2017	83,352	18,106	26,107	27,022	2,257	9,861		
	2018	90,881	18,217	30,106	30,256	2,349	9,953		
United States Virgin Is.	2015	0				0			
<b>.</b>	2016	0				0			
	2017 2018	0 0				0			
America, South	2015 2016	31,623 31,287	6,497 6,636	17,730 16,973	4,705 4,849	2,452 2,565	239 264		
	2017	30,692	6,697	16,272	4,846	2,635	242		
	2018	29,434	6,565	15,152	4,721	2,745	251		
Argentina	2015	3,059	77	1,404	1,352	150	77		
=	2016	3,111	78	1,389	1,417	137	*89		
	2017 2018	3,035 3,152	85 96	1,329 1,353	1,405 1,480	151 153	66 70		
Bolivia (Plur. State of)	2015 2016	949 913	39 41	143 140	758 725	9 6	••		
	2017	887	40	136	703	8			
	2018	835	*40	129	656	10			

	[	Internation	al bunkers	<u> </u>	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
266 299 339 341	1	28 30 30 32	124 143 173 167	-21 -6 -11 2	171 170 188 183	43 42 46 44	
52 59 49 *50	 	  	  	  	53 61 50 *50	16 18 16 *17	
*22 *22 *22 *21	·· ··	*2 *2 *2 *2	*8 *8 *8 *8	  	*12 *12 *12 *11	*295 *293 *282 *268	
*4 *4 *4 *4	 	0 0 0 0		- - - -	*3 *3 *3 *4	*65 *67 *67 *67	
*8 *9 *9		1 1 1 1	0 0 0 0	  	*8 *8 *8	*43 *42 *44 *44	
*1 *1 *1 *1	  	  	0 0 0 0	  	*1 *1 *1 *1	*153 *156 *157 *146	
3 4 3 4	0 0 0 0	0 0 0 0	  	0 0 0 0	4 4 3 4	33 33 29 33	
171 221 193 137	892 830 816 824	11 14 10 8	21 26 21 17	7 14 10 6	797 707 703 715	582 513 508 515	
*3 *3 *3 *3		  			*3 *3 *3 *3	*80 *82 *87 *88	
23,452 24,916 25,038 24,443	13,804 17,691	981 1,019 1,027 1,042	717 839 986 922	2,088 -1,142 -1,539 -1,029	91,585 90,528 90,227 93,400	285 280 278 286	
  	  	  			0 0 0 0	*1 *1 *1 *1	
6,224 5,915 6,192 6,074	13,093 13,323	292 292 283 302	281 219 218 225	28 -104 -774 -349	24,078 23,702 23,833 23,076	58 57 57 55	
644 640 650 562	255 219	40 41 43 39	37 28 33 30	9 -1 4 1	3,423 3,428 3,385 3,288	79 79 77 74	
44 43 52 61	579 554	4 4 3 3	  	-9 -12 -15 -9	364 385 398 404	33 35 36 36	

Country or area	Year	Primary energy production  Total Solids Liquids Cases Floatricity Heat						
— Country of area	- Icai	Total	Solids	Liquids	Gases	Electricity	Heat	
Brazil	2015 2016 2017 2018	11,567 11,927 12,366 12,538	3,012 3,052 3,124 3,206	6,246 6,405 6,676 6,720	777 806 905 855	1,373 1,492 1,491 1,587	159 171 170 169	
Chile	2015 2016 2017 2018	541 525 543 571	390 365 376 379	12 11 12 17	39 46 47 48	98 102 104 116	1 2 4 10	
Colombia	2015 2016 2017 2018	5,394 5,235 5,198 5,047	2,551 2,680 2,663 2,469	2,233 1,977 1,902 1,933	435 401 411 429	175 177 221 216	  	
Ecuador	2015 2016 2017 2018	1,260 1,287 1,263 1,240	23 23 24 22	1,161 1,176 1,137 1,116	29 31 29 27	48 57 73 75	0 0 0 0	
Falkland Is. (Malvinas)	2015 2016 2017 2018	0 0 0 0	0 0 0 0	  		0 0 0 0	  	
Guyana	2015 2016 2017 2018	7 7 7 5	7 7 7 5			0 0 0 0	  	
Paraguay	2015 2016 2017 2018	350 374 362 346	144 138 141 126	5 6 6 7		201 230 215 213	  	
Peru	2015 2016 2017 2018	938 957 912 918	100 98 96 95	269 233 233 238	479 531 471 464	88 94 110 119	1 1 1 1	
Suriname	2015 2016 2017 2018	40 39 39 40	2 2 2 2	36 34 34 34	0 0 0 0	3 3 3 4	  	
Uruguay	2015 2016 2017 2018	126 132 136 137	86 89 92 91	3 3 3 3		37 40 42 42	  	
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	7,390 6,780 5,944 4,608	66 63 48 34	6,217 5,598 4,803 3,601	837 892 875 763	270 227 218 210		
Asia	2015 2016 2017 2018	260,641 264,113 267,975 276,234	122,657 118,909 121,958 128,046	80,741 85,642 84,370 84,095	44,336 45,368 46,348 47,132	7,162 7,828 8,507 9,346	5,745 6,365 6,791 7,615	
Afghanistan	2015 2016 2017 2018	61 71 83 89	52 60 73 80	  	5 6 5 5	4 4 4 4	  	
Armenia	2015 2016 2017 2018	45 43 45 37	6 8 9 6	  	  	8 8 8 8	30 26 29 23	

lana é	E.m. (	Internationa	al bunkers	Ot a state of	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
2,964 2,444 2,697 2,649	2,100 2,521	103 95 93 105	174 143 141 121	-19 29 18 48	12,393 12,004 12,289 12,196	61 58 59 58	
1,047 1,143 1,141 1,149	50 46	23 24 26 28	5 5 6 5	4 6 4 7	1,510 1,582 1,603 1,635	84 87 87 87	
276 378 278 193	3,872 4,426	56 57 56 64	12 14 11 6	41 -96 -711 -330	1,701 1,767 1,693 1,630	36 37 35 33	
296 246 254 269	929 902	8 10 11 11	34 12 15 29	-20 -15 -26 -16	603 597 614 596	37 36 37 35	
0 0 0 0	<del></del>	- - -	  	- - -	1 1 1	201 194 173 173	
28 31 31 33	 	1 1 1	  	0 0 0 0	35 37 37 38	45 48 48 48	
84 103 108 121	177 160	1 2 3 3	  	0 3 -5 1	281 295 313 307	42 44 46 44	
364 464 535 506	441 482	37 42 30 30	  21	19 -14 -38 -50	890 953 973 1,001	29 31 31 31	
23 21 20 20	18 16	*2 *2 *2 *2	2 2 2 2	0 0 	43 37 40 41	77 66 70 71	
105 96 90 101	3 5	4 4 4 5	7 6 4 6	3 -4 -5 -1	213 219 217 223	62 64 63 65	
348 305 336 409	4,669 3,991	14 11 12 10	10 8 7 6	0 0 0	2,622 2,397 2,271 1,716	87 80 77 59	
106,780 111,727 118,695 123,272	99,530 100,174	3,065 3,275 3,379 3,527	4,369 4,353 4,520 4,516	172 -3,045 -137 1,852	268,316 271,726 278,735 287,605	61 61 62 63	
88 72 69 84	21 28	0 0 0 0	  	  	136 122 124 142	4 3 3 4	
98 94 101 103	4 5	*1 2 2 3	  	1 0 1 0	135 130 137 131	46 44 46 44	

Country or area	Year	T-4-1	0-11-1-	Primary energy		Electrica.	114
	+ +	Total	Solids	Liquids	Gases	Electricity	Heat
Azerbaijan	2015	2,474	6	1,785	676	6	
	2016 2017	2,429 2,308	4 4	1,760 1,658	658 639	7 6	
	2018	2,349	4	1,663	675	7	••
ahrain	2015	957	0	441	517	0	
	2016	940	0	443	497	0	••
	2017	942 946	0 0	431 427	512 520	0	
Bangladesh	2015	1,510	606	13	887	3	
angiacon	2016	1,602	615	14	968	5	
	2017	1,605 1,602	619 615	18 18	964 963	5 5	
				10	903		
Bhutan	2015 2016	77 79	49 50	••		28 29	
	2017	79	52			28	
	2018	77	52	••		25	••
Brunei Darussalam	2015	673	0	279	394	0	••
	2016 2017	633 652	0	252 235	380 416	0	
	2018	639	ő	232	407	ő	••
Cambodia	2015	184	177			7	
	2016	191	182			9	
	2017 2018	198 211	188 194			10 17	
Nhim a							
China	2015 2016	100,808 95,691	80,044 74,411	9,334 8,737	4,765 4,980	4,821 5,261	1,845 2,303
	2017	99,228	76,957	8,447	5,442	5,703	2,679
	2018	103,893	80,671	8,358	5,412	6,273	3,179
China, Hong Kong SAR	2015 2016						
	2017	···	 				
	2018	••	••	••			••
China, Macao SAR	2015	*5	*5	••			
	2016 2017	*5 *6	*5 *6				
	2018	6	6		 	 	
Cyprus	2015	5	1	0	0	1	3
, , , , , , , , , , , , , , , , , , ,	2016	6	1	0	0	1	3
	2017 2018	6 6	1 1	0	1 1	1 2	3
N = = = = ! =							
Georgia	2015 2016	55 58	22 21	2 2	0	30 34	1
	2017	56	20	1	0	33	1
	2018	52	14	1	0	36	1
ndia	2015 2016	22,818	19,005	1,740	*1,097	571 614	404 409
	2016	23,219 23,410	19,343 19,436	1,747 1,746	1,106 1,132	614 682	414
	2018	23,847	19,759	1,665	1,154	860	408
ndonesia	2015	17,377	12,637	1,987	2,380	63	309
	2016 2017	18,175 18,277	13,314 13,406	2,054 2,097	2,345 2,247	77 67	384 460
	2017	20,571	15,580	2,097 2,172	2,247 2,287	71	461
ran (Islamic Rep. of)	2015	13,637	116	6,893	6,545	52	31
an (ioiainio Nop. 01)	2016	16,412	*115	9,087	7,079	60	71
	2017 2018	17,337 17,056	*126 *130	9,433 8,809	7,641 7,979	56 57	81 81

Imports	Exports	Internationa		Stock changes	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
12 25 97 78	1,857 1,770	12 8 7 5	2 2 2 2	-22 -13 21 7	605 599 604 607	63 62 61 61	
475 462 484 485	821 844	19 19 20 21	  	-4 6 -16 -7	577 556 579 582	421 390 387 371	
308 286 343 336	5 2	15 15 17 18	4 5 5 5	-7 -16 -18 -49	1,803 1,879 1,943 1,964	12 12 12 12	
8 8 9 11	21 21 21 16	0 0 0	  		64 66 67 71	88 90 90 94	
14 16 19 16	523 521	4 3 3 4	4 2 	0 -3 -5 8	114 124 153 156	274 295 359 364	
115 130 144 138		4 4 5 5	  	  -2	295 318 339 344	19 20 21 21	
21,993 25,500 28,316 31,448	2,411 3,035 3,205 3,387	334 369 409 445	374 391 412 440	-187 -2,375 -91 1,417	119,870 119,771 123,608 129,651	85 85 87 91	
1,298 1,314 1,344 1,363	17	271 276 292 302	360 375 450 455	59 53 -2 6	576 590 587 589	80 81 80 80	
44 43 46 39		- - -	3 3 3 3	1 0 1 0	45 46 48 42	74 74 78 66	
104 111 113 113	1 0	10 12 13 14	10 12 11 11	3 1 1 -1	86 91 94 95	74 78 80 80	
163 160 165 165	11 11	3 3 4 5	  0	1 0 -1 2	198 204 206 204	49 51 51 51	
16,294 16,514 17,906 18,783	2,869 3,254	*193 *216 *167 *182	57 61 64 *68	48 -214 -252 90	36,066 36,802 38,083 39,184	28 28 28 29	
2,280 2,174 2,303 2,444	11,032	37 34 43 46	12 14 14 9	-30 -119 *35 55	8,747 9,389 9,048 10,415	34 36 34 39	
478 393 366 342	6,959	58 66 *70 *72	197 84 58 58	7 -170 -186 	9,901 10,108 10,802 10,992	126 127 134 134	

Country or area	Year			Primary energ			
— Country of area	Teal	Total	Solids	Liquids	Gases	Electricity	Heat
Iraq	2015 2016 2017 2018	7,565 9,667 9,882 9,994	2 2 2 2	7,316 9,391 9,575 9,580	238 261 297 404	*9 12 8 8	  
Israel	2015 2016 2017 2018	274 306 320 339	2 2 2 2	3 5 3 4	249 277 293 312	4 6 6 6	16 16 16 15
Japan	2015 2016 2017 2018	1,342 1,460 1,721 2,100	549 558 608 629	20 19 19 17	101 108 112 102	459 473 523 544	212 301 459 808
Jordan	2015 2016 2017 2018	8 10 11 12	3 3 3 3	0 0 0 0	4 3 4 3	1 3 4 6	  
Kazakhstan	2015 2016 2017 2018	6,650 6,669 7,389 7,378	1,834 1,834 2,012 2,040	3,386 3,324 3,671 3,888	1,397 1,468 1,663 1,410	34 43 42 39	  
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	789 912 646 558	752 866 603 511	- - - -		36 46 43 46	  
Korea, Republic of	2015 2016 2017 2018	2,125 2,125 2,028 1,866	241 258 288 267	51 58 60 70	15 13 20 18	29 37 45 56	1,789 1,760 1,615 1,455
Kuwait	2015 2016 2017 2018	7,011 7,278 6,772 6,870	0 0 0 0	6,432 6,687 6,187 6,264	578 591 585 607	 0 0 0	  
Kyrgyzstan	2015 2016 2017 2018	75 77 88 97	30 28 28 36	5 6 7 8	1 1 1 1	40 41 51 52	  
Lao People's Dem. Rep.	2015 2016 2017 2018	162 267 276 291	111 202 205 213	  		51 65 72 *79	  
Lebanon	2015 2016 2017 2018	8 7 *8 *7	5 5 *5 *5	  		2 1 2 1	1 1 *1 *1
Malaysia	2015 2016 2017 2018	3,748 3,812 3,831 3,952	101 99 112 107	1,418 1,485 1,435 1,439	2,178 2,154 2,188 2,309	51 73 97 97	  
Maldives	2015 2016 2017 2018	0 0 0 0	0 0 0 0		  	0 0 0	
Mongolia	2015 2016 2017 2018	654 959 1,311 1,394	610 918 1,273 1,362	44 41 38 32	  	  	  

- Lance of	F 1	Internation	al bunkers	Ota alicab	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
572 754 797 828	7,939 8,048	23 29 28 27	9 11 12 12	-152 133 15 27	1,997 2,309 2,576 2,677	56 63 69 70	
987 891 938 905	261 265	37 40 45 48	11 6 10 12	14 -29 33 -26	915 918 906 935	115 113 110 112	
17,917 17,549 17,568 17,011	797 770	268 280 293 302	172 181 169 178	-58 -74 -52 -6	18,086 17,824 18,108 17,859	141 140 142 140	
369 396 431 383	26 39	4 4 3 3	0 4 3 0	4 2 6 0	368 371 391 382	40 39 40 38	
312 348 336 456	3,786 4,306	*13 *15 *21 27	0 0 0 1	21 13 45 28	3,018 3,203 3,353 3,103	172 180 185 169	
70 81 63 43	599 *130	  	- - -	 *272 *335	332 394 307 265	13 16 12 10	
12,565 13,025 13,252 13,558	2,695 2,799	183 204 209 220	378 422 409 382	68 -1 42 29	11,428 11,829 11,821 11,826	225 232 231 231	
138 172 192 173	5,958 5,557	33 32 40 40	50 45 39 39	-75 -108 -127 -130	1,389 1,522 1,455 1,460	362 385 359 353	
118 96 96 117	10 16	5 5 1 0	  	12 -4 5 -2	167 162 162 192	28 27 26 30	
50 *46 *46 *46	71 90	*1 *1 *2 *2		*34 *-1 *-1	169 206 232 239	25 30 33 34	
340 352 374 353		*9 *11 *12 *12	*1 *1 *1 1		337 348 369 348	52 52 54 51	
1,912 2,068 2,042 2,346	2,266 2,264	107 103 110 107	14 12 16 17	-41 -46 3 13	3,424 3,545 3,480 3,832	113 116 112 122	
22 24 24 28		*1 *1 *1 *1	*2 *2 *2 *3		19 21 22 25	41 43 44 48	
53 49 61 	716 851	  	  	17 -3 126 -10	272 294 395 541	91 96 127 171	

Table 2

Country or area	Year			Primary energ			
— Country of area	- Icai	Total	Solids	Liquids	Gases	Electricity	Heat
Myanmar	2015 2016 2017 2018	1,176 1,207 1,187 1,215	465 474 482 488	34 28 25 21	642 670 639 652	34 35 40 53	
Nepal	2015 2016 2017 2018	424 430 438 446	399 403 410 417		12 12 12 12	12 15 17 18	  
Oman	2015 2016 2017 2018	3,228 3,310 3,242 3,446	0 0 0 0	2,044 2,101 2,028 2,074	1,184 1,209 1,214 1,371	0 0 0 0	  
Other Asia	2015 2016 2017 2018	501 453 348 404	65 63 61 63	2 1 0 0	12 10 8 6	25 33 32 32	398 346 247 303
Pakistan	2015 2016 2017 2018	2,158 2,193 2,213 2,234	646 665 664 682	198 203 213 210	1,131 1,147 1,138 1,126	120 128 123 110	63 50 74 106
Philippines	2015 2016 2017 2018	999 1,106 1,098 1,118	402 487 507 504	43 45 41 42	122 140 138 154	34 37 43 42	398 399 370 376
Qatar	2015 2016 2017 2018	9,249 9,450 9,319 9,138	0 0 0 0	3,101 3,224 3,116 2,968	6,148 6,226 6,204 6,170	  	  
Saudi Arabia	2015 2016 2017 2018	27,723 28,663 28,103 28,567		23,515 24,238 23,572 23,861	4,208 4,425 4,530 4,706	0 0 0 0	  
Singapore	2015 2016 2017 2018	28 28 28 26	28 28 27 25	  		0 1 1 1	  
Sri Lanka	2015 2016 2017 2018	181 169 167 *175	158 153 150 *151	  		23 17 17 25	  
State of Palestine	2015 2016 2017 2018	9 10 8 8	4 4 3 2			0 0 0 0	5 5 6 6
Syrian Arab Republic	2015 2016 2017 2018	196 175 172 169	0 0 0 0	49 44 44 42	146 127 126 125	1 3 3 3	  
Tajikistan	2015 2016 2017 2018	*131 144 *157 *165	*69 83 *94 *97	1 1 1	0 0 0 0	61 60 62 66	  
Thailand	2015 2016 2017 2018	3,157 3,299 3,133 3,051	1,124 1,260 1,158 1,097	900 921 910 895	1,110 1,092 1,027 1,009	23 26 37 49	0 0 0 0

Importo	Evporto	Internationa	l bunkers	Stock changes	Supply			
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita		
154 203 166 278	529 *495	   3	0   0	32 10 -2	848 872 860 991	16 16 16 18		
78 117 139 152	0	3 6 6 5	  	0 0 	499 542 572 593	18 20 21 21		
84 85 95 91	2,291	19 8 11 13	52 68 41 100	3 7 0 *-7	1,051 1,021 1,104 1,091	246 228 237 226		
4,982 5,038 5,148 5,066	728 716	113 121 125 128	44 52 49 47	17 -20 10 -51	4,599 4,610 4,596 4,578	195 195 194 193		
1,117 1,698 2,148 2,359	20 33	9 11 *11 *9	6 4 2 2	13 2 *-3 0	3,229 3,854 4,318 4,545	16 19 21 21		
1,277 1,376 1,487 1,618	234 225	54 58 71 73	1 2 4 4	14 5 -35 59	2,050 2,183 2,321 2,393	20 21 22 22		
26 24 5 10	7,767 7,531	53 76 121 126	  	110 118 -15 13	1,540 1,513 1,688 1,809	600 570 620 650		
1,274 1,194 1,228 1,973	19,916 19,212	116 124 135 152	128 140 134 142	121 -300 -186 *-210	10,307 9,977 10,035 9,950	325 308 303 295		
7,236 7,369 7,899 7,277	4,152 4,349	*304 *322 *332 *350	1,829 1,969 2,051 2,018	40 -17 *27 -23	1,236 971 1,166 1,070	221 172 204 186		
256 300 308 317	4 0	16 23 24 22	15 24 23 25	-36 -49 -33 -3	433 467 461 444	21 22 22 21		
63 67 68 65	0	  	  	0 0  0	72 77 76 74	16 17 16 15		
277 303 339 318	32 37	0 0 0 0	19 17 16 15		424 429 459 437	24 25 27 26		
43 42 36 47	6 5	2 2 1 1	  		167 178 187 199	20 21 21 22		
3,315 3,303 3,477 3,675	543 591	164 175 183 198	47 49 47 56	-28 8 -6 165	5,695 5,827 5,795 5,678	83 84 84 82		

Country or area	Year Primary energy production								
— Country of area	Tour	Total	Solids	Liquids	Gases	Electricity	Heat		
Timor-Leste	2015 2016 2017 2018	402 326 289 *265	1 1 1 1	131 104 85 69	270 222 203 *195	0 0 0 0	  		
Turkey	2015 2016 2017 2018	1,317 1,495 1,527 1,671	655 760 761 801	116 118 118 132	24 27 30 35	284 302 284 316	238 287 334 386		
Turkmenistan	2015 2016 2017 2018	3,407 3,230 3,223 3,331	0 0 0 0	553 510 477 452	2,854 2,720 2,745 2,879	  	  		
United Arab Emirates	2015 2016 2017 2018	9,995 10,293 9,790 9,626	  	7,879 8,145 7,885 7,935	2,113 2,145 1,899 1,685	0 0 2 4	*3 *2 3 3		
Uzbekistan	2015 2016 2017 2018	2,058 2,111 2,141 2,310	53 59 61 63	124 119 126 132	1,857 1,909 1,926 2,094	25 25 29 21	  		
Viet Nam	2015 2016 2017 2018	3,035 2,853 2,802 2,553	1,614 1,557 1,536 1,359	839 688 618 550	374 373 327 339	207 235 321 304	  		
Yemen	2015 2016 2017 2018	173 64 75 74	5 5 5 5	64 41 47 64	103 18 22 4	0 1 1 2	  		
Europe	2015 2016 2017 2018	101,269 102,683 104,721 106,862	21,363 21,630 21,747 22,971	30,413 31,064 31,022 31,333	32,059 32,672 34,569 34,790	4,115 4,241 4,281 4,608	13,319 13,075 13,100 13,160		
Albania	2015 2016 2017 2018	87 82 68 81	10 8 8 9	54 45 41 39	1 3 3 3	21 26 16 31	0 1 1 1		
Andorra	2015 2016 2017 2018	1 1 *1 *1	0 0 0 0	  		0 0 0 0	  		
Austria	2015 2016 2017 2018	501 513 516 488	226 233 238 227	55 50 46 43	56 53 57 46	155 167 166 162	9 9 9 9		
Belarus	2015 2016 2017 2018	163 166 180 171	83 86 98 88	73 73 74 76	7 6 6 6	1 1 2 2	  		
Belgium	2015 2016 2017 2018	444 637 626 484	94 98 94 95	16 15 18 17	10 10 9 10	32 32 36 42	292 482 468 320		
Bosnia and Herzegovina	2015 2016 2017 2018	173 199 194 238	153 178 180 214	  	  	20 20 14 24	  		

	- · I	Internationa	al bunkers	0	Supply			
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita		
*7 *7 *7 *7	325 288	0 0 0 0	  	  	8 8 8 *8	6 6		
4,710 4,743 5,205 4,842	307 326	153 147 152 163	35 36 35 38	89 33 79 31	5,390 5,715 6,139 6,030	72		
0 0 0 0	2,227 2,052 2,044 2,151	21 21 21 21	  		1,160 1,158 1,158 1,160	204 201		
1,788 1,759 1,967 2,043	7,346 7,740 8,083 8,301	344 365 326 301	*521 *345 425 358	 *2 74 60	3,571 3,600 2,848 2,649	300		
175 141 141 87	378 429	*4 *4 *3 *4	  	43 23 15 -69	1,734 1,847 1,835 1,944	59		
593 713 704 706	437 406	41 62 38 48	7 8 9 12	*74 *66 83 102	2,985 2,993 2,970 2,975	32 31		
127 93 80 81	114 *9 *10 *14	1 0 0 0	5 5 4 4	  0	180 144 140 137	5		
67,523 67,394 70,234 68,713	60,680 62,362	2,271 2,339 2,520 2,622	2,639 2,692 2,762 2,589	184 -788 251 -311	103,959 105,153 107,059 109,167			
63 61 67 54	45 28	0 0 0 0	1 1 2 1	6 5 6 5	91 91 100 91	31 31 35 32		
8 8 8 9	0	0 0 0 0	  	  	9 9 9 9	116		
1,265 1,339 1,349 1,333	450 413	30 33 31 35	1 1 1	-48 -17 3 -7	1,371 1,385 1,416 1,377	158 158 161 155		
1,713 1,534 1,546 1,584	662 640	5 5 6 6	  	-13 -27 -1 22	1,067 1,060 1,081 1,139	113 112 114 120		
3,409 3,314 3,511 3,675	1,505	62 62 68 72	246 282 317 393	39 -19 -53 21	2,182 2,308 2,300 2,215	203 201		
140 143 146 142	51	0 0 0 0	  	11 4 11 0	250 282 278 312	83 83		

Table 2

Country or area	Year	T-4-1	0-11-1-	Primary energ		Electrica I	114
		Total	Solids	Liquids	Gases	Electricity	Heat
Bulgaria	2015	507	298	3	4	31	171
	2016	474	265	4	6	24	175
	2017	493	289	5	5	21	173
	2018	506	289	6	3	28	179
Croatia	2015 2016 2017 2018	184 185 176 175	64 65 65 63	29 32 32 32	63 59 54 46	26 29 24 33	1 1 1
Czechia	2015	1,207	847	18	34	17	292
	2016	1,144	816	16	33	17	262
	2017	1,157	782	17	33	17	308
	2018	1,154	762	17	33	17	326
Denmark	2015	667	101	331	180	53	2
	2016	628	101	298	179	49	2
	2017	649	108	290	193	56	3
	2018	577	108	244	168	54	3
Estonia	2015 2016 2017 2018	234 208 243 277	231 205 239 273	  	1 1 1 1	3 2 3 2	- - -
Faeroe Islands	2015 2016 2017 2018	1 1 1 1	  	  	  	1 1 1 1	- - -
Finland	2015	732	387	16	4	69	255
	2016	737	403	5	5	68	256
	2017	753	415	12	7	71	248
	2018	812	473	11	8	69	251
France	2015	5,778	539	157	31	307	4,744
	2016	5,460	575	147	33	329	4,375
	2017	5,374	557	151	35	305	4,327
	2018	5,622	559	162	37	378	4,486
Germany	2015	5,015	2,627	282	580	498	1,028
	2016	4,810	2,476	287	595	499	953
	2017	4,794	2,473	287	576	595	863
	2018	4,666	2,371	289	517	625	865
Gibraltar	2015 2016 2017 2018	 0 0 0	  	  	  	 0 0 0	  
Greece	2015	354	281	8	4	53	9
	2016	283	202	12	5	53	11
	2017	301	225	11	5	49	12
	2018	301	213	14	5	57	12
Guernsey	2015 2016 2017 2018	  	  	  	  	  	  
Hungary	2015	471	176	52	61	4	178
	2016	479	170	59	64	4	182
	2017	473	160	62	63	5	183
	2018	465	150	65	65	5	179
Iceland	2015 2016 2017 2018	285 289 299 336	0 0 1 1	  	0 0 0	50 49 51 50	235 240 248 285

	F	Internationa	al bunkers	Ota ale ale annua	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
507	050	0	4	•	770	400	
537 538	250 241	8 9	4 3	6	778 757	108 106	
558	246	10	3	9	782	110	
486	196	11	3	1	780	111	
301	128	5 5	0	2	350	83	
314	140	5	0	1	353	84	
344	146	6	0	3	364	87	
337	145	8	1	3	354	85	
914	347	13		4	1,758	166	
904		13	••	-34	1,742	164	
999	316	15	••	8	1,818	171	
962		17		-2	1,813	170	
790	691	37	32	20	676	119	
770	661	40	28	-26	695	122	
674 683	586 495	42 44	22 25	-29 -16	703 712	123 124	
003	793	77	25	-10	712	124	
109	84	2	12	15	230	174	
110	88	2 2 3	12	-24	240	183	
108	96	3	13	-1 2	240	182	
118	115	3	12	2	263	198	
*10		0	1		*9	*100	
*10		0	1 1		*9	*189 *191	
*11		0	2		*10	*214	
*12		0	2	···	*11	*219	
979	318	27	12	4	1,350	246	
1,063	404	27	12	-56	1,412	257	
1,033	398	29	15	-47	1,392	253	
1,053	391	33	14	11	1,415	256	
6,444	1,405	243	69	-27	10,531	158	
6,384	1,273	240	62	-75	10,344	155	
6,602	1,351	241	70	-8	10,323	154	
6,417	1,400	249	78	41	10,271	153	
10,886	2,540	346	101	-16	12,931	158	
10,813	2,193	372	118	-29	12,968	158	
11,237 9,804	2,548 1,406	411 424	96 71	-36 -76	13,012 12,645	157 152	
9,004	1,400	424	7.1	-70	12,043	132	
163		0	154		9	264	
166		0	156		9	277	
184	••	0	174 170		10 11	286	
181		0	170		11	314	
4.404	007	25	7.5	40	005	04	
1,461 1,549	697 780	35 38	75 73	43 -4	965 945	91 89	
1,608	823	42	90	-4 -4	958	91	
1,632	869	47	90 92	-10	935	89	
,							
1					1	13	
1					1	16 17	
1					1	1/	
1					1	18	
759	190	8		-21	1,053	108	
814	213	8		-1	1,072	110	
1,014	313	10		49	1,115	115	
1,032	381	12	••	-14	1,118	115	
			_				
40		9	2 2 3 3	1	313	949	
45 47		13 16	2	0	318 328	958 980	
47 54	••	16 18	ა ვ	0 2	366	1,087	
	<del>"</del>	10_			300	1,001	

Table 2

Country or area	Year			Primary energ			
	Tour	Total	Solids	Liquids	Gases	Electricity	Heat
Ireland	2015 2016 2017	81 176 204	46 43 51	1 1 1	7 106 122	27 25 29	1 1 1
	2018	208	56	1	117	34	1
Isle of Man	2015 2016 2017 2018	0 0 0 *1	0 0 0 *1			0 0 0 0	 
Italy	2015 2016 2017 2018	1,509 1,401 1,421 1,452	393 389 411 379	269 197 220 250	311 277 269 266	300 296 282 321	237 242 239 236
Jersey	2015 2016 2017 2018	*1 *1 *1 *1	*1 *1 *1 *1	  		  	  
Kosovo	2015 2016 2017 2018	76 84 75 76	75 83 74 75			1 1 1 1	0 0 0 0
Latvia	2015 2016 2017 2018	98 102 108 119	84 87 86 103	3 2 2 3	4 4 4 4	7 10 16 9	  
Liechtenstein	2015 2016 2017 2018	*1 *1 *1 *1	*1 *1 *1 *1	  	0 0 0 0	0 0 0 0	0 0 0 0
Lithuania	2015 2016 2017 2018	77 78 86 82	54 54 58 55	8 7 7 8	1 1 1 2	4 6 7 6	10 10 12 11
Luxembourg	2015 2016 2017 2018	6 7 8 9	4 5 5 6	  	1 1 1 1	1 1 2 2	0 0 0 0
Malta	2015 2016 2017 2018	1 1 1	  	0 0 	0 0 0 0	0 0 1 1	0 0 0 0
Montenegro	2015 2016 2017 2018	30 28 27 31	25 21 23 23			5 7 4 8	  
Netherlands	2015 2016 2017 2018	2,004 1,926 1,743 1,524	114 116 117 116	145 120 133 131	1,665 1,608 1,401 1,176	32 36 46 52	48 47 47 48
North Macedonia	2015 2016 2017 2018	58 51 53 51	50 43 48 44	0 0 0 0	  	7 7 4 7	0 0 0 0
Norway	2015 2016 2017 2018	8,689 8,793 9,035 8,664	86 77 60 61	3,789 3,905 3,896 3,628	4,307 4,286 4,553 4,458	503 522 523 514	4 3 4 4

Imports	Exports	Internationa		Stock changes	Supp	bly
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita
611 510 503 502	74 85	35 36 43 46	7 7 6 7	14 -16 -2 3	557 585 574 577	120 125 121 120
4 5 4 4	0	  	  	  	4 5 4 4	49 55 54 53
6,309 6,390 6,615 6,407	1,311 1,407	136 142 147 165	80 93 97 115	-5 -61 -24 -18	6,374 6,307 6,408 6,289	105 104 106 104
2 2 2 2	 	  	  		3 3 3 3	29 29 29 28
32 31 36 35	4	0 0 0	  	-1 -2 0 0	106 113 108 109	59 64 60 60
190 183 176 186	89 87	5 5 6 7	11 13 11 2	3 -1 -4 7	179 179 185 195	90 91 95 101
2 2 2 2	 	  	  	  	3 3 3 3	88 88 89 90
601 620 619 599	387 385	3 4 5 5	3 7 7 8	4 0 -5 -1	293 299 313 315	100 104 110 112
178 178 183 188	7	20 22 25 26	  	-1 0 0 0	158 156 159 165	278 270 269 273
117 117 133 141	12	5 5 6 7	65 74 88 93	-2 2 5 -1	27 25 29 28	63 58 65 65
17 20 23 21	5	1 1 1	  	0 1 0 -1	42 41 43 45	67 65 68 72
8,350 8,483 8,552 8,654	6,784 6,612	161 166 170 172	494 491 482 463	126 -80 -56 43	2,987 3,049 3,087 3,033	176 180 181 178
66 71 70 69	5	  	 	0 1 -2 2	116 116 119 112	56 56 57 54
339 331 409 464	7,914 8,225	26 22 23 24	6 5 8 9	8 12 -44 35	1,215 1,170 1,232 1,173	234 223 233 220

Table 2

Country or area	Year			Primary energ			
	1001	Total	Solids	Liquids	Gases	Electricity	Heat
Poland	2015	2,843	2,556	73	164	46	4
	2016	2,791	2,493	81	160	53	4
	2017	2,692	2,386	80	159	63	4
	2018	2,613	2,317	81	157	54	4
Portugal	2015	222	118	13	3	76	11
	2016	251	121	12	3	105	10
	2017	218	121	13	4	69	12
	2018	246	123	13	3	94	12
Republic of Moldova	2015 2016 2017 2018	28 30 32 33	27 29 31 33	0 0 0 0	0 0 0 0	0 0 0 0	  0
Romania	2015	1,116	351	177	369	92	127
	2016	1,045	331	170	327	95	123
	2017	1,071	340	162	358	86	126
	2018	1,053	320	160	356	93	124
Russian Federation	2015	56,024	8,702	22,621	21,953	607	2,142
	2016	57,679	9,098	23,219	22,542	667	2,155
	2017	60,017	9,627	23,173	24,323	669	2,224
	2018	62,422	10,952	23,560	24,980	692	2,239
Serbia	2015	449	348	45	19	36	0
	2016	446	348	41	18	39	0
	2017	438	348	40	17	33	0
	2018	418	324	39	16	39	0
Slovakia	2015	265	67	7	9	16	166
	2016	266	70	8	10	18	162
	2017	265	63	7	11	17	166
	2018	256	61	8	9	15	163
Slovenia	2015	142	63	0	1	15	63
	2016	144	62		1	17	64
	2017	153	66		1	15	70
	2018	148	63	0	2	18	65
Spain	2015	1,367	294	61	13	309	690
	2016	1,391	274	63	12	336	707
	2017	1,368	298	79	12	275	704
	2018	1,386	289	78	14	335	669
Sweden	2015	1,400	443	11	7	330	609
	2016	1,439	460	11	7	280	682
	2017	1,491	466	9	7	299	710
	2018	1,502	452	16	7	285	741
Switzerland	2015	495	95	0	5	142	253
	2016	467	100	0	5	130	232
	2017	460	101	0	5	129	224
	2018	518	100	0	5	133	279
Ukraine	2015	2,552	818	111	621	25	976
	2016	2,773	1,099	98	637	33	906
	2017	2,431	695	95	649	38	953
	2018	2,573	795	100	692	46	940
United Kingdom	2015	4,934	432	1,982	1,564	195	762
	2016	5,016	346	2,086	1,616	191	777
	2017	5,023	336	2,060	1,624	241	762
	2018	5,119	326	2,241	1,576	271	705
Oceania	2015	17,058	12,888	909	2,726	212	322
	2016	17,215	12,594	868	3,200	230	322
	2017	17,986	12,661	759	4,003	239	324
	2018	18,215	12,424	681	4,526	258	327

Imports	Exports	Internationa		Stock changes	Supply			
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita		
2,086 2,178 2,431 2,658	857 853 711 656	28 29 37 43	8 8 11 11	32 -111 -22 108	4,190 4,386	105 110 116 117		
1,101 1,069 1,168 1,058	326 334 337 271	45 49 55 59	27 32 33 34	7 -6 10 20	910 951	89 88 92 90		
83 85 90 94	1 1 1 1	1 1 2 2	 	0 0 0 0	113 118	27 28 29 31		
483 559 582 604	255 261 249 256	9 11 13 5	2 1 1 1	-7 -5 -11 -16	1,336 1,400	67 67 71 72		
1,139 *995 *1,130 *1,121	27,197 28,124 28,804 29,899	*223 *214 238 246	726 692 729 *497	75 48 669 -325	29,596 30,706	200 204 211 228		
229 247 278 285	61 60 60 65	3 5 6 6	1 1 1	1 -6 3 -5	633 647	86 89 92 91		
648 635 688 645	241 223 222 191	2 2 2 2	- - -	-4 -9 13 -8	686 717	124 126 132 131		
243 261 275 278	106 122 124 125	1 1 1	3 5 6 9	0 0 3 -1	278 293	133 134 141 140		
5,238 5,228 5,615 5,544	1,262 1,292 1,371 1,321	166 176 192 200	313 315 280 293	-40 -104 -68 -67	4,941 5,209	105 106 112 111		
1,385 1,533 1,472 1,488	771 822 886 849	32 35 38 40	76 84 98 77	70 53 -87 -28	1,978 2,027	188 201 205 206		
717 722 728 675	144 129 127 136	70 73 75 79	0 0 0 0	-15 3 -6 -19	985 991	121 117 117 116		
1,327 1,246 1,481 1,421	54 54 74 56	5 *5 *5 		66 -19 93 -29	3,978 3,739	84 89 84 90		
6,033 5,813 5,922 5,998	2,977 2,964 3,106 3,200	465 466 500 504	106 112 95 103	-172 -188 -126 6	7,476 7,370	115 113 110 109		
2,545 2,630 2,678 2,840	12,719 13,191 13,628 14,158	204 224 245 260	39 38 38 40	66 -178 122 -48	6,569 6,630	165 162 162 160		

Country or area	Year	Ŧ.,		Primary energ		E	
		Total	Solids	Liquids	Gases	Electricity	Heat
Australia	2015 2016 2017 2018	16,033 16,201 16,979 17,231	12,691 12,412 12,475 12,233	768 742 645 581	2,452 2,912 3,711 4,253	107 120 132 147	15
Cook Islands	2015 2016 2017 2018	0 0 0 0	. <u>-,</u>	  	  	0 0 0 0	 
Fiji	2015 2016 2017 2018	7 6 7 *6	6 4 5 *4		  	1 2 2 2	
French Polynesia	2015 2016 2017 2018	1 1 1 1	0 0 0 0	  	  	1 1 1 1	  
Guam	2015 2016 2017 2018	0 0 0 0	  	  	  	0 0 0 0	
Kiribati	2015 2016 2017 2018	*1 *1 *1 *1	*1 *1 *1 *1		  	0 0 0 0	
Marshall Islands	2015 2016 2017 2018	0 0 0	0 0 0	  	  	0 0 0 0	
Micronesia (Fed. States of)	2015 2016 2017 2018	0 0 0 0	0 0 0 0	  	  	0 0 0 0	
Nauru	2015 2016 2017 2018	0 0 0	  		  	0 0 0 0	
New Caledonia	2015 2016 2017 2018	2 1 2 2	0 0 0 0	0 0 0 0	  	1 1 2 1	
New Zealand	2015 2016 2017 2018	780 766 758 735	129 115 118 124	91 77 70 55	172 180 178 158	97 102 98 102	292 293
Niue	2015 2016 2017 2018	0 0 0 0	0 0 0 0	  	  	0 0 0 0	0
Palau	2015 2016 2017 2018	 0 0 0	  	  	  	 0 0 0	
Papua New Guinea	2015 2016 2017 2018	228 233 233 *234	57 57 57 57	51 49 44 *44	102 108 113 *115	4	15 15

- Incompanie	E and a	Internationa	al bunkers	Ota ali ali anno	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
2,002 2,041 2,091 2,230	12.904	161 170 186 198	22 22 22 23	78 -174 135 -45	5,330 5,320 5,374 5,393	223 219 219 217	
*1 *1 *2 *2		0 0 0 0	0 0 0 0	  	*1 *1 *1 *1	*54 *56 *61 *62	
36 33 35 *36	13	*1 *1 *1 *1	*2 *2 *2 *3	*2 *-2 *-1 *1	25 22 25 *25	29 26 29 *28	
12 12 12 12		0 0 0 0	1 1 1	0 0 0 0	12 11 12 12	43 42 42 43	
  	  	  	  	  	0 0 0 0	0 1 1 1	
1 1 1 *1	  	0 0 0 0	  	  	1 1 2 *2	12 12 14 *14	
*2 *2 *2 *2 *2	  	0 0 0 0			*2 *2 *2 *2	*38 *38 *39 *39	
3 *3 *3 *3		0 0 0 0	0 0 0 0	  	2 *2 *2 *2 *2	19 *20 *19 *19	
*1 *1 *1 *1	  	0 0 0 0	0 0 0 0	0 0 	*1 *1 *1 *1	*73 *70 *73 *70	
62 68 66 75		1 1 1 2	0 0 0 0	1 0 -1 *2	61 67 68 73	226 246 245 262	
328 353 347 359	110 103	35 46 51 54	13 12 12 12	-16 1 -16 -9	952 950 955 945	206 204 203 199	
0 0 0 0	 	0 0 0 0	  	  	0 0 0 0	64 *62 *60 *64	
*3 *3 *4 *4	  	0 0 *1 *1	  		*3 *3 *3 *3	*160 *164 *168 *166	
80 98 100 *100	161 160	*3 *3 3 *3	0 0 0 0	1 -3 4 *4	166 169 166 *167	21 20 20 *19	

### Table 2

Carratura an anaa	\/a==			Primary energy	production		
Country or area	Year	Total	Solids	Liquids	Gases	Electricity	Heat
Samoa	2015	2	1		0	0	0
Samoa	2016	2 2	1	••	0	0	0
	2017	*2	*1	••	0	0	0
	2017	*2	*1	••	0	0	0
	2010	2	'	••	U	O	U
Solomon Islands	2015	*3	*3			0	
	2016	*3	*3			0	
	2017	*3	*3 *3 *3			0	
	2018	*3	*3			0	
Tonga	2015	0	0			0	
Toriga	2016	0	0	••	•••	0	••
	2017	0	0	••	••	0	••
	2017	0	0	••	••	0	••
	2010	U	U	••		U	••
Tuvalu	2015	0				0	
	2016	0				0	
	2017	0				0	
	2018	0				0	
Vanuatu	2015	1	1	0		0	
variada	2016	1	1	0	••	ő	••
	2017	1	i	0	••	ŏ	••
	2018	1	1	ő		Ö	
Wallis and Futuna Is.	2015	0	••			0	
	2016	0				0	
	2017	0	••			0	
	2018	0				0	

Importe	Exports	Internationa		Stock changes	Supply		
Imports	Exports	Aviation	Marine	Stock changes	Total	Per capita	
4	0	1		0	5	26	
4	0	1		0	5	26	
4	0	*1		0	5	27	
4	0	*1		Ō		26 26 27 27	
5	0	0	0		8	13	
*5	0	0	0		*7	*12 *12 *12 *12	
*5 *5	0	0	0		*7	*12	
*5	0	0	0		*8	*12	
2		0	0	0	2	17	
2 2		0	0	0	2	18 21 19	
2		0	0	0		21	
2		0	0		2	19	
0	**	0			0	*10	
0		0			0	*10 *11 *12	
0		0			0	*11	
0	••	0			0	*12	
2	0	0	0	0	3	11	
3	0	0	0	0	3	11 10 12	
3	0	0	0		3	10	
3	0	0	0		3	12	
0		0			0	28 29 29 31	
0		0			0	29	
0		0			0	29	
0		0			0	31	

### Total final consumption and its components

Petajoules and Gigajoules per capita

#### **Table Notes**

**Total final consumption** refers to all fuel and energy that is delivered to users for both their energy and non-energy uses which do not involve a transformation process.

**Non-energy use** consists of the use of energy products as raw materials for the manufacture of products outside the scope of energy statistics, as well as for direct uses that do not involve using the products as a source of energy, nor as a transformation input. Examples are lubrication, sealing, preservation, road surfacing, and use as a solvent.

Industry refers to the use of energy products for energy purposes by economic units belonging to manufacturing, construction and non-fuel mining industries, namely the following: Iron and steel, Chemical and petrochemical, Non-ferrous metals, Non-metallic minerals; Transport equipment; Machinery; Mining and quarrying; Food and Tobacco; Paper, pulp and print; Wood and wood products (other than pulp and paper); Textile and leather; Construction; and Industries not elsewhere specified. It excludes the use of energy products for transport.

**Transport** refers to the consumption of fuels and electricity by any economic entity to transport goods or persons between points of departure and destination within the national territory. As such, it excludes international aviation and shipping, which are included under international marine and aviation bunkers respectively.

**Other** refers to energy consumed by consumers not classified under Industry. It includes Households, Commerce and public services, Agriculture, Forestry, Fishing, and Not elsewhere specified.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

Figure 9: World total final consumption by component, 2018

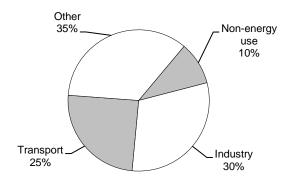
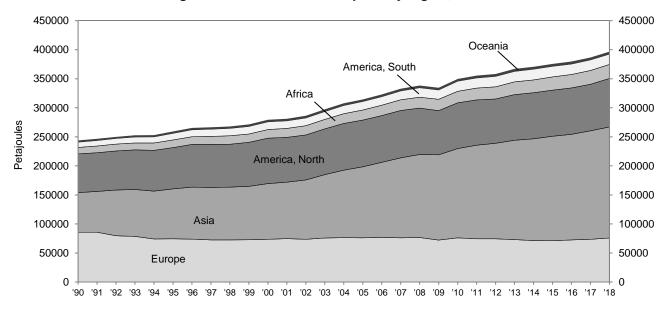


Figure 10: Total final consumption by region, 1990-2018



		Total final consumption	Non-energy use			TEC per cenite	
Country or area	Year			Industry	Transport	Other	TFC per capita
World	2015 2016 2017 2018	375,549 379,576 386,652 396,720	36,554 37,558	116,594 114,872 116,662 121,103	94,676 96,532 96,243 97,948	128,642 131,618 136,190 138,585	51 51
Africa	2015 2016 2017 2018	22,848 23,318 23,838 24,203	785 882	3,793 3,863 3,792 3,837	4,373 4,317 4,519 4,880	13,882 14,352 14,645 14,668	19 19
Algeria	2015 2016 2017 2018	1,561 1,571 1,591 1,776	165 133	242 249 270 284	647 632 626 634	517 525 563 649	39 38
Angola	2015 2016 2017 2018	*437 *423 *397 *379	4 4	54 57 41 42	*101 *89 *74 *64	*276 *273 *277 *271	*15 *13
Benin	2015 2016 2017 2018	*148 169 *179 183		6 7 6 3	63 81 84 94	*79 *81 *90 *86	16 *16
Botswana	2015 2016 2017 2018	57 62 64 66	1 1	15 14 13 13	*28 33 35 37	14 14 14 15	29 29
Burkina Faso	2015 2016 2017 2018	*150 *153 *161 *168	0	*14 *13 *15 *17	*22 24 28 32	*114 *116 *117 *119	*8 *8
Burundi	2015 2016 2017 2018	*55 *56 *56 *58	*1 0	*1 *1 *1 *1	4 *5 *6 *8	*49 *49 *49 *49	*5 *5
Cabo Verde	2015 2016 2017 2018	*6 *7 *7 *7	0 0	0 0 0 0	*3 *4 *4 *4	*3 *3 *3	*13 *13
Cameroon	2015 2016 2017 2018	*302 *307 *311 *318	3 3	15 14 15 16	43 44 41 39	*241 *246 *253 *259	*13 *13
Central African Rep.	2015 2016 2017 2018	*16 *16 *16 *16	0	0 0 0 0	*2 *3 *3 *3	*13 *13 *13 *13	*4 *4
Chad	2015 2016 2017 2018	*70 *70 *71 *72	0 0	*1 *1 *1 *1	*2 *2 *2 *2	*66 *67 *68 *69	*5 *5
Comoros	2015 2016 2017 2018	*6 *6 7 *7		0 0 0 0	*2 *2 *2 *2	*4 *4 4 *4	*8 8

		Total final	Non anamy year		Energy use		
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Congo	2015 2016 2017 2018	80 79 79 82	1 1	2 1 2 2	20 18	57 58	16 16
Côte d'Ivoire	2015 2016 2017 2018	282 292 309 300	3	29 34 30 22	49 55	206 220	12 13
Dem. Rep. of the Congo	2015 2016 2017 2018	*898 *916 *1,053 739	0 0	143 147 167 27	26 29	*742 *856	*12 *13
Djibouti	2015 2016 2017 2018	*7 *7 *8 *8	0		*2 *2	*5 *5	*8 *8
Egypt	2015 2016 2017 2018	2,566 2,879 2,811 2,730	284 282	754 838 750 852	535 538	1,223 1,242	30 29
Equatorial Guinea	2015 2016 2017 2018	*98 *113 *126 *90	0 0	*81 *96 *109 *75	*8 9	*8 *8	*93 *100
Eritrea	2015 2016 2017 2018	21 21 21 21	0		3 3	18 17	6 6
Eswatini	2015 2016 2017 2018	*36 *36 39 40	0 0	*16 *17 15 16	6	*13 15	*33 35
Ethiopia	2015 2016 2017 2018	*1,347 *1,388 *1,420 1,440	4		78 88	*1,239 *1,261	*13 *13
Gabon	2015 2016 2017 2018	*91 *93 *79 *83	1	28 29 *21 *24	12 *8	*52 *50	*46 *38
Gambia	2015 2016 2017 2018	*10 *10 *10 *10	 	*2 *2 *2 *2	*1 *1 *1 *1	*7 *7	*5 *4
Ghana	2015 2016 2017 2018	275 271 270 282	*3 *3	34 30	*110 106	125 131	5 10 9
Guinea	2015 2016 2017 2018	*140 *142 *150 *155	*1 *2	*16	*19 *23	*105 *106	*12 *12

		Total final			Energy use		
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Guinea-Bissau	2015 2016 2017 2018	*28 *29 *29 *29	*1 *1	(	) *1 ) *1	*26   *26	*16 *16
Kenya	2015 2016 2017 2018	617 *574 587 *553	2 2	58 60 62 75	) 141 2 138	*371 3 385	*12 5 12
Lesotho	2015 2016 2017 2018	*45 *44 *45 *46	0	*18 *17 *20 *2	7 7 ) 7	7	) *21 ) *22
Liberia	2015 2016 2017 2018	*82 *86 *87 *88	0 0	* * *	2 *12 1 *10	2	3 *19 5 *18
Libya	2015 2016 2017 2018	465 500 527 557	103 130	70 68 80 86	3 255 ) 241	5 74 I 76	77 8 80
Madagascar	2015 2016 2017 2018	*183 221 236 *244	*3 *3	*2( *2; *2;	1 17 5 18	7 180 3 190	9
Malawi	2015 2016 2017 2018	*62 *65 *65 *69	0 0	*1 *1 *10 *10	1 *11 ) *13	*43 *42	*4 ! *4
Mali	2015 2016 2017 2018	*134 *142 *144 *144	 	*; *; *{	7	3 *117 9 *118	' *8 8 *8
Mauritania	2015 2016 2017 2018	*49 *45 *58 *61	*1 *1	*1 <sup>*</sup> *8 18 18	3 *16 5 *19	3 *21 9 *23	*11 *13
Mauritius	2015 2016 2017 2018	38 40 41 42	) 1 1	{ { { {	3 22	10 2 10	32
Morocco	2015 2016 2017 2018	613 653 683 691	21 21	125 140	5 232 ) 240	2 275 ) 282	5 18 2 19
Mozambique	2015 2016 2017 2018	*324 238 239 212	7 ) 6		2 55 4 57	5 123 7 112	9 2 8
Namibia	2015 2016 2017 2018	72 75 75 75	i 1			) 3 <del>7</del> 3 39	31 32 31

		Total final			Energy use		
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Niger	2015 2016 2017 2018	82 *82 *72 *82	0	3 4 *5 *3	11 11	*67 *56	*4 5 *3
Nigeria	2015 2016 2017 2018	*5,298 *5,413 *5,531 *5,785	60 57	*310 *294 *300 *315		*4,338 *4,452	*29 *29
Rwanda	2015 2016 2017 2018	*80 *81 *80 *82	0	*7 *7 *7 *7	*7	*65 *66	*7 *7
Sao Tome and Principe	2015 2016 2017 2018	*2 *2 *2 *2	0	0 0 0	0	*1 *1	*10 *10
Senegal	2015 2016 2017 2018	121 126 117 123	 	23 25 *20 *24	40 43	61 53	8 8
Seychelles	2015 2016 2017 2018	*4 *5 *5 *5	0 0	*1 *1 *1 *1	*2 *2 *2 *3	*2 *2	*52 *52
Sierra Leone	2015 2016 2017 2018	*55 *55 *55 *55	0	*2 *2 *2 *2	*6 *6	*47 *47	*8 *7
Somalia	2015 2016 2017 2018	*105 *111 *113 *116		*2 *2 *2 *2	2 *2	*107 *110	*8 *8
South Africa	2015 2016 2017 2018	2,764 2,620 2,697 2,913	86 191	1,078 1,050 964 997		989 864	47 47
South Sudan	2015 2016 2017 2018	24 22 19 17	 	0 0 1 1	13 10	9	2 2
St. Helena and Depend.	2015 2016 2017 2018	000000000000000000000000000000000000000	 	  	0 0 0 0	0	*28 *17
Sudan	2015 2016 2017 2018	*385 *393 *409 *408	11 *11	*77 *69 *70 *72	*133	*183 *195	*10 *10
Togo	2015 2016 2017 2018	77 82 80 85	0	2 5 4 4	9 12	68 64	11 10

0	\/	Total final	N		Energy use		TEC par agaita
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Tunisia	2015 2016 2017 2018	331 335 351 353	12 13	92 89 91 91	98 100 108 107	134 140	30 31
Uganda	2015 2016 2017 2018	664 683 706 738	*1 0	71 74 76 89	38 41 43 47	568 586	17 17
United Rep. of Tanzania	2015 2016 2017 2018	713 716 734 758	2 2	76 74 80 83	79 74 74 77	567 577	13 13
Zambia	2015 2016 2017 2018	375 387 400 406	3 3	114 115 121 123	30 30 29 29	239 247	24 24
Zimbabwe	2015 2016 2017 2018	*399 *405 *415 *434	1 1	27 28 31 33	37 31 32 41	*345 *352	*29 *29
America, North	2015 2016 2017 2018	79,394 79,716 80,047 83,519	7,233 7,489	14,924 14,835 14,754 15,390	31,539 31,971 32,160 32,883	25,678 25,644	139 139
Anguilla	2015 2016 2017 2018	*2 *2 *1 *2	··	  	*1 *1 *1	*1 *1 *1	*111 *100
Antigua and Barbuda	2015 2016 2017 2018	*4 *4 *4 *4	0	0 0 0	*3 *3 *3 *3	*1 *1	*43 *43
Aruba	2015 2016 2017 2018	*7 *7 *7 *7	0	  	*3 *3 *3 *3	*3 *3	*63 *65
Bahamas	2015 2016 2017 2018	*20 *19 *20 *28	0	8 7 *7 *8	*5 *4 *6 *10	*7 *7	*49 *52
Barbados	2015 2016 2017 2018	11 12 12 12		1 1 2 2	6 6 6 6	5 4	41 42
Belize	2015 2016 2017 2018	14 *14 15 14	0	3 3 4 3	7 *7 7 6	4 4	*37 39
Bermuda	2015 2016 2017 2018	5 *6 *6	0 0 0	0 0 0 0	*2 *2 *2 *2	3	74

		Total final			Energy use		TEO 2 2 2 2 2 2 1 1 2
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Bonaire, St Eustatius, Saba	2015 2016 2017 2018	*4 *5 *5 *5	*1 *1	*1 *1 *1 *1	*2 *2 *2 *2	*1 *1	*181 *181
British Virgin Islands	2015 2016 2017 2018	*2 *2 *1 *1		0 0 0 0	*1 *1	*1 *1 *1	*64 *45
Canada	2015 2016 2017 2018	8,279 8,174 8,332 8,646	976 872	1,891 1,822 1,890 1,922	2,707 2,790	2,669 2,781	) 225 227
Cayman Islands	2015 2016 2017 2018	5 5 5 5	0	1 1 1 1	2 2	1 1	78 80
Costa Rica	2015 2016 2017 2018	157 164 168 167	3 5	39 40 41 40	79 81	42 42	2 34 2 34
Cuba	2015 2016 2017 2018	234 244 *243 240	5 4	123 140 *135 137	19 19	80 84	) 22 *21
Curaçao	2015 2016 2017 2018	29 29 29 29	4 4	6 6 6 6	15 15	4	180 179
Dominica	2015 2016 2017 2018	*2 *2 *2 *2		0 0 0 0	*1 *1	*1 *1 *1	*24 *22
Dominican Republic	2015 2016 2017 2018	227 249 247 254	19 13	54 61 65 61	96 95	74 73	24 3 23
El Salvador	2015 2016 2017 2018	103 100 101 107	1 1	19 20 23 25	48 47	32 30	2 16 ) 16
Greenland	2015 2016 2017 2018	8 8 8 *8	0	0 1 1 *1	2 2	6	6 141 6 144
Grenada	2015 2016 2017 2018	3 3 3 3	  	0 0 0 0	1 1		26 2 27
Guatemala	2015 2016 2017 2018	374 398 *433 *441	1 1	37 38 43 39	105 115	255 *273	5 24 3 *26

		Total final			Energy use		TEO 2 2 2 2 2 2 1 1 2
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Haiti	2015 2016 2017 2018	136 137 139 141	1 0	12 12 12 12	20 20	105 106	13 13
Honduras	2015 2016 2017 2018	*196 *195 171 *192	0	35 38 40 33	55 55 54 57	*102 *77	. *21 ' 18
Jamaica	2015 2016 2017 2018	80 83 77 97	3 2	33 33 28 45	29 31 29 35	16 18	29 26
Mexico	2015 2016 2017 2018	5,005 5,087 5,110 5,206	217 211	1,487 1,476 1,570 1,570		1,189 1,188	41 41
Montserrat	2015 2016 2017 2018	*1 0 0 0	0	0 0 0 0	0 0 0 0	0	*58 *53
Nicaragua	2015 2016 2017 2018	*104 *109 *108 *109	2 2	15 15 15 15	30 31 33 31	*61 *59	*17 *17
Panama	2015 2016 2017 2018	144 145 155 154		38 33 36 34	70	44	36
Puerto Rico	2015 2016 2017 2018	63 62 49 *49		8 8 6 *6	  	54 43	. 19 3 15
Sint Maarten (Dutch part)	2015 2016 2017 2018	*10 *10 *9 *9	*2 *1	*2 *2 *2 *2	*5 *5	1 *1	*238 *227
St. Kitts-Nevis	2015 2016 2017 2018	*2 *2 *2 *2 *2	0 0 0 0	0 0 0 0	*1 *1	*1 *1	*38 *37
St. Lucia	2015 2016 2017 2018	5 5 6 6	0	0 0 0 0	3	2	30 29 31 31
St. Pierre-Miquelon	2015 2016 2017 2018	*1 *1 *1 *1		  	0 0 0 0	0	*99 *101
St. Vincent-Grenadines	2015 2016 2017 2018	*3 *3 *2 *3	0	0 0 0 0	*1	1 1	*25 *22

O country on a con-	Va au	Total final	Name and a second		Energy use		TFO
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Trinidad and Tobago	2015 2016 2017 2018	543 489 498 490	372 380	55 55	47 42 42 35	20 20	355 360
Turks and Caicos Islands	2015 2016 2017 2018	*1 1 1 1 *1		  	0 0 *1 *1	1	34 36
United States	2015 2016 2017 2018	63,609 63,938 64,075 67,075	5,627 5,990	11,019	26,085 26,404 26,560 27,093	20,888 20,756	198 197
United States Virgin Is.	2015 2016 2017 2018	*2 *2 *2 *2 *2	 	*1 *1	  	*1 *1 *4	*22 *17
America, South	2015 2016 2017 2018	18,177 17,877 18,004 17,719	914 875	5,606 5,637	6,935 6,775 6,871 6,738	4,582 4,620	43 43
Argentina	2015 2016 2017 2018	2,417 2,394 2,396 2,307	97 93	533	821 815 857 800	949 920	55 55
Bolivia (Plur. State of)	2015 2016 2017 2018	260 268 279 287	2 2	74 75	131 137 145 152	55 57	24 25
Brazil	2015 2016 2017 2018	10,033 9,716 9,912 9,736	592 602	3,380 3,424	3,872 3,710 3,738 3,687	2,035 2,149	47 48
Chile	2015 2016 2017 2018	1,047 1,108 1,121 1,172	24 23	445	351 367 380 393	296	61
Colombia	2015 2016 2017 2018	1,227 1,297 1,255 1,232	76 60	336 339	422 439 437 449	446 419	27 26
Ecuador	2015 2016 2017 2018	466 470 490 495	 	74 68 72 83	241 247 262 251	154 156	28 29
Falkland Is. (Malvinas)	2015 2016 2017 2018	000000000000000000000000000000000000000	 	0	0 0 0 0	0	167 150
Guyana	2015 2016 2017 2018	27 29 29 29 29	0	7 7	9 11 10 11	11 11	38 37

0 1		Total final			Energy use		TEC non conito
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Paraguay	2015 2016 2017 2018	249 258 273 283	2 2	78 75 75 78	83 101 113 120	81 83	38 40
Peru	2015 2016 2017 2018	746 773 792 821	11 13	212 221 224 234	317 340 361 371	200 195	25 25
Suriname	2015 2016 2017 2018	23 22 23 23	0	5 5 5 5	8 7 9	9	38
Uruguay	2015 2016 2017 2018	191 199 202 202	3 4	79 82 84 86	52 54 56 51	60 58	58 59
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	1,489 1,344 1,232 1,133	107 77	423 379 386 368	628 549 503 444	309 266	45 42
Asia	2015 2016 2017 2018	179,903 182,004 186,838 191,271	20,302 20,375	73,481 71,551 73,600 77,024	31,671 32,928 31,762 32,160	57,222 61,100	. 41 41
Afghanistan	2015 2016 2017 2018	*127 *112 *113 *131	*1 *2	*35 *36 *41 *45	*67 *48 *41 *57	*26 *28	*3 *3
Armenia	2015 2016 2017 2018	93 92 97 94	1	13 13 14 14	27 26 27 30	52 54	31 33
Azerbaijan	2015 2016 2017 2018	369 381 376 399	35 46	52 61 43 41	101 95 109 120	190 178	39 38
Bahrain	2015 2016 2017 2018	259 262 262 274	69 70	89 89 85 92	53	53 53	184 175
Bangladesh	2015 2016 2017 2018	1,387 1,422 1,505 1,540	56 54	349 344 378 389	135 144 159 174	879 914	9 . 9
Bhutan	2015 2016 2017 2018	*63 *65 *67 *69	*1 *1	8 9 10 11	6 6 7 7	*49 *50	*88 *90
Brunei Darussalam	2015 2016 2017 2018	54 55 75 77	19 20	6 5 23 32	19	13 13	132 177

		Total final			Energy use		TEC non conite
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Cambodia	2015 2016 2017 2018	248 267 278 *297	1 1	43 54 56 *62	70 74	142 148	! 17 3 17
China	2015 2016 2017 2018	76,046 76,244 77,878 82,022	7,642 7,658	39,212 37,674 37,865 40,206		20,985 21,825	54 55
China, Hong Kong SAR	2015 2016 2017 2018	316 325 337 333	1 2	29 *30 *32 *31		207 207	45 46
China, Macao SAR	2015 2016 2017 2018	37 37 37 34	2 2	3 2 2 2	6 6 6 6	27 27	7 61 7 59
Cyprus	2015 2016 2017 2018	61 64 67 66	2 2	9 9 10 10	26 27 29 28	26 27	55 57
Georgia	2015 2016 2017 2018	175 185 187 186	13 14	29 28 32 33	57 64 58 57	79 83	46 47
India	2015 2016 2017 2018	*26,892 *27,419 28,655 27,984	1,479 1,127	11,918 11,547 12,945 12,852	1,997	*10,115	*21 21
Indonesia	2015 2016 2017 2018	5,804 5,967 6,029 6,769	403 401	1,551 1,565 1,611 2,638	1,259 1,361 1,391 1,296	2,639 2,626	23 23
Iran (Islamic Rep. of)	2015 2016 2017 2018	7,885 8,339 8,657 8,703	1,516 1,588	*1,762 1,854 1,930 1,996	1,950 1,834 2,090 1,989	3,135 3,050	105 107
Iraq	2015 2016 2017 2018	776 773 838 927	15 22	158 149 156 176	352 400	257 261	<sup>7</sup> 21 22
Israel	2015 2016 2017 2018	617 623 650 649	73 79	118 112 123 121		195 200	77 79
Japan	2015 2016 2017 2018	12,361 12,177 12,319 11,918	1,457 1,544	3,602 3,545 3,545 3,478	3,017 2,993	4,158 4,237	95 97
Jordan	2015 2016 2017 2018	249 267 283 279	11 10	41 41 41 39	119 130 137 138	85 95	28 29

•		Total final			Energy use		TEC non conite
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Kazakhstan	2015 2016 2017 2018	1,725 1,730 1,857 1,667	*43 45	872 868 943 638	*229	605 591 628 731	97 3 103
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	279 330 254 215	 ·	159 197 140 110	19	100 113 95 86	3 13 5 10
Korea, Republic of	2015 2016 2017 2018	7,316 7,557 7,741 7,699	2,139 2,250	2,028 2,025 2,042 2,085		1,841 1,929 1,954 1,964	) 148 151
Kuwait	2015 2016 2017 2018	659 679 712 696	124 121	186 197 213 180	198	153 159 168 170	) 172 3 176
Kyrgyzstan	2015 2016 2017 2018	142 146 149 176	1 0	32 18 18 21		71 79 105 138	24 5 24
Lao People's Dem. Rep.	2015 2016 2017 2018	121 *129 *137 *140	0	15 *22 *29 *30	*38 *39	67 *69 *69 *69	*19 *20
Lebanon	2015 2016 2017 2018	*219 *227 *242 *224	4 4	*32 *31 *34 *33	*93	*96 *99 *108 *97	*34 *35
Malaysia	2015 2016 2017 2018	2,120 2,290 2,494 2,556	369 506	566 648 705 766	866 894 868 871	378 378 415 391	75 80
Maldives	2015 2016 2017 2018	*14 *15 *16 *19	0	*1 *1 *1 *1	*10 *12 *12 *14	*3 *3 *3	3 *33 3 *32
Mongolia	2015 2016 2017 2018	203 224 375 424		23 25 26 29	21 19 20 21	160 181 329 373	73 120
Myanmar	2015 2016 2017 2018	*679 *745 *733 *847	13 16	77 94 81 159	86 75	*523 *552 *562 *581	2
Nepal	2015 2016 2017 2018	*494 *538 *568 *591	0	42 50 56 59	50	*421 *437 *450 *462	*20 *21
Oman	2015 2016 2017 2018	851 851 888 986	101 117	257 263 299 254	174 173	305 312 298 403	2 190 3 190

0 1		Total final			Energy use		TEC por capita
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Other Asia	2015 2016 2017 2018	2,906 2,930 2,913 2,936	900 888	993	514 529 524 514	508 508	124 123
Pakistan	2015 2016 2017 2018	*2,843 2,940 3,225 3,441	*188 5 221	873 946	633 702 778 771	1,177	14 ) 16
Philippines	2015 2016 2017 2018	1,313 1,423 1,506 1,518	55 68	311 332	462 500 517 536	556 590	i 14 I 14
Qatar	2015 2016 2017 2018	810 800 832 870	194 195	328 341	175 181 185 162	97 110	302 305
Saudi Arabia	2015 2016 2017 2018	6,771 6,590 6,291 6,639	1,324 1,280	1,608 1,596	2,049 1,942 1,737 1,409	*1,717 1,679	203 190
Singapore	2015 2016 2017 2018	707 764 1,025 834	301 528	270 295	93 91 100 105	103 102	135 180
Sri Lanka	2015 2016 2017 2018	373 393 382 *375	*4 ! *1	86	117 148 150 135	145 145	i 19 i 18
State of Palestine	2015 2016 2017 2018	65 69 68 66	1 1	3 4	29 32 32 30	32 31	! 15 14
Syrian Arab Republic	2015 2016 2017 2018	242 252 273 260	28 30	54 58	79 85 95 89	84 91	. 14 16
Tajikistan	2015 2016 2017 2018	154 165 164 172	1	15 26 31 28	19 18 16 17	120 116	19 5 18
Thailand	2015 2016 2017 2018	4,088 4,056 4,129 4,186	947 944	1,297 1,297	1,006 1,065 1,156 1,168	747 733	59 60
Timor-Leste	2015 2016 2017 2018	*5 *4 *4 *4	 		*1 *1 *1	*3 *3	*4 *3
Turkey	2015 2016 2017 2018	3,859 4,040 4,338 4,240	337 206	1,312	1,033 1,126 1,177 1,187	1,512 1,643	51 53

	,	Total final			Energy use		TEC por capita
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Turkmenistan	2015 2016 2017 2018	757 755 756 759		58 58 58 58	182 182 182 182	517 515 516 519	133 131
United Arab Emirates	2015 2016 2017 2018	*2,804 *2,624 *2,311 *2,291	*350 *279	*1,120	542 485 528 529	375 *383 384 414	*280 *244
Uzbekistan	2015 2016 2017 2018	1,194 1,229 1,231 1,239	*9 *9	*415 *393	208 199 213 235	573 606 616 720	39 39
Viet Nam	2015 2016 2017 2018	2,262 2,338 2,425 2,365	72 22	1,129 1,198	435 477 536 513	623 660 670 619	25 26
Yemen	2015 2016 2017 2018	108 93 86 85	0 0	13 13	43 38 36 37	48 42 37 35	3
Europe	2015 2016 2017 2018	71,041 72,437 73,667 75,701	7,008 7,643	17,853	18,540 18,900 19,251 19,573	28,044 28,676 29,067 29,838	97 99
Albania	2015 2016 2017 2018	84 81 89 82	6 3	12 15	34 32 35 30	35 32 35 36	28 31
Andorra	2015 2016 2017 2018	9 9 9 9	0	0	5 5 5 5	4 4 4 4	112 112
Austria	2015 2016 2017 2018	1,140 1,168 1,178 1,165	76 68	319	365 372 377 380	393 401 412 387	133 134
Belarus	2015 2016 2017 2018	765 772 791 840	106 105	166 173	154 160 166 184	328 340 347 345	82 84
Belgium	2015 2016 2017 2018	1,728 1,743 1,721 1,741	318 315	469 461	379 384 378 380	567 572 567 562	154 151
Bosnia and Herzegovina	2015 2016 2017 2018	142 152 149 182	3 3	32 35	43 50 53 52	64 67 60 89	45 45
Bulgaria	2015 2016 2017 2018	419 419 426 427	21 20	112 115	136 139 141 143	142 147 149 149	59 60

		Total final			Energy use		TFO
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Croatia	2015 2016 2017 2018	294 296 308 301	23 23	46 46 50 50	86 92	142 143	? 70 3 74
Czechia	2015 2016 2017 2018	1,062 1,057 1,136 1,125	70 119	271 268 280 278	281	446 456	99 107
Denmark	2015 2016 2017 2018	569 586 590 593	10 10	87 90 95 96	183 186	302 299	2 103 103
Estonia	2015 2016 2017 2018	120 122 123 127	5	22 20 20 22	33 34	64	93 93
Faeroe Islands	2015 2016 2017 2018	8 8 9 10	0	1 1 1 1	1 1	6 7	5 172 7 196
Finland	2015 2016 2017 2018	1,029 1,075 1,077 1,096	62 61	432 446 453 471	177	389 384	) 196 195
France	2015 2016 2017 2018	6,466 6,549 6,551 6,398	571 602	1,162 1,205 1,182 1,167	1,959 1,978	2,814 2,790	98 98
Germany	2015 2016 2017 2018	9,311 9,447 9,562 9,387	908 971	2,342 2,357 2,388 2,422	2,432 2,469	3,750 3,735	) 115 5 116
Gibraltar	2015 2016 2017 2018	7 8 9 9	1	  	-	1	238 253
Greece	2015 2016 2017 2018	690 695 687 664	25 37	131 129 116 115	250 247	290 288	65 65
Guernsey	2015 2016 2017 2018	1 1 1 1		  	  	. 1	20 21
Hungary	2015 2016 2017 2018	795 811 847 846	80 95	165 170 180 187	185 193	377 379	83 87
Iceland	2015 2016 2017 2018	120 122 125 136	1 1	61 60 63 64	14 15	47	7 369 7 374

		Total final	l		Energy use		
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Ireland	2015 2016 2017 2018	439 457 456 474	7 12 6 11	102 104	159 171 169 172	172 172	97 96
Isle of Man	2015 2016 2017 2018	2 2 2 2 2		1	  	2 2 2 2	28
Italy	2015 2016 2017 2018	5,006 4,964 5,008 5,015	266 3 334	1,054 1,048	1,545 1,521 1,466 1,512	2,124 2,160	82 82
Jersey	2015 2016 2017 2018	6 6 6	 }	*1 *1 *2	2 2 2 2	3	59 57
Kosovo	2015 2016 2017 2018	58 62 66 64	2 2	12 13	16 16 17 18	32 33	35 37
Latvia	2015 2016 2017 2018	160 160 167 174	) 4 7 4	31 33	44 44 46 47	80 84	81 85
Liechtenstein	2015 2016 2017 2018	3333	 }		  	3	79 80
Lithuania	2015 2016 2017 2018	248 255 270 275	5 44 ) 51	41 44	74 79 83 88	91 93	88 95
Luxembourg	2015 2016 2017 2018	151 151 155 160	5 2 5 1	26	84 82 84 90	40 43	261 261
Malta	2015 2016 2017 2018	20 20 21 22	0 0	2 2	8 8 9 10	9	45 48
Montenegro	2015 2016 2017 2018	29 30 32 32	) 1 ! 2	5 6	8 9 10 11	15 15	48 51
Netherlands	2015 2016 2017 2018	2,378 2,425 2,477 2,450	5 538 7 571		443 444 457 468	849 849	143 146
North Macedonia	2015 2016 2017 2018	83 85 85 82	5 6 5 3	15 14	26 29 30 31	35 37	41

# Total final consumption and its components Petajoules and gigajoules per capita

		Total final			Energy use		
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
Norway	2015 2016 2017 2018	858 866 866 875	97 104	247 247 253 256		309 311	165 164
Poland	2015 2016 2017 2018	2,791 2,959 3,144 3,177	241 256	607 620 669 689		1,307 1,307	78 83
Portugal	2015 2016 2017 2018	687 683 694 684	49 51	185 184 190 192	245	208 208	66 67
Republic of Moldova	2015 2016 2017 2018	100 105 110 115	1 2	9 8 9 10	29	66 70	26 27
Romania	2015 2016 2017 2018	939 953 992 1,013	51 47	251 243 251 260	226 243 261 267	416 433	48 50
Russian Federation	2015 2016 2017 2018	18,383 18,854 19,426 21,464	2,558 2,908	5,210 5,584 5,211 5,487		6,742 7,273	130 133
Serbia	2015 2016 2017 2018	349 372 383 380	35 36	82 86 93 97		165 166	53 54
Slovakia	2015 2016 2017 2018	425 434 467 476	41 46	143 142 147 158	104	147 154	80 86
Slovenia	2015 2016 2017 2018	201 210 213 215	6 6	51 52 54 58		73 71	101 102
Spain	2015 2016 2017 2018	3,364 3,465 3,549 3,639	208 206	757 754 822 844	1,291 1,338	1,183	74 76
Sweden	2015 2016 2017 2018	1,365 1,395 1,402 1,376	91 104	469 467 468 467	310	528 520	142 142
Switzerland	2015 2016 2017 2018	782 793 784 764	19 19	149 150 151 145	242 240	383 375	94 92
Ukraine	2015 2016 2017 2018	2,145 2,206 2,122 2,220	121 104	692 634 639 699	394 416	963	49 48

# Total final consumption and its components Petajoules and gigajoules per capita

	\ \ \	Total final			Energy use		TEC por capita
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
United Kingdom	2015 2016 2017 2018	5,308 5,402 5,380 5,404	328 337	974 893 909 903	1,763 1,769	2,305 2,418 2,365 2,402	81 81
Oceania	2015 2016 2017 2018	4,187 4,224 4,259 4,307	311 293	1,177 1,164 1,172 1,183	1,640 1,679	1,109 1,115	104 104
American Samoa	2015 2016 2017 2018	1 1 *1 *1	0	0 0 0		0 0 0	10 *10
Australia	2015 2016 2017 2018	3,374 3,397 3,419 3,474	236 224	926 912 916 931	1,359 1,375 1,399 1,427	863 874 880 889	140 139
Cook Islands	2015 2016 2017 2018	*1 *1 *1 *1		  	*1 *1	0 0 0	*44 *48
Fiji	2015 2016 2017 2018	*22 *20 *22 *22	0	*10 *7 *9 *8	*9	4	*23 *26
French Polynesia	2015 2016 2017 2018	8 9 9 9	0	  	5 6 5 6	*3 *3	32 31
Guam	2015 2016 2017 2018	6 6 6 6		  		6 6 6	35 35
Kiribati	2015 2016 2017 2018	*1 *1 *1 *1	0	0 0 0 0	0	*1 *1	*10 *12
Marshall Islands	2015 2016 2017 2018	*2 *2 *2 *2 *2	 	0 0 0 0	*1	0 0 0	*29 *29
Micronesia (Fed. States of)	2015 2016 2017 2018	*1 *1 *1 *1	0 0 0 0	0 0 0 0	*1	0 0 0	*13 *13
Nauru	2015 2016 2017 2018	0 0 *1 *1		0 0 0 0	0 0 0 0	0	*44 *48
New Caledonia	2015 2016 2017 2018	39 41 42 *45	7 7	21 21 22 *24	9 9 9 *11		148 151

# Total final consumption and its components Petajoules and gigajoules per capita

		Total final			Energy use		
Country or area	Year	consumption	Non-energy use	Industry	Transport	Other	TFC per capita
New Zealand	2015 2016 2017 2018	594 606 614 603	68 62	184 186 187 182	206 219	146 146	130 131
Niue	2015 2016 2017 2018	0 0 0 0		0 0 0 0	0	0	*47 *46
Northern Mariana Islands	2015 2016 2017 2018	*1 *1 *1 *1	  	  		*1 *1 *4	*19 *19
Palau	2015 2016 2017 2018	*2 *2 *2 *2 2	0	0 0 0 0	*2 *2	0	*119 *123
Papua New Guinea	2015 2016 2017 2018	*119 *121 122 *122		36 37 37 *37	24 24	*60 *61	*15 14
Samoa	2015 2016 2017 2018	4 4 *5 *5	0	0 0 0	2 *2	2 *2	23 2 *24
Solomon Islands	2015 2016 2017 2018	*7 *7 *7 *7	0	0 0 0	*3 *3	*4 *4	*11 *11
Tonga	2015 2016 2017 2018	*1 *1 *2 *2	0 0 0 0	  	*1 *1 *1 *1	0	*14 *17
Tuvalu	2015 2016 2017 2018	0 0 0 0		  	0 0 0 0	0	5 5
Vanuatu	2015 2016 2017 2018	*3 *3 *2 *3	0	0 0 0 0	*2 *1	*1 *1	*10 *9
Wallis and Futuna Is.	2015 2016 2017 2018	0 0 0 0		  	0 0 0 0	0	*19 *19

#### Production, trade and supply of coal

Thousand metric tons of coal equivalent and kilograms per capita

#### **Table Notes**

**Production** includes hard coal, brown coal, oil shale and peat. Production from other sources of hard coal and brown coal is also included, representing recovered slurries, middlings, and other low- grade coal products which cannot be classified according to type of coal and which includes coal recovered from waste piles and other waste receptacles.

Imports, Exports and Changes in stocks refer to hard coal, brown coal, oil shale, peat, coke oven coke, gas coke, coal tar, patent fuel, brown coal briquettes, peat products and other coal products.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

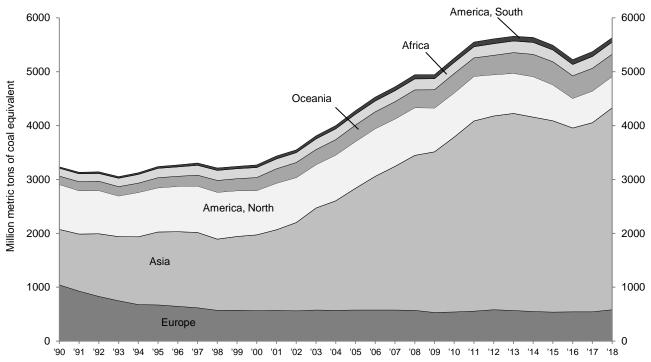


Figure 11: Production of coal by region, 1990-2018

		5			Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
World	2015 2016 2017 2018	5,491,616 5,224,437 5,371,636 5,631,460	1,076,500 1,085,684 1,143,538 1,167,589	1,145,144 1,168,783 1,232,776 1,300,312	9,423 -165,667 -49,143 19,628	5,413,549 5,307,005 5,331,540 5,479,108	734 711 706 718
Africa	2015 2016 2017 2018	218,895 210,914 220,922 225,090	10,463 11,171 12,825 14,190	66,312 62,521 68,112 69,688	2,540 -3,106 1,050 916	160,506 162,669 164,586 168,677	136 134 132 132
Algeria	2015 2016 2017 2018	  	203 75 290 493	  	1 75 -30 -42	202 0 319 535	5 0 8 13
Benin	2015 2016 2017 2018	  	36 106 112 106	  	  106	36 106 112 0	3 10 10 0
Botswana	2015 2016 2017 2018	1,678 1,508 1,787 1,999		195 165 184 255	*391 *-3  	1,093 1,346 1,603 1,743	515 623 727 773
Burundi	2015 2016 2017 2018	2 5 7 6	0 9 1 0	 	  	2 14 8 6	0 1 1 1
Egypt	2015 2016 2017 2018	  	600 668 667 485	94 *61 *143	0 0  *76	507 607 524 409	5 6 5 4
Eswatini	2015 2016 2017 2018	*76 139 160 114	45 72 54 54	*76 *139 160 114	*-10 	*45 82 54 54	*41 73 48 47
Ethiopia	2015 2016 2017 2018	 2 2 2	362 463 511 545	  	  	362 465 512 547	4 4 5 5
Kenya	2015 2016 2017 2018	  	438 432 408 610		  	438 432 408 610	9 9 8 12
Lesotho	2015 2016 2017 2018	  	*541 *519 *597 *629	  	  	*541 *519 *597 *629	*263 *250 *285 *298
Madagascar	2015 2016 2017 2018	  	*349 340 483 *493	  	  	*349 340 483 *493	*14 14 19 *19
Malawi	2015 2016 2017 2018	52 38 *42 *44	30 *40 *36 *42	7 7 *7 *8	  	75 71 *71 *77	4 4 *4 *4

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Mauritius	2015 2016 2017 2018	  	708 815 1,267 1,136		73 168 594 497		504 512 532 504
Morocco	2015 2016 2017 2018	  	6,090 6,340 6,420 7,977	 	-259 221 59 920	6,119 6,361	180 172 176 193
Mozambique	2015 2016 2017 2018	6,152 5,039 10,800 11,282	 	4,482 7,291 10,800 12,132	*1,507 *-2,271 -34 -893		6 1 1
Namibia	2015 2016 2017 2018	  	3 26 33 17	  	  7	33	1 11 14 4
Niger	2015 2016 2017 2018	121 135 122 151	  	  	-2 0 0	135 122	6 6 6 7
Nigeria	2015 2016 2017 2018	41 40 40 41	 	 	 	41 40 40 41	0 0 0 0
Rwanda	2015 2016 2017 2018	  *2	  	  		*2	
Senegal	2015 2016 2017 2018	  	433 455 542 852	  	  	1EE	30 30 35 54
South Africa	2015 2016 2017 2018	206,396 201,981 204,095 206,824	549 699 1,297 669	61,274 54,627 56,656 56,981	  	148,736	2,630 2,634 2,609 2,604
United Rep. of Tanzania	2015 2016 2017 2018	226 243 496 553	 	  	  	496	4 5 9 10
Zambia	2015 2016 2017 2018	134 277 672 990	*54 *50 *50 *50	*3 *2 *2 *2	  	4 000	12 20 43 60
Zimbabwe	2015 2016 2017 2018	4,016 1,507 2,698 3,084	22 61 58 33	181 229 159 195	829 -1,286 461 246	2,625 2,137	219 187 150 185
America, North	2015 2016 2017 2018	668,594 549,460 586,611 581,223	27,738 25,669 26,306 24,407	86,763 76,312 106,625 124,947	26,085 -36,077 -14,142 -21,146	534,894 520,433	1,028 934 901 862

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Bahamas	2015 2016 2017 2018		*1 *1 *1 *1			*1 *1 *1 *1	*4 *4 *4 *4
Bermuda	2015 2016 2017 2018	  	0 0 0 3	  	  	0 0 0 3	5 8 4 45
Canada	2015 2016 2017 2018	44,193 41,707 44,091 44,329	7,834 6,756 7,775 7,832	25,893 25,918 26,500 28,776	-489 -2,401 479 1,556	26,622 24,947 24,886 21,829	739 686 677 589
Costa Rica	2015 2016 2017 2018		0 0 6 0	  	  	0 0 6 0	0 0 1 0
Cuba	2015 2016 2017 2018		7 3 4 5	  	  	7 3 4 5	1 0 0 0
Dominican Republic	2015 2016 2017 2018	  	981 988 1,105 1,112	  	22 34 -5 21	959 954 1,109 1,090	93 92 106 103
El Salvador	2015 2016 2017 2018	  	1 1 1 1	  	  	1 1 1 1	0 0 0 0
Guatemala	2015 2016 2017 2018	  	2,200 2,016 1,609 1,780	  	687 239 135 39	1,513 1,777 1,475 1,741	93 107 87 101
Honduras	2015 2016 2017 2018	  	114 51 1	  	  	114 51 1	12 6 0
Jamaica	2015 2016 2017 2018	  	95 86 85 93	  	6 1 12 17	89 86 72 77	31 30 25 26
Mexico	2015 2016 2017 2018	8,282 9,943 9,401 9,768	7,554 8,053 9,819 8,924	3 2 99 48	-548 308 1,010 1,518	16,380 17,686 18,111 17,127	134 143 145 136
Panama	2015 2016 2017 2018	  	312 276 77 193	  	  	312 276 77 193	79 68 19 46
United States	2015 2016 2017 2018	616,120 497,810 533,119 527,126	8,639 7,437 5,823 4,463	60,867 50,392 80,026 96,123	-15,773	537,486 489,112 474,689 459,763	1,675 1,514 1,460 1,406

0 1		<b>.</b>		_ ,	Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
America, South	2015 2016 2017 2018	87,000 90,472 89,060 82,766	31,728 31,290 33,167 32,983	70,646 80,119 98,393 80,763	2,092 -1,685 -19,077 -6,384	45,991 43,328 42,911 41,370	112 104 102 98
Argentina	2015 2016 2017 2018	29 20 17 51	1,959 1,554 1,486 1,666	10 8 0 2	-83 -13 -110 72	2,060 1,581 1,613 1,642	48 36 37 37
Bolivia (Plur. State of)	2015 2016 2017 2018	  	5 5 9 7		  	5 5 9 7	0 0 1 1
Brazil	2015 2016 2017 2018	3,467 3,766 2,759 2,757	21,209 19,532 21,563 21,539	 	-434 485 204 758	25,110 22,813 24,118 23,539	123 111 116 112
Chile	2015 2016 2017 2018	2,986 1,448 1,403 1,286	8,110 9,464 9,554 9,357	840 641 579 272	17 91 -79 176	10,239 10,179 10,456 10,195	570 559 566 544
Colombia	2015 2016 2017 2018	79,437 84,046 84,081 78,263		68,903 78,588 97,083 79,747	3,316 -1,864 -18,538 -6,472	7,218 7,321 5,536 4,989	152 152 113 100
Falkland Is. (Malvinas)	2015 2016 2017 2018	*3 *2 2 2		  	  	*3 *2 2 2	*917 *778 529 502
Paraguay	2015 2016 2017 2018	  	4 2 1 5	  	  	4 2 1 5	1 0 0 1
Peru	2015 2016 2017 2018	243 251 278 198	440 730 553 408	244 154 326 581	-724 -384 -554 -917	1,164 1,211 1,059 943	38 39 34 29
Uruguay	2015 2016 2017 2018	  	1 2 1 1		  	1 2 1 1	0 1 0 0
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	836 939 521 209	  	649 728 405 162	  	188 211 117 47	6 7 4 2
Asia	2015 2016 2017 2018	3,548,863 3,411,978 3,510,565 3,746,835	784,264 812,063 856,957 886,696	392,975 411,505 418,953 449,172	-9,994 -104,058 -25,593 42,922	3,950,147 3,916,594 3,974,162 4,141,437	891 875 879 908
Afghanistan	2015 2016 2017 2018	1,201 1,495 1,929 2,152	*193 *193 *195 *195	425 709 957 1,048	  	969 979 1,167 1,300	28 28 32 35

2		<b>.</b>			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Armenia	2015 2016 2017 2018		1 1 1 2			1 1 1 2	0 0 0 1
Azerbaijan	2015 2016 2017 2018	  	1 1 2 1	  	-4 -1 0	5 2 2 1	0 0 0
Bangladesh	2015 2016 2017 2018	483 729 829 659	2,620 1,559 1,866 2,424	  	-141  	3,243 2,289 2,695 3,083	21 14 17 19
Bhutan	2015 2016 2017 2018	75 104 142 142	  *22	5 0 17 	  	70 104 126 164	96 141 168 218
Cambodia	2015 2016 2017 2018	 38 41	838 970 1,326 801	  	 -77 	838 970 1,441 841	54 62 90 52
China	2015 2016 2017 2018	2,607,837 2,415,315 2,496,752 2,622,819	124,709 160,992 169,202 171,719	13,088 16,054 13,579 12,957	-19,290 -105,199 -37,854 23,843	2,738,748 2,665,452 2,690,229 2,757,738	1,947 1,885 1,893 1,932
China, Hong Kong SAR	2015 2016 2017 2018	  	10,063 10,042 9,450 9,793	0 0 	499 478 490 592	9,564 9,565 8,960 9,201	1,331 1,320 1,226 1,248
Cyprus	2015 2016 2017 2018	  	5 0 15 19	  	0 0 10 -1	5 0 5 20	5 0 4 17
Georgia	2015 2016 2017 2018	177 172 156 80	238 245 289 406	1 1 14 3	5 34 -1 32	409 383 431 451	102 95 108 113
India	2015 2016 2017 2018	378,700 384,883 385,495 412,754	185,749 176,775 193,663 220,142	812 1,085 930 755	-8,617	560,025 567,959 586,845 629,234	427 429 438 465
Indonesia	2015 2016 2017 2018	376,390 402,358 407,258 485,069	2,863 3,959 4,694 5,323	323,263 326,101 344,127 379,789	-1,823 -364 346 -875	57,812 80,581 67,479 111,478	224 308 255 416
Iran (Islamic Rep. of)	2015 2016 2017 2018	1,144 1,056 1,452 1,570	684 345 440 607	188 99 114 305	0 1 1	1,639 1,302 1,777 1,872	21 16 22 23
Israel	2015 2016 2017 2018	57 57 61 56	9,404 7,465 7,240 6,557	  	5 -331 201 -220	9,456 7,853 7,099 6,833	1,185 968 861 815

0 1			, , l		Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Japan	2015 2016 2017 2018	1,107 942 1,106 1,053	168,250 163,473 166,350 163,922	786 1,024 1,229 1,456	-3 77 -80 62	168,573 163,314 166,307 163,457	1,317 1,278 1,304 1,285
Jordan	2015 2016 2017 2018	  	258 324 221 301	  	  	258 324 221 301	28 34 23 30
Kazakhstan	2015 2016 2017 2018	62,488 62,503 68,585 69,537	901 778 876 1,189	19,044 16,506 18,635 17,288	647 1,382 1,669 -286	43,699 45,393 49,156 53,723	2,487 2,546 2,719 2,933
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	24,101 27,955 18,995 15,856	1,009 1,284 794 128	17,971 20,435 *4,435	 *9,276 *11,444	7,139 8,805 6,078 4,540	283 348 239 178
Korea, Republic of	2015 2016 2017 2018	1,121 1,097 983 754	115,899 116,238 116,668 114,013		1,130 812 -198 -222	115,890 116,523 117,849 114,989	2,280 2,286 2,306 2,247
Kyrgyzstan	2015 2016 2017 2018	1,011 959 969 1,241	972 567 648 585	149 204 268 433	222 37 97 -91	1,612 1,284 1,251 1,484	270 211 202 235
Lao People's Dem. Rep.	2015 2016 2017 2018	1,852 4,993 5,070 5,351	  	0 0 0 0	 *1,176 *-42 *-44	1,852 3,817 5,112 5,396	275 558 735 764
Lebanon	2015 2016 2017 2018	  	*236 *236 *236 *236	  	  	*236 *236 *236 *236	*36 *35 *35 *34
Malaysia	2015 2016 2017 2018	2,305 2,175 2,692 2,389	22,930 24,447 27,401 29,633	223 22 547 0	14 -178 -82 305	24,998 26,779 29,628 31,717	826 873 953 1,006
Mongolia	2015 2016 2017 2018	20,639 31,123 43,242 46,279	1 0 2 2	12,864 23,064 27,749 30,650	473 -131 4,289 -384	7,303 8,190 11,206 16,015	2,436 2,680 3,599 5,052
Myanmar	2015 2016 2017 2018	363 566 737 921	0 209 0	16 20 0	  	347 755 737 921	7 14 14 17
Nepal	2015 2016 2017 2018	19 19 21 21	777 966 1,109 1,183	  		796 985 1,130 1,204	29 36 41 43
Other Asia	2015 2016 2017 2018	  	58,596 57,963 59,932 55,500	1 1 45 25	736 -125 622 -993	57,860 58,087 59,265 56,468	2,456 2,459 2,503 2,380

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Pakistan	2015 2016 2017 2018	2,658 2,673 2,538 2,874	4,607 6,623 12,908 14,796	  	  	7,265 9,296 15,445 17,670	36 46 74 83
Philippines	2015 2016 2017 2018	5,563 8,453 8,997 8,864	13,248 15,061 17,003 19,979	2,342 5,153 4,654 3,811	-343 -292 -974 1,527	16,813 18,654 22,320 23,505	165 180 212 220
Singapore	2015 2016 2017 2018	  	581 609 1,284 693	0 1 1 1	 *599 	581 609 685 692	104 108 120 120
Sri Lanka	2015 2016 2017 2018	  	1,882 2,405 2,527 2,166	  	*-85 323 *370 82	1,967 2,082 2,157 2,084	94 99 102 98
Syrian Arab Republic	2015 2016 2017 2018	  	1 1 1 1	  		1 1 1 1	0 0 0
Tajikistan	2015 2016 2017 2018	653 1,117 1,491 1,609	8 8 6 6	0 0 4 37		661 1,125 1,492 1,578	78 130 168 173
Thailand	2015 2016 2017 2018	5,545 6,151 5,864 5,357	21,582 20,375 21,101 23,276	19 31 41 76	2,984 4,474 3,512 5,939	24,124 22,022 23,412 22,619	351 319 338 326
Turkey	2015 2016 2017 2018	18,284 22,139 22,403 23,637	31,470 33,623 35,588 34,970	215 179 204 184	273 777 435 -45	49,266 54,805 57,352 58,469	627 687 707 710
United Arab Emirates	2015 2016 2017 2018	  	2,452 2,630 3,042 2,744	0 0 1 0	  	2,452 2,630 3,041 2,743	265 281 321 285
Uzbekistan	2015 2016 2017 2018	1,761 1,955 2,036 2,111	476 469 481 757	0 0 0 0	61 -155 87 -648	2,176 2,579 2,430 3,517	70 82 76 108
Viet Nam	2015 2016 2017 2018	33,331 30,988 30,727 33,637	625 1,107 286 2,497	*1,564 818 1,404 353	534	31,357 30,743 29,280 35,781	338 328 310 374
Yemen	2015 2016 2017 2018	  	137 119 112 109	  		137 119 112 109	5 4 4 4
Europe	2015 2016 2017 2018	538,953 542,312 543,618 582,321	221,028 203,971 212,747 207,306	165,255 177,959 190,221 223,115	-13,843 -14,262 3,730 5,788	608,569 582,585 562,414 560,724	817 780 752 749

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Albania	2015 2016 2017 2018	34 2 32 68	88 70 92 111	0  21 1		122 72 103 177	42 25 36 61
Andorra	2015 2016 2017 2018	  	0 0 0 0	  	  	0 0 0 0	*1 *1 *1 *1
Austria	2015 2016 2017 2018	0 0 	3,984 4,132 4,480 3,873	57 37 39 42	-618 -219 2 -75	4,546 4,314 4,439 3,906	524 493 503 439
Belarus	2015 2016 2017 2018	350 465 654 814	641 676 694 1,343	65 62 176 722	-172 -101 -44 178	1,098 1,180 1,216 1,257	116 125 129 133
Belgium	2015 2016 2017 2018	83 83 71 94	4,562 4,113 4,219 4,608	133 76 105 76	-181 -231 -205 235	4,693 4,351 4,390 4,391	416 383 384 382
Bosnia and Herzegovina	2015 2016 2017 2018	4,189 5,029 5,160 5,227	1,442 1,340 1,442 1,520	439 462 386 621	277 33 232 83	4,915 5,874 5,984 6,043	1,433 1,735 1,785 1,818
Bulgaria	2015 2016 2017 2018	8,379 7,309 8,134 7,536	1,080 822 833 842	8 4 5 10	-6 -34 193 260	9,457 8,160 8,769 8,107	1,314 1,141 1,235 1,150
Croatia	2015 2016 2017 2018	  	892 949 564 479	  	26 19 4 -44	865 930 560 522	204 221 134 126
Czechia	2015 2016 2017 2018	24,164 23,034 21,832 20,999	3,883 4,165 4,222 4,151	4,218 4,284 3,308 2,842	273 -947 -112 -254	23,556 23,863 22,858 22,562	2,222 2,247 2,148 2,115
Denmark	2015 2016 2017 2018	  	2,282 2,403 2,564 2,519	76 17 0 15	-389 -434 351 51	2,596 2,819 2,213 2,453	456 494 386 426
Estonia	2015 2016 2017 2018	6,067 4,895 5,935 6,885	6 21 34 33	21 19 29 13	489 -832 -127 146	5,564 5,728 6,067 6,759	4,230 4,351 4,599 5,109
Finland	2015 2016 2017 2018	1,196 1,029 1,044 2,588	3,713 3,994 3,872 4,077	120 89 135 105	-1,088 -1,590 -1,143 551	5,877 6,524 5,923 6,009	1,072 1,187 1,075 1,088
France	2015 2016 2017 2018	0 0 	13,042 12,318 14,411 13,086	26 79 6 48	-218 -895 305 128	13,235 13,133 14,101 12,911	199 196 210 192

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Germany	2015 2016 2017 2018	61,661 56,750 56,346 53,737	53,538 56,663 48,289 43,257	1,852 1,985 2,112 2,082	-531 1,187 608 -3,546	113,878 110,241 101,915 98,459	1,392 1,341 1,233 1,184
Greece	2015 2016 2017 2018	8,108 5,675 6,525 6,107	227 272 327 335	  	326 -295 -29 -281		751 588 651 639
Hungary	2015 2016 2017 2018	2,169 2,089 1,833 1,816	1,578 1,624 1,798 1,795	430 514 376 303	-59 -27 44 77	3,226	345 331 330 333
Iceland	2015 2016 2017 2018	  	133 141 142 144	  	  -12	133 141 142 156	402 426 423 464
Ireland	2015 2016 2017 2018	1,088 970 1,063 1,145	2,116 1,649 1,756 1,178	18 14 15 6	62 -386 220 332	2,991 2,584	671 637 544 412
Italy	2015 2016 2017 2018	73 0 0	18,058 15,663 13,705 12,684	378 370 338 356	98 -396 36 131	15,689	291 258 220 201
Kosovo	2015 2016 2017 2018	2,194 2,343 2,017 2,039	10 2 4 3	12 5 4 2		2,411 2,026	1,244 1,357 1,131 1,140
Latvia	2015 2016 2017 2018	0 1 1 2	58 54 56 67	2 5 5 9	-10 -8 -7 -8	59 59	33 30 30 36
Lithuania	2015 2016 2017 2018	30 7 10 11	223 229 271 269	4 2 2 2	-5 -23 5 -13		86 89 96 104
Luxembourg	2015 2016 2017 2018	  	70 75 65 61	  	  	70 75 65 61	124 130 110 100
Montenegro	2015 2016 2017 2018	557 439 464 523	2 2 2 2	19 13 30 31	  .21	540 428 435 515	862 682 693 820
Netherlands	2015 2016 2017 2018	  	14,906 14,261 13,446 11,893	204 146 238 150	-492 -62 91 -16		897 835 771 689
North Macedonia	2015 2016 2017 2018	1,252 1,065 1,218 1,143	121 161 130 168	1 0 0 1	16 -18 -33 75	1,243 1,381	653 597 663 593

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Norway	2015	1,060	1,080	1,078	-110	1,173	226
	2016	784	1,047	874	-125	1,082	206
	2017	126	1,148	72	-9	1,211	229
	2018	144	1,120	108	-20	1,176	220
Poland	2015	76,974	7,227	14,119	22	70,060	1,842
	2016	74,742	7,198	14,552	-3,943	71,331	1,878
	2017	71,156	11,258	12,405	-1,741	71,751	1,891
	2018	68,685	16,202	10,726	2,870	71,292	1,880
Portugal	2015 2016 2017 2018	  	4,583 4,160 4,869 3,809	·· ·· ··	-71 94 258 -42	4,654 4,066 4,610 3,852	449 394 448 376
Republic of Moldova	2015 2016 2017 2018	  	135 84 172 122	  	-4 -21 20 6	139 105 152 116	34 26 37 29
Romania	2015	6,837	1,508	102	-234	8,478	425
	2016	6,051	1,481	1	-13	7,543	381
	2017	6,383	1,430	0	84	7,729	393
	2018	5,740	1,287	1	-194	7,220	370
Russian Federation	2015	286,103	*20,429	139,806	-2,349	169,076	1,166
	2016	298,801	*20,001	152,746	1,216	164,840	1,135
	2017	317,480	*24,602	168,843	7,695	165,544	1,138
	2018	361,269	*24,127	*203,710	6,648	175,039	1,201
Serbia	2015	10,287	899	11	95	11,080	1,563
	2016	10,287	913	20	-92	11,272	1,593
	2017	10,309	980	23	16	11,250	1,598
	2018	9,442	1,113	21	-215	10,749	1,534
Slovakia	2015	708	4,032	60	-22	4,701	865
	2016	870	3,912	69	-140	4,853	892
	2017	638	4,312	67	49	4,834	887
	2018	522	4,507	56	141	4,831	886
Slovenia	2015 2016 2017 2018	1,232 1,170 1,334 1,288	291 216 282 306	0 0 	-1 -7 -6 -21	1,525 1,393 1,621 1,616	736 671 781 778
Spain	2015	1,780	15,641	865	-2,319	18,876	404
	2016	1,052	11,558	428	-2,507	14,689	315
	2017	1,611	15,931	299	-923	18,166	389
	2018	1,261	13,283	413	-1,678	15,808	339
Sweden	2015	157	2,868	78	-73	3,021	309
	2016	181	3,204	27	409	2,949	300
	2017	161	2,826	29	29	2,929	296
	2018	228	2,932	9	11	3,141	315
Switzerland	2015 2016 2017 2018	  	185 162 156 115	·· ·· ··	1 -1 -1 -31	185 163 157 145	22 19 19 17
Ukraine	2015	24,914	14,199	616	-636	39,133	871
	2016	33,615	15,168	657	815	47,311	1,058
	2017	19,481	18,561	711	573	36,759	826
	2018	20,801	19,723	78	141	40,304	911

#### Table 4

			Imports		Changes in	Sup	ply
Country or area	Year	Production		Exports	stocks	Total	Per capita
United Kingdom	2015 2016 2017 2018	7,307 3,573 2,601 2,208	21,293 9,070 8,801 10,160	440 401 443 554	-5,903 -4,618 -2,699 203		517 254 205 173
Oceania	2015 2016 2017 2018	429,310 419,301 420,860 413,223	1,279 1,521 1,535 2,006	363,194 360,366 350,472 352,628	-6,480 4,889	64,852 66,935 67,034 65,071	1,627 1,655 1,635 1,565
Australia	2015 2016 2017 2018	426,544 416,972 418,500 410,631	238 233 270 435	361,805 359,145 349,288 351,384	-6,325 5,142	64,385	2,599 2,654 2,617 2,501
New Caledonia	2015 2016 2017 2018	  	729 960 927 1,140	  	45 -105 *25	708 914 1,033 1,115	2,613 3,335 3,725 3,981
New Zealand	2015 2016 2017 2018	2,767 2,329 2,361 2,592	312 328 337 431	1,389 1,222 1,185 1,244	-148	1,950 1,636 1,661 1,696	422 351 353 357

#### Production, trade and supply of hard coal

Thousand metric tons and kilograms per capita

#### **Table Notes**

**Production** includes production from other sources as defined in the previous table.

Data for China include brown coal.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

Figure 12: Production of hard coal by region, 1990-2018

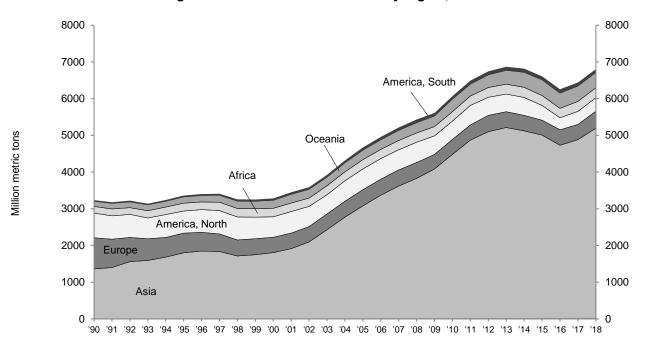
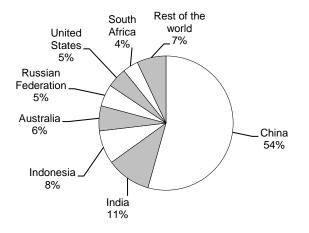
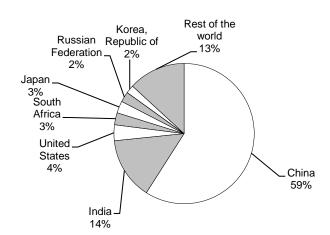


Figure 13: Major hard coal producing countries, 2018

Figure 14: Major hard coal consuming countries, 2018





					Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
World	2015 2016 2017 2018	6,607,944 6,254,000 6,439,662 6,803,099	1,205,307 1,221,128 1,287,878 1,322,754	1,246,802 1,266,846 1,333,490 1,404,691	-14,331 -184,553 -46,057 33,651	6,580,780 6,392,834 6,440,107 6,687,512	892 856 853 876
Africa	2015 2016 2017 2018	269,299 259,791 271,131 276,114	10,687 11,530 13,249 14,628	80,975 75,863 82,343 84,268	2,796 -3,447 1,192 1,091	196,215 198,906 200,845 205,383	166 164 162 161
Algeria	2015 2016 2017 2018		0 0 0 12	  	-11 0 -5 4	11 0 5 8	0 0 0 0
Benin	2015 2016 2017 2018	  	41 120 127 120	  	  120	41 120 127 0	4 11 11 0
Botswana	2015 2016 2017 2018	2,085 1,874 2,220 2,482	  	242 205 229 317	*486 *-3 	1,357 1,672 1,991 2,165	640 774 903 960
Burundi	2015 2016 2017 2018	  	0 10 1 0	  	  	0 10 1 0	0 1 0 0
Egypt	2015 2016 2017 2018	  	341 387 598 429	  	  *131	341 387 598 298	4 4 6 3
Eswatini	2015 2016 2017 2018	*87 158 182 129	51 82 61 61	*87 *158 182 129	*-11  	*51 93 61 61	*46 83 54 54
Ethiopia	2015 2016 2017 2018	 2 2 2	411 526 580 619	  		411 528 582 621	4 5 5 6
Kenya	2015 2016 2017 2018	  	498 491 463 693	  	  	498 491 463 693	10 10 9 13
Lesotho	2015 2016 2017 2018	  	*614 *590 *678 *714	  	  	*614 *590 *678 *714	*298 *284 *324 *339
Madagascar	2015 2016 2017 2018	  	*396 386 549 *560	  	  	*396 386 549 *560	*16 16 21 *21
Malawi	2015 2016 2017 2018	59 43 *48 *50	34 *46 *41 *48	8 8 *8 *10	  	85 81 *81 *88	5 5 *5 *5

					Changes in	Sup	pply
Country or area	Year	Production	Imports	nports Exports		Total	Per capita
Mauritius	2015 2016 2017 2018	  	804 926 1,431 1,283	  	83 191 671 561		572 582 601 570
Morocco	2015 2016 2017 2018	  	6,460 6,724 6,809 8,460	  	-275 234 63 976	6,490 6,746	191 182 187 205
Mozambique	2015 2016 2017 2018	6,600 5,462 11,777 12,337	  	4,809 7,903 11,777 13,266	*1,617 *-2,462 -37 -977	21 37	6 1 1 2
Namibia	2015 2016 2017 2018	  	4 34 42 22		  9	34 42	2 14 17 5
Niger	2015 2016 2017 2018	221 247 224 276	  	  	-4 0 0	247 224	11 12 10 12
Nigeria	2015 2016 2017 2018	47 46 46 47	  	  	  	47	0 0 0 0
Senegal	2015 2016 2017 2018	  	490 514 613 963	  	  	514 613	34 34 40 61
South Africa	2015 2016 2017 2018	255,425 249,719 252,343 255,641	519 661 1,226 633	75,830 67,538 70,049 70,431	  	182,842 183,520	3,252 3,253 3,219 3,216
United Rep. of Tanzania	2015 2016 2017 2018	257 276 563 628	 	  	  	563	5 5 10 11
Zambia	2015 2016 2017 2018	159 328 797 1,174	 	 	  	797	10 20 47 68
Zimbabwe	2015 2016 2017 2018	4,360 1,636 2,929 3,348	24 33 30 11	0 50 98 115	900 -1,396 500 267	3,015 2,361	252 215 166 206
America, North	2015 2016 2017 2018	401,196 327,054 356,345 366,232	25,295 22,188 22,924 20,788	91,952 82,016 111,043 131,407	6,857 -26,181 -10,459 -10,526	293,406 278,685	577 512 483 457
Bermuda	2015 2016 2017 2018	 	0 0 0 3	 		0	

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Canada	2015 2016 2017 2018	29,826 27,761 31,508 35,667	6,050 5,047 6,075 6,303	30,200 30,231 30,918 33,476	-1,020 -2,938 1,270 1,875	6,696 5,515 5,395 6,619	186 152 147 179
Costa Rica	2015 2016 2017 2018	  	1 1 7 0	  	  	1 1 7 0	0 0 1 0
Cuba	2015 2016 2017 2018	  	7 2 4 4	  	  	7 2 4 4	1 0 0 0
Dominican Republic	2015 2016 2017 2018	  	1,115 1,122 1,255 1,263	  	26 39 -5 24	1,260	106 104 120 117
Guatemala	2015 2016 2017 2018	  	2,232 2,045 1,633 1,807	  	697 242 137 40	1,535 1,803 1,496 1,767	94 109 88 102
Honduras	2015 2016 2017 2018	  	129 58 1	  	  	129 58 1	14 6 0
Jamaica	2015 2016 2017 2018	  	108 98 96 106	  	7 1 14 19	101 98 82 87	35 34 28 30
Mexico	2015 2016 2017 2018	3,186 4,437 4,605 4,775	7,245 6,656 8,178 7,270	3 2 3 5			86 90 110 94
Panama	2015 2016 2017 2018	  	354 313 87 219	  	  	354 313 87 219	89 78 21 52
United States	2015 2016 2017 2018	368,184 294,856 320,232 325,790	8,055 6,845 5,588 3,813	61,749 51,783 80,122 97,926		307,275 273,445 256,657 244,354	958 847 790 747
America, South	2015 2016 2017 2018	96,133 101,236 98,614 91,855	32,553 33,283 34,794 34,477	74,519 85,067 104,344 84,805		49,714	126 122 118 115
Argentina	2015 2016 2017 2018	34 24 20 60	1,988 1,602 1,510 1,696	12 9 0 2	-16 -131	1,633 1,661	49 38 38 38
Bolivia (Plur. State of)	2015 2016 2017 2018	  	6 6 10 8	  	  	6 6 10 8	1 1 1 1

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Brazil	2015 2016 2017 2018	6,354 7,006 4,819 4,838	20,273 19,503 21,207 20,986	  	-679 860 162 409	27,306 25,649 25,864 25,415	134 124 124 121
Chile	2015 2016 2017 2018	3,143 2,525 2,425 2,257	9,894 11,585 11,595 11,463	844 870 914 422	0 281 -131 220	12,193 12,959 13,237 13,078	679 712 717 698
Colombia	2015 2016 2017 2018	85,548 90,512 90,549 84,284	  	72,788 83,325 102,689 83,593	3,571 -2,007 -19,964 -6,970	9,189 9,194 7,824 7,661	193 191 160 154
Paraguay	2015 2016 2017 2018	  	4 2 1 5	  	  	4 2 1 5	1 0 0 1
Peru	2015 2016 2017 2018	252 269 301 216	388 585 471 319	253 165 353 633	-747 -446 -586 -1,001	1,134 1,135 1,005 903	37 37 32 28
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	802 900 500 200		622 698 388 155	  	180 202 112 45	6 7 4 2
Asia	2015 2016 2017 2018	5,007,729 4,731,221 4,880,265 5,197,664	906,127 943,627 993,638 1,034,914	437,429 452,221 463,166 492,835	-13,057 -131,679 -26,780 47,458	5,489,484 5,354,307 5,437,517 5,692,285	1,238 1,196 1,203 1,248
Afghanistan	2015 2016 2017 2018	1,365 1,698 2,191 2,445	  	425 733 1,014 1,117	  	940 965 1,177 1,328	27 27 32 36
Armenia	2015 2016 2017 2018	  	1 1 1	  	  	1 1 1	0 0 0 0
Azerbaijan	2015 2016 2017 2018	  	1 1 2 1	  	-4 -1 0	5 2 2 1	1 0 0 0
Bangladesh	2015 2016 2017 2018	676 1,022 1,161 923	3,651 2,184 2,614 3,395	  	-197  	4,524 3,206 3,775 4,318	29 20 24 27
Bhutan	2015 2016 2017 2018	85 118 162 162	  *25	5 0 19	  	80 118 143 187	110 160 191 248
China	2015 2016 2017 2018	3,746,542 3,410,604 3,523,562 3,697,736	204,065 255,553 270,933 282,098	5,338 8,790 8,088 4,936	-25,469 -127,576 -34,531 26,418	3,970,738 3,784,943 3,820,938 3,948,480	2,822 2,677 2,689 2,766

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
China, Hong Kong SAR	2015 2016 2017 2018	  	11,184 11,161 10,503 10,884	0 0	555 531 545 658	10,630 9,958	1,479 1,468 1,363 1,387
Cyprus	2015 2016 2017 2018	  	6 0 17 22	 	0 0 11 -1		5 0 5 19
Georgia	2015 2016 2017 2018	  	121 104 162 258	0 0 0	-12 9 18 32	95 144	33 24 36 56
India	2015 2016 2017 2018	639,230 657,868 675,400 728,720	203,949 190,953 208,273 235,240	1,250 1,773 1,503 1,313	5,404 -11,924 -15,905 4,401	836,525 858,972 898,075 958,246	638 649 671 708
Indonesia	2015 2016 2017 2018	427,280 456,000 461,000 548,000	2,813 3,564 4,352 5,358	366,970 369,576 389,538 429,061	-2,069 -456 355 -1,030		252 346 285 468
Iran (Islamic Rep. of)	2015 2016 2017 2018	1,206 1,115 1,521 1,646	397 334 362 302	183 103 68 228	  	1,346	18 17 22 21
Israel	2015 2016 2017 2018	  	11,042 8,795 8,516 7,721	 	6 -390 237 -259	11,036 9,185 8,279 7,980	1,383 1,133 1,004 952
Japan	2015 2016 2017 2018	1,265 1,288 1,328 1,328	189,239 185,891 186,870 183,724	2 2 3 32	  	190,502 187,177 188,195 185,020	1,488 1,465 1,476 1,455
Jordan	2015 2016 2017 2018	  	262 326 196 264		  	262 326 196 264	28 34 20 26
Kazakhstan	2015 2016 2017 2018	93,072 92,840 101,796 101,086	14 24 4 441	27,674 23,789 26,986 23,877	465 1,974 2,053 -448	67,100 72,761	3,696 3,763 4,024 4,263
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	24,960 29,071 19,739 16,478	953 1,240 706	19,863 22,586 *4,906	*10,262 *12,660	6,050 7,725 5,277 3,818	240 305 208 149
Korea, Republic of	2015 2016 2017 2018	1,764 1,726 1,486 1,140	127,080 127,892 129,113 125,749	  	1,778 1,277 -300 -336	130,899	2,500 2,517 2,562 2,486
Kyrgyzstan	2015 2016 2017 2018	345 248 247 324	1,371 794 926 819	227 250 208 394	-26 -119 44 2	911 921	254 150 149 118

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Lao People's Dem. Rep.	2015 2016 2017 2018	136 139 133 143	  	0 0 0 0	  	136 139 133 143	20 20 19 20
Lebanon	2015 2016 2017 2018	  	*250 *250 *250 *250	 	  	*250 *250 *250 *250	*38 *37 *37 *36
Malaysia	2015 2016 2017 2018	2,559 2,415 2,989 2,653	25,461 27,146 30,426 32,904	248 24 607 0	15 -198 -91 339	27,757 29,735 32,899 35,218	917 969 1,058 1,117
Mongolia	2015 2016 2017 2018	18,451 28,851 41,362 44,386	1 1 2 2	13,303 23,680 28,553 31,472	530 -54 4,416 -388	4,618 5,225 8,395 13,304	1,540 1,710 2,696 4,196
Myanmar	2015 2016 2017 2018	420 550 737 820	0 0 0	20 16 0	 	400 534 737 820	8 10 14 15
Nepal	2015 2016 2017 2018	22 22 24 25	907 1,127 1,294 1,380		  	929 1,149 1,318 1,405	34 42 48 50
Other Asia	2015 2016 2017 2018	  	54,552 53,101 55,287 54,947	1 1 1	803 -1,121 349 -904	53,748 54,221 54,937 55,850	2,282 2,296 2,321 2,354
Pakistan	2015 2016 2017 2018	4,142 4,165 3,954 4,478	4,885 7,021 13,684 15,686			9,027 11,186 17,638 20,164	45 55 85 95
Singapore	2015 2016 2017 2018	  	659 692 1,458 787	0 1 1 1	 *680 	659 691 778 786	118 122 136 137
Sri Lanka	2015 2016 2017 2018	  	1,882 2,405 2,527 2,166		*-85 323 *370 82	1,967 2,082 2,157 2,084	94 99 102 98
Tajikistan	2015 2016 2017 2018	985 1,275 1,707 1,842	13 10 6 7	0 0 5 43	  	998 1,285 1,708 1,805	118 148 192 198
Thailand	2015 2016 2017 2018		23,964 22,581 23,262 25,739	21 34 45 84	3,512 4,972 3,805 6,448	20,431 17,575 19,412 19,207	297 255 280 277
Turkey	2015 2016 2017 2018	1,435 1,313 1,234 1,102	33,979 36,216 38,252 38,329	151 61 100 85	444 444 506 -200	34,819 37,024 38,880 39,546	443 464 479 480

		5:			Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
United Arab Emirates	2015 2016 2017 2018	  	2,578 2,782 3,214 2,870	0 0 1 0		2,578 2,782 3,212 2,870	278 297 339 298
Uzbekistan	2015 2016 2017 2018	127 160 124 181	142 206 203 580	0 0 0	0 -37 -15 -17	268 403 342 778	9 13 11 24
Viet Nam	2015 2016 2017 2018	41,664 38,735 38,409 42,047	551 1,139 97 2,842	*1,748 802 1,521 190	1,293 667 411 	39,174 38,405 36,574 44,699	423 410 387 468
Yemen	2015 2016 2017 2018	  	156 135 127 124	  	  	156 135 127 124	6 5 5 4
Europe	2015 2016 2017 2018	407,872 420,736 416,826 458,946	229,668 209,314 222,050 216,358	168,253 181,192 192,514 228,181	-15,997 -15,005 5,191 5,637	485,284 463,862 441,171 441,486	651 621 590 590
Albania	2015 2016 2017 2018	69 4 46 98	102 81 107 129	0  30 2	  	171 85 123 224	59 30 43 78
Andorra	2015 2016 2017 2018	  	0 0 0 0	 	  	0 0 0 0	*1 *2 *2 *1
Austria	2015 2016 2017 2018	  	3,028 3,282 3,386 3,087	11 0 1 3	-631 -249 11 -131	3,648 3,531 3,374 3,215	420 404 383 362
Belarus	2015 2016 2017 2018	  	675 724 762 1,592	41 36 167 825	-46 70 -49 145	680 618 644 622	72 65 68 66
Belgium	2015 2016 2017 2018	15 14 16 16	4,088 3,531 3,428 3,832	79 65 81 46	-156 -223 -210 233	4,180 3,703 3,573 3,569	370 326 313 311
Bosnia and Herzegovina	2015 2016 2017 2018	  	1,359 1,302 1,361 1,457	36 0 0	49 64 91 0	1,274 1,238 1,270 1,457	371 366 379 438
Bulgaria	2015 2016 2017 2018	51 52 41 334	1,061 762 898 836	0 0 0	-3 -87 15 166	1,115 901 924 1,004	155 126 130 142
Croatia	2015 2016 2017 2018	  	974 1,045 589 499	  	23 25 5 -50	951 1,020 584 549	225 242 140 132

Country or area		5		Exports	Changes in	Supply		
Country or area	Year	Production	Imports		stocks	Total	Per capita	
Czechia	2015 2016 2017 2018	8,426 7,015 5,601 4,562	3,145 3,565 3,844 3,808	3,565 3,516 2,414 1,954	125 -824 -108 -140		743 743 671 615	
Denmark	2015 2016 2017 2018	  	2,757 2,886 3,074 2,756	92 21  17	-471 -522 423 54	2,651	551 593 462 467	
Estonia	2015 2016 2017 2018	  	7 23 45 44	0  	-22 -4 -3 -6	27	22 21 36 38	
Finland	2015 2016 2017 2018	  	3,601 4,012 3,970 4,109	  	-451 -872 -445 -32	4,415	739 888 801 750	
France	2015 2016 2017 2018	0 0 	13,318 12,566 14,911 13,207	0 0 	-426 -1,036 96 181	13,602	206 203 221 194	
Germany	2015 2016 2017 2018	6,649 4,078 3,836 2,761	54,528 57,757 50,486 44,816	179 278 222 202	-551 1,067 552 -3,322		753 736 648 610	
Greece	2015 2016 2017 2018	  	257 312 411 379	  	-24 -21 35 -55	333 376	26 31 36 41	
Hungary	2015 2016 2017 2018	  	1,373 1,384 1,545 1,542	  	-10 -17 27 41		141 144 156 155	
Iceland	2015 2016 2017 2018	  	116 124 127 131	  	  .13	116 124 127 144	351 373 380 428	
Ireland	2015 2016 2017 2018	  	2,394 1,912 1,986 1,328	13 10 12 	67 -338 186 161		497 477 376 242	
Italy	2015 2016 2017 2018	81 0 0	19,186 16,577 15,226 14,149	82 0 0 3	174 -337 40 170	19,011 16,914 15,186 13,976	314 279 250 230	
Kosovo	2015 2016 2017 2018	  	12 2 2 1	0 0 	  	12 2 2 1	7 1 1 1	
Latvia	2015 2016 2017 2018	  	71 67 68 82	2 6 6 10	-12 -10 -8 -7	71	41 36 36 41	

Country					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Lithuania	2015 2016 2017 2018	  	227 225 272 262	0 0	-25 -21 23 -3	252 246 249 265	86 85 88 95
Luxembourg	2015 2016 2017 2018	  	73 81 68 64	  	  	73 81 68 64	129 140 115 106
Netherlands	2015 2016 2017 2018	  	17,384 16,350 14,870 13,021	  	-593 -128 189 -61	17,977 16,478 14,681 13,082	1,061 970 863 767
North Macedonia	2015 2016 2017 2018	  	15 27 33 101	0 0 0 1	3 -3 0 10	12 29 33 91	6 14 16 43
Norway	2015 2016 2017 2018	1,106 818 131 150	693 660 781 746	1,124 912 75 113	-113 -146 5 -10	788 712 832 793	152 136 157 149
Poland	2015 2016 2017 2018	72,686 70,783 65,975 63,857	8,289 8,299 12,855 19,244	9,191 9,096 7,089 4,907	-137 -4,732 -2,043 3,360	71,921 74,718 73,784 74,834	1,891 1,967 1,944 1,973
Portugal	2015 2016 2017 2018	  	5,420 4,911 5,712 4,496	  	-84 110 304 -50	5,504 4,801 5,408 4,546	531 465 526 443
Republic of Moldova	2015 2016 2017 2018	  	166 99 200 144	  	-5 -26 24 7	171 125 176 137	42 31 43 34
Romania	2015 2016 2017 2018	  	124 157 194 185	0 0 0	-4 21 4 6	128 136 190 179	6 7 10 9
Russian Federation	2015 2016 2017 2018	278,033 292,862 312,811 358,614	*22,609 *21,723 *26,722 *26,065	151,870 165,835 181,022 *219,125	-2,193 698 9,643 7,430	150,965 148,052 148,868 158,124	1,041 1,019 1,023 1,085
Serbia	2015 2016 2017 2018	  	219 179 151 260	1 0 	12 -10 1 -2	206 189 150 262	29 27 21 37
Slovakia	2015 2016 2017 2018	  	3,663 3,557 3,808 3,962	  	-102 -109 4 42	3,765 3,666 3,804 3,920	693 674 698 719
Slovenia	2015 2016 2017 2018	  	15 13 11 10	0 0 	3 2  -1	12 11 11 11	6 5 5 5

0 1		D 1 "			Changes in	Supp	Supply		
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita		
Spain	2015 2016 2017 2018	1,747 1,070 1,161 771	18,735 13,830 19,089 15,773	1,088 453 264 276	-2,743 -3,365 -1,235 -2,668	17,812 21,221	474 382 455 406		
Sweden	2015 2016 2017 2018	  	2,791 3,100 2,731 2,718	0 0 	400	2,673 2,601	287 272 263 280		
Switzerland	2015 2016 2017 2018	  	76 47 52 15	  	-1 -4 -2 -38	54	9 6 6		
Ukraine	2015 2016 2017 2018	30,411 39,862 24,167 25,202	14,598 15,648 19,778 21,387	494 520 636 63	-770 1,142 645 140	53,848 42,664	1,008 1,204 959 1,048		
United Kingdom	2015 2016 2017 2018	8,598 4,178 3,041 2,581	22,518 8,494 8,497 10,121	385 444 495 634	-3,159	17,775 14,202	571 268 213 177		
Oceania	2015 2016 2017 2018	425,714 413,961 416,481 412,288	977 1,186 1,222 1,588	393,674 390,488 380,080 383,194	3,023 -6,913 5,450 -2,753	31,572 32,174	753 781 785 804		
Australia	2015 2016 2017 2018	424,313 412,756 415,269 410,934	125 30 103 228	392,348 389,301 378,938 381,944	3,026 -6,884 5,593 -2,807	30,369 30,841	1,214 1,252 1,254 1,286		
New Caledonia	2015 2016 2017 2018	  	821 1,082 1,045 1,285	  	23 51 -119 *29	1,031 1,164	2,945 3,759 4,199 4,488		
New Zealand	2015 2016 2017 2018	1,401 1,205 1,212 1,354	31 74 74 75	1,326 1,187 1,142 1,250	-26 -80 -25 25	172 169	29 37 36 32		

#### 2017

		Exporters								
Importers	World	Australia	Canada	Colombia	Indonesia	Kazakhstan				
Austria	3,386	410								
Belgium	3,428	1,265		29						
Brazil	21,207	6,322	926	5,552	68					
Canada	6,075			985						
Chile	11,595	2,310	188	7,421						
China	270,933	79,913	4,748	7	35,278					
China, Hong Kong SAR	10,503	304			8,236					
Denmark	3,074			483						
Finland	3,970		668			126				
France	14,911	3,912	192	2,083						
Germany	50,486	5,635	1,481	6,173	1	31				
India	208,273	43,892	3,085	331	93,931					
Israel	8,516			3,922						
Italy	15,226	357	303	3,336	871	706				
Japan	186,870	120,885	3,076	2,199	32,780	159				
Korea, Republic of	129,113	48,413	9,268	2,587	31,123					
Malaysia	30,426	6,620			20,190					
Mexico	8,178		192	6,514						
Morocco	6,809			32						
Netherlands	14,870	2,151	176	2,210	202	53				
Pakistan	13,684	51			1,418					
Poland	12,855	1,731	270	702		94				
Portugal	5,712			4,510						
Russian Federation	26,722			40		19,891				
Slovakia	3,808		168	30						
Spain	19,089	1,021	194	4,570	4,257					
Thailand	23,262	3,457		161	16,162					
Turkey	38,252	1,087	486	17,337	160					
Ukraine	19,778	403	200		77	409				
United Kingdom	8,497	749	36	731		103				
United States	5,588	1	712	4,212	578					

2017

Exporters								
Mongolia	Poland	Russian Federation	South Africa	United States	Viet Nam			
	1,303	176		523				
		1,191	76	701				
		2,308	835	5,195				
		147		4,932				
		75		1,599				
28,450		25,307		2,780	254			
		1,520			٠.			
	5	1,779	610	169				
	59	2,603		476				
	8	4,053	1,709	2,420				
	1,240	19,007	1,627	9,060				
		3,916	34,904	10,323	96			
		3,003	1,166					
		5,509	1,123	2,908				
71		18,789	73	5,823	770			
		24,322	5,474	4,240	124			
		2,705	585		16			
		1		1,446				
		3,504	765	2,223				
	0	5,013	814	2,896	5			
		321	7,240	119				
		8,611		768				
		297	163	740				
	710	1,182		337				
	9	4,969	1,432	1,768				
		1,363	79	123	146			
	73	14,390	2,219	1,911				
	651	13,251	714	4,049				
	28	3,884	50	2,352				
		31	34					

#### 2018

	,	Exporters								
Importers	World	Australia	Canada	Colombia	Indonesia	Kazakhstan				
Austria	3,087	190		22						
Belgium	3,832	1,189		17						
Brazil	20,986	5,805	855	5,984						
Canada	6,303			1,234						
Chile	11,463	1,027	194	8,202						
China	282,098	88,712	3,129	334	37,612					
China, Hong Kong SAR	10,884	306	123		8,889					
Denmark	2,756			247						
Finland	4,109	130	600	5						
France	13,207	3,754	91	1,515		••				
Germany	44,816	5,162	1,552	3,786		87				
India	235,240	48,170	4,453	508	103,346					
Israel	7,721									
Italy	14,149	436	210	2,847		623				
Japan	183,724	118,027	3,207	822	30,987					
Korea, Republic of	125,749	47,555	9,108	2,431	30,168					
Malaysia	32,904	6,215	81	88	16,458					
Mexico	7,270			5,531						
Morocco	8,460			71						
Netherlands	13,021	2,160	129	1,097	72	187				
Pakistan	15,686		59	100	3,399					
Poland	19,244	1,478	214	1,460	18	504				
Portugal	4,496		45	3,684						
Russian Federation	26,065			45		18,070				
Slovakia	3,962		364	35						
Spain	15,773	1,334	73	3,421	4,494					
Thailand	25,739	3,805		5	19,994					
Turkey	38,329	2,048	445	18,946						
Ukraine	21,387	80	360			422				
United Kingdom	10,121	630		635						
United States	3,813		618	2,290	721					

2018

Exporters								
Mongolia	Poland	Russian Federation	South Africa	United States	Viet Nam			
	1,373	214		508				
		1,531	198	762				
		2,607		5,735				
		120		4,921				
				2,037				
31,470		26,220		2,036	173			
		1,362						
		1,878	526	45				
		2,713		634				
	1	4,159	810	1,915				
	246	19,037	1,044	9,747				
		4,321	33,986	15,509				
		5,079	296	3,521				
		19,471	155	8,426				
		22,828	5,371	4,869				
		2,069	7,991	1				
		8		1,706				
		3,911	484	3,888				
**		5,032	107	3,863				
		494	9,565	174				
		13,054		1,535				
		71		692				
	629	1,532		213				
	18	3,645	890	1,457				
		549		456				
		12,339	1,596	2,694				
	313	15,009	245	4,370				
	3	4,694	118	3,573				
	_	72	43					

#### Production, trade and supply of brown coal and oil shale

Thousand metric tons and kilograms per capita

#### **Table Notes**

Data refer to brown coal and oil shale.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

Figure 15: Production of brown coal and oil shale by region, 1990-2018

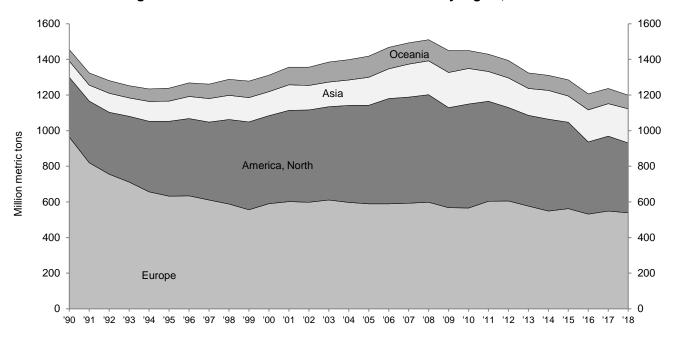


Figure 16: Major brown coal producing countries, 2018

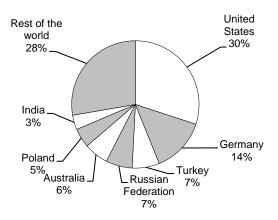


Figure 17: Major brown coal consuming countries, 2018

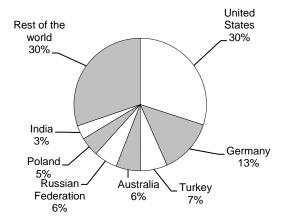


Table 7

# Production, trade and supply of brown coal and oil shale Thousand metric tons and kilograms per capita

				nports Exports	Changes in	Supply		
Country or area	Year	Production	Imports		stocks	Total	Per capita	
World	2015 2016 2017 2018	1,285,091 1,206,026 1,237,057 1,199,129	48,975 52,866 58,404 60,630	17,638 19,527 27,458 28,437	33,810 -19,398 -8,519 -17,807	1,282,618 1,258,764 1,276,523 1,249,129	174 169 169 164	
America, North	2015 2016 2017 2018	485,515 405,533 419,855 392,279	4,194 4,986 5,049 4,891	5,460 2,994 7,968 7,265	30,680 -18,794 -6,865 -17,704	453,569 426,319 423,801 407,609	799 744 734 700	
Canada	2015 2016 2017 2018	32,518 31,499 30,201 24,620	1,518 1,272 1,404 1,292	116 101 135 291	529 -92 -669 95	33,391 32,762 32,139 25,526	927 900 875 689	
Mexico	2015 2016 2017 2018	7,491 8,130 7,171 7,466	462 1,624 2,178 2,010	  	-706 450 2,874 1,979	8,659 9,304 6,475 7,497	71 75 52 59	
United States	2015 2016 2017 2018	445,506 365,904 382,483 360,193	2,214 2,090 1,467 1,589	5,344 2,893 7,833 6,974	30,857 -19,152 -9,070 -19,778	411,519 384,253 385,187 374,586	1,282 1,190 1,185 1,145	
Asia	2015 2016 2017 2018	147,601 179,698 182,188 192,035	37,536 41,707 47,162 49,847	5,520 9,576 9,089 8,793	1,265 4,409 313 2,481	178,353 207,420 219,949 230,608	40 46 49 51	
Bangladesh	2015 2016 2017 2018	  	32 0 	  		32 0 	0 0 	
Cambodia	2015 2016 2017 2018	  56 60	1,235 1,429 1,954 1,180	  	 -114 	1,235 1,429 2,124 1,240	80 91 133 76	
Georgia	2015 2016 2017 2018	306 297 268 138	  	2 2 2 2	1 9 2 -2	303 286 264 138	75 71 66 34	
India	2015 2016 2017 2018	43,843 45,230 46,255 44,283	0 19 10 19	0 5 4 40	1,631 -2,074 327 1,538	42,212 47,318 45,934 42,724	32 36 34 32	
Israel	2015 2016 2017 2018	420 423 449 415	  	  		420 423 449 415	53 52 54 50	
Kazakhstan	2015 2016 2017 2018	5,526 5,750 6,095 6,561	0 1  0	2,357 2,204 2,231 2,757	496 177 554 5	2,673 3,370 3,310 3,799	152 189 183 207	
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	2,530 2,755 1,921 1,602	  	 	  	2,530 2,755 1,921 1,602	100 109 76 63	

# Production, trade and supply of brown coal and oil shale Thousand metric tons and kilograms per capita

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Korea, Republic of	2015 2016 2017 2018	  	6,824 6,569 9,769 9,828			6,824 6,569 9,769 9,828	134 129 191 192
Kyrgyzstan	2015 2016 2017 2018	1,584 1,603 1,624 2,071	9 5 3 4	10 91 272 367	477 225 139 -185	1,106 1,292 1,216 1,893	186 213 196 300
Lao People's Dem. Rep.	2015 2016 2017 2018	4,658 13,097 13,440 15,903		0  	*3,163 *-114 *-135	4,658 9,934 13,554 16,039	691 1,451 1,949 2,271
Mongolia	2015 2016 2017 2018	5,755 6,672 6,783 7,015	  	46 427 406 571	-80 -160 58 -20	5,789 6,404 6,320 6,465	1,931 2,095 2,030 2,039
Myanmar	2015 2016 2017 2018	54 233 274 486	437 0 	 13 0	  	54 657 274 486	1 12 5 9
Other Asia	2015 2016 2017 2018	  	11,429 12,532 12,304 11,566	  	28 1,443 470 -313	11,401 11,089 11,834 11,879	484 470 500 501
Philippines	2015 2016 2017 2018	7,378 11,211 11,932 11,755	17,279 20,030 22,268 26,301	3,106 6,835 6,172 5,055	-455 -388 -1,292 2,025	22,006 24,794 29,320 30,977	216 239 279 290
Tajikistan	2015 2016 2017 2018	57 50 53 65	  1 1	  	  	57 50 54 66	7 6 6 7
Thailand	2015 2016 2017 2018	15,151 16,979 16,259 14,852	 55 193 226	  	-239 92 163 491	15,390 16,942 16,289 14,587	224 246 235 210
Turkey	2015 2016 2017 2018	56,979 71,691 72,864 82,835	  	  1 1	-716 2,184 -72 353	57,695 69,507 72,935 82,481	735 871 899 1,002
Uzbekistan	2015 2016 2017 2018	3,361 3,707 3,915 3,993	727 630 660 722	0 0 0 0	121 -263 193 -1,275	3,967 4,600 4,383 5,990	128 146 137 184
Europe	2015 2016 2017 2018	561,867 531,547 549,110 538,775	6,843 5,795 5,801 5,366	6,615 6,957 10,357 12,352	2,216 -4,833 -1,783 -2,673	559,879 535,218 546,337 534,463	751 717 731 714
Austria	2015 2016 2017 2018	:	94 79 76 80	0 0	0 0 	94 79 76 80	11 9 9 9

Table 7

# Production, trade and supply of brown coal and oil shale Thousand metric tons and kilograms per capita

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Belgium	2015 2016 2017 2018	91 93 74 101	10 5 14 3	1 1 7 1	1 2 8 -3	99 95 73 106	9 8 6 9
Bosnia and Herzegovina	2015 2016 2017 2018	12,173 13,644 14,084 14,505	56 87 98 106	358 258 239 195	151 -326 -186 262	11,720 13,799 14,129 14,154	3,418 4,075 4,216 4,258
Bulgaria	2015 2016 2017 2018	35,859 31,231 34,277 30,263	0 0 1 	36 17 22 43	81 213 583 54	35,742 31,001 33,673 30,166	4,964 4,335 4,741 4,278
Croatia	2015 2016 2017 2018		57 44 49 36	  	12 -6 	45 50 49 36	11 12 12 9
Czechia	2015 2016 2017 2018	38,105 38,528 39,306 39,204	1,031 138 205 185	868 855 941 838	430 -405 -91 -243	37,838 38,216 38,661 38,794	3,569 3,599 3,633 3,637
Estonia	2015 2016 2017 2018	19,616 17,057 21,625 21,883	  	 	1,717 -2,837 -272 509	17,899 19,894 21,897 21,374	13,608 15,111 16,596 16,157
France	2015 2016 2017 2018	  	118 99 61 67	  	-7 -8 11 -9	125 107 50 76	2 2 1 1
Germany	2015 2016 2017 2018	178,065 171,547 171,286 166,258	20 26 30 21	914 0 	201 532 102 -920	176,970 171,041 171,214 167,199	2,164 2,081 2,071 2,011
Greece	2015 2016 2017 2018	46,246 32,638 37,731 36,489	0 0 0	  	1,979 -1,592 -330 -1,386	44,267 34,230 38,061 37,875	4,153 3,225 3,601 3,600
Hungary	2015 2016 2017 2018	9,261 9,216 7,972 7,898	224 178 207 189	355 211 2 3	-192 3 34 -91		953 941 837 842
Italy	2015 2016 2017 2018	  	448 130 10 2	  	  	448 130 10 2	7 2 0 0
Kosovo	2015 2016 2017 2018	8,241 8,801 7,575 7,661	2 2 9 9	45 18 14 9	-126 -267 -33 -32		4,655 5,092 4,245 4,281
Lithuania	2015 2016 2017 2018	: : : : : : : : : : : : : : : : : : : :	0 0 3 2	0 0		0 1 3 2	0 0 1 1

# Production, trade and supply of brown coal and oil shale Thousand metric tons and kilograms per capita

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Montenegro	2015 2016 2017 2018	1,773 1,398 1,475 1,596	5 5 5 5	59 42 97 94	  .65	1,719 1,361 1,383 1,573	2,742 2,170 2,204 2,505
Netherlands	2015 2016 2017 2018	  	36 36 48 40	  	0 0 0	36 36 48 40	2 2 3 2
North Macedonia	2015 2016 2017 2018	5,937 5,152 5,094 4,995	173 192 127 112	3 2 2 0	65 -72 -153 287	6,042 5,414 5,372 4,820	2,906 2,602 2,580 2,314
Poland	2015 2016 2017 2018	63,128 60,246 61,161 58,571	281 289 328 276	198 212 256 287	164 -67 49 -24	63,047 60,390 61,184 58,584	1,658 1,590 1,612 1,545
Romania	2015 2016 2017 2018	25,493 22,980 25,752 23,647	1,020 854 670 588	378 3 2 6	-770 -46 201 -724	26,905 23,877 26,219 24,953	1,350 1,206 1,334 1,279
Russian Federation	2015 2016 2017 2018	73,629 73,485 74,886 80,478	1,531 2,296 2,321 2,160	3,370 5,272 8,701 10,796	-435 1,079 -1,662 25	72,225 69,430 70,168 71,817	498 478 482 493
Serbia	2015 2016 2017 2018	37,826 38,440 39,806 37,649	781 336 488 369	30 66 74 80	142 -282 42 -560	38,435 38,992 40,178 38,498	5,422 5,510 5,708 5,495
Slovakia	2015 2016 2017 2018	1,939 1,847 1,834 1,502	436 494 556 595	  	-223 -79 41 43	2,598 2,420 2,349 2,054	478 445 431 377
Slovenia	2015 2016 2017 2018	3,168 3,349 3,356 3,217	388 372 372 411	 	-16 -27 -14 -51	3,572 3,748 3,742 3,679	1,725 1,807 1,802 1,771
Spain	2015 2016 2017 2018	1,317 730 1,816 1,630			-960 -650 -114 250	2,277 1,380 1,930 1,380	49 30 41 30
Switzerland	2015 2016 2017 2018	  	132 133 123 110	  	2 3 1 3	130 130 122 107	16 15 14 12
Ukraine	2015 2016	 1,165				 1,165	 26
	2017 2018	1,228			2	1,226	28
Oceania	2015 2016 2017 2018	90,108 89,248 85,904 76,040	402 379 392 526	43 0 44 28	-350 -180 -184 89	90,817 89,807 86,436 76,449	2,279 2,221 2,108 1,839

### Table 7

# Production, trade and supply of brown coal and oil shale Thousand metric tons and kilograms per capita

Country or area	Year Production	Draduskias	Imports	Exports	Changes in	Supply		
		Production			stocks	Total	Per capita	
Australia	2015 2016 2017 2018	88,118 87,587 84,198 74,156		  		87,587 84,198	3,682 3,610 3,425 2,978	
New Zealand	2015 2016 2017 2018	1,990 1,661 1,706 1,884	402 379 392 526	43 0 44 28	-180 -184	2,220 2,238	585 476 476 483	

### Production, trade and supply of coke

Thousand metric tons and kilograms per capita

#### **Table Notes**

Data comprise coal tar, gas coke and coke oven coke.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

Figure 18: Per capita supply of coke by region, 2018

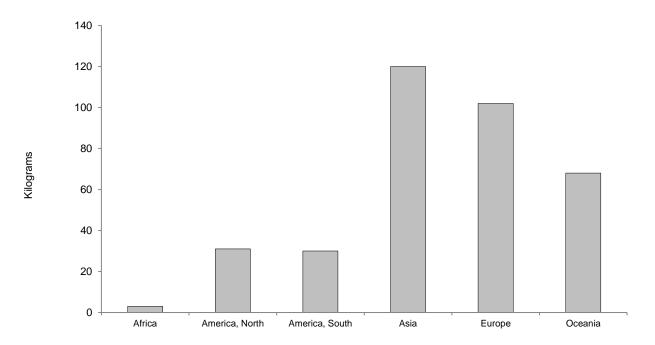


Figure 19: Major coke producing countries, 2018

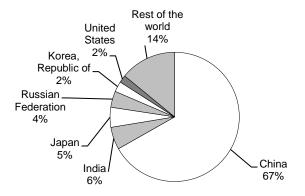
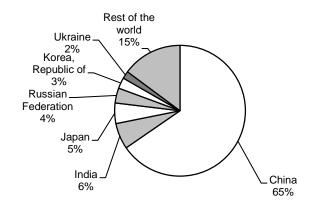


Figure 20: Major coke consuming countries, 2018



		5			Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
World	2015 2016 2017 2018	673,569 656,116 636,422 670,037	27,141 26,677 26,659 27,176	27,142 28,525 27,655 29,856	-739 -15,771 -13,751 5,926	674,306 670,039 649,177 661,431	91 90 86 87
Africa	2015 2016 2017 2018	2,643 2,695 2,089 2,796	591 515 538 692	315 281 236 106	12 78 -26 -90	2,907 2,851 2,417 3,472	2 2 2 3
Algeria	2015 2016 2017 2018	  	211 78 301 500	  	12 78 -26 -48	199 0 327 548	5 0 8 13
Egypt	2015 2016 2017 2018	297 *222 *518 296	324 *353 *153 *116	101 *66 *154	0 0  -42	520 *509 *517 454	6 *5 *5 5
South Africa	2015 2016 2017 2018	2,009 2,166 1,390 2,281		 	  	2,009 2,166 1,390 2,281	36 39 24 39
Zambia	2015 2016 2017 2018	  	*56 *52 *52 *52	*3 *2 *2 *2	  	*53 *50 *50 *50	*3 *3 *3 *3
Zimbabwe	2015 2016 2017 2018	337 307 181 219	 32 32 24	211 213 80 104		126 126 133 139	9 9 9 10
America, North	2015 2016 2017 2018	16,670 14,411 15,333 16,306	2,043 2,554 2,453 2,415	853 951 1,201 1,127	634 -583 -260 -290	17,226 16,597 16,845 17,884	30 29 29 31
Bermuda	2015 2016 2017 2018	  	0 0 0 0	 	  	0 0 0 0	1 1 1 1
Canada	2015 2016 2017 2018	2,273 2,194 2,203 2,520	1,213 1,236 1,211 1,101	76 44 5 39	81 172 -241 -105	3,329 3,214 3,650 3,687	92 88 99 99
Cuba	2015 2016 2017 2018	  	1 1 1	  		1 1 1 1	0 0 0 0
El Salvador	2015 2016 2017 2018	  	1 1 1	  	  	1 1 1 1	0 0 0 0
Mexico	2015 2016 2017 2018	1,919 1,462 1,384 1,261	701 1,109 1,187 1,206	 99 44	  	2,620 2,571 2,472 2,423	22 21 20 19

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
United States	2015 2016 2017 2018	12,478 10,755 11,746 12,525	127 207 53 106	777 907 1,097 1,044	553 -755 -19 -185	11,275 10,810 10,721 11,772	35 33 33 36
America, South	2015 2016 2017 2018	12,733 12,637 13,524 14,524	2,336 1,233 1,603 1,918	1,956 1,919 2,574 3,130	-51 -16 96 582	13,164 11,967 12,457 12,730	32 29 30 30
Argentina	2015 2016 2017 2018	816 617 716 792	  	  	  	816 617 716 792	19 14 16 18
Brazil	2015 2016 2017 2018	9,079 9,233 9,837 10,159	2,295 1,107 1,538 1,839		-64 23 113 532	11,438 10,317 11,262 11,466	56 50 54 55
Chile	2015 2016 2017 2018	407 418 386 410	3 0 0	39 146 52 31	17 -72 -3 49	354 344 337 330	20 19 18 18
Colombia	2015 2016 2017 2018	2,431 2,369 2,585 3,163		1,917 1,773 2,522 3,099	0 0  	514 596 63 64	11 12 1 1
Peru	2015 2016 2017 2018		38 126 65 79	0 0 0 0	-4 33 -14 1	42 93 79 78	1 3 3 2
Asia	2015 2016 2017 2018	544,243 529,815 510,702 554,481	9,398 10,090 10,092 10,685	10,881 11,650 9,964 11,797	-1,574 -15,464 -13,820 5,319	544,333 543,720 524,650 548,050	123 121 116 120
Afghanistan	2015 2016 2017 2018	*53 *66 *67 *67	*200 *200 *203 *203	*53 *66 *67 *67	  	*200 *200 *203 *203	*6 *6 *5
China	2015 2016 2017 2018	448,225 449,115 431,684 447,514	4 1 10 91	9,648 10,119 8,079 9,758	-1,608 -15,290 -13,780 5,268	440,189 454,286 437,395 432,579	313 321 308 303
Georgia	2015 2016 2017 2018		123 147 135 162	0 0 13	14 21 -18 3	109 126 140 159	27 31 35 40
India	2015 2016 2017 2018	30,071 12,503 11,330 *37,665	3,068 4,346 4,585 *4,931	103 89 108 *25	  	33,036 16,760 15,807 *42,571	25 13 12 *31
Indonesia	2015 2016 2017 2018	19 2,931 *2,795 *3,214	160 548 523 *170	0 0 0		179 3,479 *3,318 *3,384	1 13 *13 *13

		5:			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Iran (Islamic Rep. of)	2015 2016 2017 2018	1,179 1,199 1,317 1,400	315 26 122 354	15 1 51 91	0 1 1	1,479 1,223 1,387 1,663	19 15 17 20
Japan	2015 2016 2017 2018	33,201 33,957 33,401 33,492	2,733 2,035 1,273 1,595	788 1,027 1,232 1,437	-3 77 -80 62	35,149 34,888 33,522 33,588	275 273 263 264
Jordan	2015 2016 2017 2018	  	20 28 44 64	  	  	20 28 44 64	2 3 5 6
Kazakhstan	2015 2016 2017 2018	2,647 2,872 2,989 2,839	973 835 952 933	15 29 48 67	43 20 	3,562 3,658 3,894 3,705	203 205 215 202
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	  	177 200 179 133	  	  	177 200 179 133	7 8 7 5
Korea, Republic of	2015 2016 2017 2018	18,146 16,572 16,600 17,468	389 340 335 324	  		18,535 16,912 16,935 17,792	365 332 331 348
Other Asia	2015 2016 2017 2018	6,021 6,226 6,056 6,345	187 201 274 300	0 0 46 24	-35 -7 -8 1	6,243 6,434 6,292 6,620	265 272 266 279
Philippines	2015 2016 2017 2018	  	250 336 294 307	  		250 336 294 307	2 3 3 3
Syrian Arab Republic	2015 2016 2017 2018	  	1 1 1 1	  	  	1 1 1 1	0 0 0 0
Thailand	2015 2016 2017 2018	  	15 30 88 18	  	-93 -36 30 -43	108 66 58 61	2 1 1 1
Turkey	2015 2016 2017 2018	4,680 4,374 4,463 4,477	568 590 834 814	87 135 126 118	108 -250 35 29	5,053 5,079 5,136 5,144	64 64 63 62
United Arab Emirates	2015 2016 2017 2018	  	2 1 2 25	0 0 0 0	 	2 1 2 25	0 0 0 3
Uzbekistan	2015 2016 2017 2018	  	23 23 23 29	 0 0	  	23 23 23 29	1 1 1 1

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Viet Nam	2015 2016 2017 2018	  	190 202 216 231	172 183 195 209		18 19 21 22	0 0 0 0
Europe	2015 2016 2017 2018	93,810 93,189 91,476 78,760	12,642 12,095 11,788 11,231	12,193 12,969 13,207 13,121	240 214 259 405	94,020 92,101 89,797 76,466	126 123 120 102
Austria	2015 2016 2017 2018	1,379 1,394 1,397 1,359	1,004 929 1,167 823	48 39 40 41	-9 20 -9 55	2,344 2,264 2,533 2,086	270 259 287 235
Belarus	2015 2016 2017 2018	  	52 54 57 56	  	-3 4 -5 1	55 50 62 55	6 5 7 6
Belgium	2015 2016 2017 2018	1,274 1,248 1,236 1,252	375 465 514 499	50 7 14 26	-33 -19 -1 4	1,632 1,725 1,737 1,721	145 152 152 150
Bosnia and Herzegovina	2015 2016 2017 2018	911 880 855 945	0 17 58 38	286 377 306 566	178 92 216 -12	447 428 391 429	130 126 117 129
Bulgaria	2015 2016 2017 2018	  	76 97 62 61		-4 -3 0 -1	80 100 62 62	11 14 9 9
Croatia	2015 2016 2017 2018	  	25 30 31 30	 	0 1  -1	25 29 31 31	6 7 7 7
Czechia	2015 2016 2017 2018	2,521 2,396 2,676 2,738	724 844 522 530	521 550 646 635	-29 2 23 -25	2,753 2,688 2,529 2,658	260 253 238 249
Denmark	2015 2016 2017 2018	  	15 11 12 14	  	-2 -1  2	17 12 12 12	3 2 2 2
Estonia	2015 2016 2017 2018	8 13 19 14	  	8 13 19 13	0 0  1	0 0 0 0	0 0 0 0
Finland	2015 2016 2017 2018	915 921 900 899	446 323 255 311	121 91 137 107	78 83 42 37	1,162 1,070 976 1,066	212 195 177 193
France	2015 2016 2017 2018	3,315 3,227 3,356 3,304	470 370 494 608	27 83 6 50	193 91 219 -39	3,565 3,423 3,625 3,901	54 51 54 58

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Germany	2015 2016 2017 2018	8,800 9,387 9,392 9,361	2,893 2,388 2,297 2,301	348 715 842 838	0	11,369 11,060 10,817 10,815	139 135 131 130
Hungary	2015 2016 2017 2018	1,006 929 999 997	48 39 110 96	344 459 374 303	-9 9	714 518 726 734	73 53 75 76
Iceland	2015 2016 2017 2018	  	24 25 22 21	  	  	24 25 22 21	73 75 66 62
Italy	2015 2016 2017 2018	1,687 1,806 1,717 1,860	682 985 684 654	307 374 342 360	2	2,122 2,517 2,057 2,168	35 41 34 36
Lithuania	2015 2016 2017 2018	  	13 16 16 19	  	0 0 -1 	13 16 17 19	4 6 6 7
Luxembourg	2015 2016 2017 2018	  	1 1 1 0	  		1 1 1 0	2 2 2 1
Netherlands	2015 2016 2017 2018	2,117 2,108 2,036 2,060	69 71 110 110	211 151 246 156	13 50 -80 40	1,962 1,978 1,980 1,974	116 116 116 116
North Macedonia	2015 2016 2017 2018	  	0 1 5 0	0 0 0 0	4	1 2 1 0	0 1 1 0
Norway	2015 2016 2017 2018	  	427 426 411 416	0	15 -14	429 411 425 427	83 78 80 80
Poland	2015 2016 2017 2018	10,170 10,101 9,790 9,849	100 125 211 214	6,849 7,355 6,855 6,948	-94	3,329 2,916 3,240 2,974	88 77 85 78
Portugal	2015 2016 2017 2018	  	8 13 12 9	  	0 1 	8 12 12 9	1 1 1 1
Romania	2015 2016 2017 2018	  	798 808 761 721	  	-27 -21 34 -26	825 829 727 747	41 42 37 38
Russian Federation	2015 2016 2017 2018	40,079 39,500 40,602 27,094	91 73 105 120	2,455 2,261 2,920 2,739	58 -62	37,837 37,254 37,849 24,487	261 256 260 168

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Serbia	2015 2016 2017 2018	  	491 664 719 774	0 0 3 	2 -3	493 662 718 838	70 94 102 120
Slovakia	2015 2016 2017 2018	1,698 1,694 1,637 1,645	191 153 258 305	63 72 70 59		1,661 1,770 1,794 1,803	306 325 329 331
Slovenia	2015 2016 2017 2018	  	31 28 30 30	  	2 1 	29 27 30 30	14 13 14 14
Spain	2015 2016 2017 2018	1,631 1,572 1,580 1,484	337 186 261 412	144 137 132 245	45 -50	1,858 1,576 1,759 1,660	40 34 38 36
Sweden	2015 2016 2017 2018	1,187 1,171 1,155 1,105	87 103 96 234	81 28 30 9	-65 -16 -104 91	1,258 1,262 1,325 1,239	129 128 134 124
Switzerland	2015 2016 2017 2018	- - - -	15 16 14 15	  		15 16 14 15	2 2 2 2
Ukraine	2015 2016 2017 2018	12,267 13,442 10,696 11,460	2,037 1,612 1,550 840	240 257 225 26	0 -150 66 7	14,064 14,947 11,955 12,267	313 334 269 277
United Kingdom	2015 2016 2017 2018	2,845 1,400 1,433 1,334	1,112 1,222 943 970	90 0 0	109 6	3,928 2,513 2,370 2,217	60 38 36 33
Oceania	2015 2016 2017 2018	3,470 3,369 3,298 3,169	130 189 186 235	944 755 473 575	  	2,656 2,803 3,011 2,829	67 69 73 68
Australia	2015 2016 2017 2018	2,966 2,867 2,789 2,683	130 189 186 235	944 755 473 575		2,152 2,301 2,502 2,343	90 95 102 94
New Zealand	2015 2016 2017 2018	504 502 509 486	  	  	  	504 502 509 486	109 108 108 102

### Production, trade and supply of patent fuel

Thousand metric tons and kilograms per capita

#### **Table Notes**

Data refer to patent fuel.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/classification, and xvi to xvii for the descriptions of relevant flows.

Figure 21: Major patent fuel producing countries, 2018

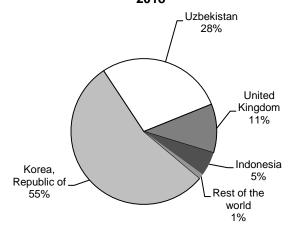
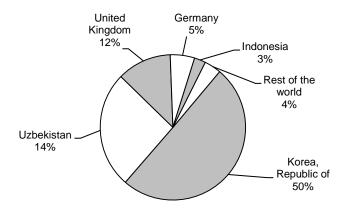


Figure 22: Major patent fuel consuming countries, 2018



		5			Changes in	Sup	Supply	
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita	
World	2015 2016 2017 2018	2,035 2,508 1,900 1,817	241 237 240 219	40 32 29 25	69 44	2,644 2,067	0 0 0 0	
Africa	2015 2016 2017 2018	4 4 5 5	  	  		4 4 5 5	0 0 0 0	
Niger	2015 2016 2017 2018	*4 *4 *5 *5	  	  		*4 *4 *5 *5	0 0 0 0	
America, North	2015 2016 2017 2018	  	2 2 2 2	  		2	0 0 0 0	
Bahamas	2015 2016 2017 2018	  	*2 *2 *2 *2	  		*2 *2 *2 *2	*5 *5 *5 *5	
Asia	2015 2016 2017 2018	1,796 2,257 1,692 1,601	4 5 6 8	0 0 0 0	54 46	2,208 1,652	0 0 0 0	
Armenia	2015 2016 2017 2018	  	0 1 1 1	  		0 1 1 1	0 0 0 0	
Indonesia	2015 2016 2017 2018	*19 *95 *82 *97	*3 *4 *4 *5	0 0 0 0	*54 *46	*45 *40	0 0 0 0	
Korea, Republic of	2015 2016 2017 2018	1,473 1,255 1,078 992	  	  		1,473 1,255 1,078 992	29 25 21 19	
United Arab Emirates	2015 2016 2017 2018	  	0 1 1 2	  	  	0 1 1 2	0 0 0 0	
Uzbekistan	2015 2016 2017 2018	304 907 532 512	 	  	••	304 907 532 512	10 29 17 16	
Europe	2015 2016 2017 2018	235 247 203 211	235 230 232 209	40 32 29 25	15 -2	430 408	1 1 1 1	
Austria	2015 2016 2017 2018	  	7 4 4 28	  		7 4 4 28	1 0 0 3	

Country on ano		5			Changes in stocks	Sup	Supply	
Country or area	Year	Production	Production Imports	Exports		Total	Per capita	
Belgium	2015 2016 2017 2018		8 8 6 5	6 4	i -1 - 1	3	0 0 0 0	
France	2015 2016 2017 2018	  	24 29 26 12			24 29 26 12	0 0 0 0	
Germany	2015 2016 2017 2018	  	155 137 114 108	1 1		154 136 113 107	2 2 1 1	
Luxembourg	2015 2016 2017 2018	  	1 0 0 0			1 0 0 0	2 0 0 0	
Poland	2015 2016 2017 2018	3 2 2 14	14 14	3 4	 	13 12	0 0 0 0	
Slovakia	2015 2016 2017 2018		8 9 11 11		 	8 9 11 11	1 2 2 2	
Ukraine	2015 2016 2017 2018	1 0 		  		1 0 	0 0 	
United Kingdom	2015 2016 2017 2018	231 245 201 197	29 57	22 20	! 16 ) -3	236	4 4 4 4	

### Production, trade and supply of brown coal briquettes and peat products

Thousand metric tons and kilograms per capita

#### **Table Notes**

Data refer to brown coal briquettes (BKB) and peat products.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/classification, and xvi to xvii for the descriptions of relevant flows.

Figure 23: Production of BKB and peat products by region, 1990-2018

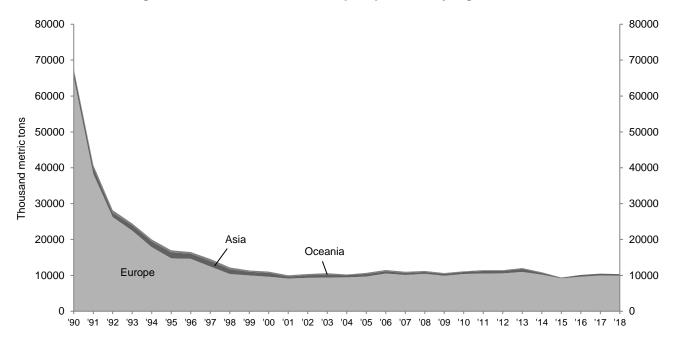
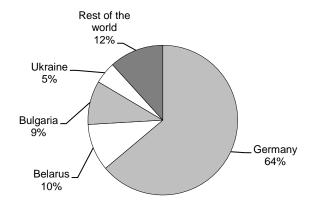


Figure 24: Major BKB and peat products producing countries, 2018

Figure 25: Major BKB and peat products consuming countries, 2018



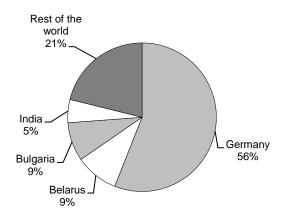


Table 10
Production, trade and supply of brown coal briquettes and peat products
Thousand metric tons and kilograms per capita

0 1		<b>.</b>			Changes in	Supply		
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita	
World	2015 2016 2017 2018	9,415 10,106 10,470 10,352	869 910 876 903	1,600 1,721	-12 130	9,428 9,495	1 1 1 1	
America, North	2015 2016 2017 2018	  	3 4 2 1		  	3 4 2 1	0 0 0 0	
Mexico	2015 2016 2017 2018	  	3 4 2 1			4	0 0 0 0	
Asia	2015 2016 2017 2018	193 466 473 467	1	0		475	0 0 0 0	
Georgia	2015 2016 2017 2018	  	2 1 2 3	0		2 1 2 0	1 0 0 0	
India	2015 2016 2017 2018	*173 *436 *464 *461	  		  	*436	0 0 0 0	
Singapore	2015 2016 2017 2018	  	1 0 			1 0 	0 0 	
Uzbekistan	2015 2016 2017 2018	20 30 9 6	  	  	  	20 30 9 6	1 1 0 0	
Europe	2015 2016 2017 2018	9,178 9,640 9,997 9,885	862 864 872 899	1,600 1,721	-30 140	8,934 9,008	11 12 12 12	
Austria	2015 2016 2017 2018	   	10 9 14 12	0		10 9 14 12	1 1 2 1	
Belarus	2015 2016 2017 2018	677 873 976 1,055		100	9	834	62 82 88 91	
Belgium	2015 2016 2017 2018	  	440 417 366 383		-1	202	39 37 32 33	
Bulgaria	2015 2016 2017 2018	938 1,313 1,192 980		 	-40 7 99 210	1,306 1,093	136 183 154 109	

# Production, trade and supply of brown coal briquettes and peat products Thousand metric tons and kilograms per capita

		5			Changes in	Sup	ply
Country or area	Year	r Production	Imports	Exports	stocks	Total	Per capita
Czechia	2015 2016 2017 2018	122 118 128 145	146 171 225 236	82 94 105 126	-2 2	246	17 19 23 24
Estonia	2015 2016 2017 2018	9 8 	  	0 0 	-1 	9	7 7 
Finland	2015 2016 2017 2018	0 0 	  	0 0 	-1 -1	9 1 1	2 0 0
France	2015 2016 2017 2018	  	54 44 57 45		0  	54 44 57 45	1 1 1 1
Germany	2015 2016 2017 2018	6,657 6,418 6,705 6,612	41 19 8 14	1,444 1,380 1,486 1,477	-50 	5,107 5,227	64 62 63 62
Hungary	2015 2016 2017 2018	  	4 7 12 11	  		4 7 12 11	0 1 1 1
Ireland	2015 2016 2017 2018	148 183 170 146	27 20 14 15	18 14 13 17	19 14	170 157	41 36 33 37
Latvia	2015 2016 2017 2018	 1 1	  	  1		  1 1	 1 1
Lithuania	2015 2016 2017 2018	5 6 5 4	45 60 59 73	2 5 4 1	2 -5	49 59 65 75	17 20 23 27
Luxembourg	2015 2016 2017 2018	  	9 8 9 9	  	  	9 8 9 9	16 14 16 14
Netherlands	2015 2016 2017 2018	  	17 40 42 38	  	  	17 40 42 38	1 2 2 2
Poland	2015 2016 2017 2018	  	39 27 29 44	2 5 2		37 22 27 44	1 1 1 1
Russian Federation	2015 2016 2017 2018	43 41 26 29	 0 0	3 4 2 0	1 0	36 24	0 0 0 0

Table 10
Production, trade and supply of brown coal briquettes and peat products
Thousand metric tons and kilograms per capita

		D:	ion Importo	Funcido	Changes in	Sup	Supply	
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita	
Serbia	2015 2016 2017 2018	331 434 513 422	11 11 5 2	4 4 0 2	-16	457 505	37 65 72 62	
Slovakia	2015 2016 2017 2018	  	19 31 32 17		. 1 . 1 -1	17 30 31 18	3 6 6 3	
Ukraine	2015 2016 2017 2018	248 246 281 490	0		) 2 15	296	5 5 7 9	
Oceania	2015 2016 2017 2018	44 0 	 41  1		) 18 10	23 10	1 1 0 0	
Australia	2015 2016 2017 2018	44 0 	 41  1	( (	) 18 10	23 10	2 1 0 0	

### Production, trade and supply of peat

Thousand metric tons and kilograms per capita

#### **Table Notes**

Data refer to peat.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/classification, and xvi to xvii for the descriptions of relevant flows.

Figure 26: World production of peat, 1990-2018

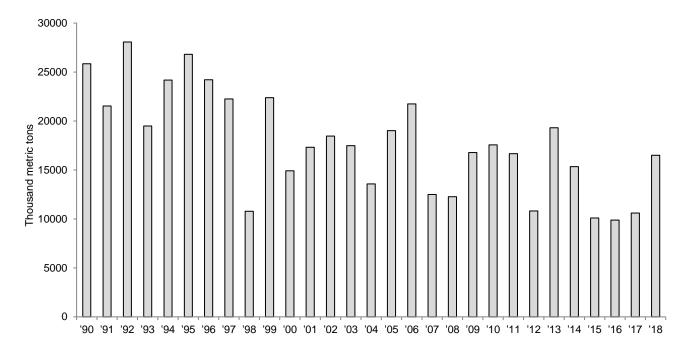


Figure 27: Major peat producing countries, 2018

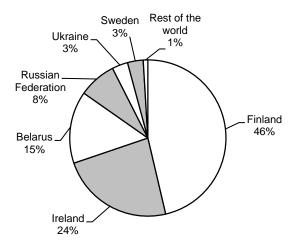
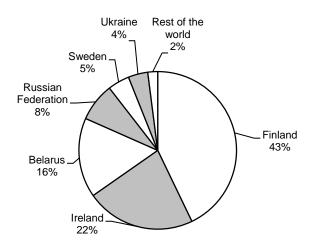


Figure 28: Major peat consuming countries, 2018



0 1				<b>.</b>	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
World	2015 2016 2017 2018	10,086 9,887 10,605 16,502	183 220	152 164	-3,517 -2,314	13,435 12,975	2 2 2 2
Africa	2015 2016 2017 2018	4 10 14 19				10	0 0 0 0
Burundi	2015 2016 2017 2018	4 10 14 12		  		10	0 1 1
Rwanda	2015 2016 2017 2018	   *7					  *1
America, South	2015 2016 2017 2018	8 7 5 5	5 4			. 12	0 0 0 0
Falkland Is. (Malvinas)	2015 2016 2017 2018	*8 *7 5 5		  	  	*7 5	*2,821 *2,392 1,627 1,545
Uruguay	2015 2016 2017 2018		5 4		  	5	1 1 1
Asia	2015 2016 2017 2018	  	5 6	0		5	0 0 0 0
Georgia	2015 2016 2017 2018		2 1 2 3			. 1	1 0 0 0
Uzbekistan	2015 2016 2017 2018		0 1 1 1			1	0 0 0 0
Viet Nam	2015 2016 2017 2018		3 3 3 3		  	3	0 0 0 0
Europe	2015 2016 2017 2018	10,074 9,870 10,586 16,478	173 209	152 164	-3,517 -2,314	13,408 12,945	17 18 17 19
Austria	2015 2016 2017 2018	1 0 				1 0	0 0 

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Belarus	2015 2016 2017 2018	1,015 1,362 2,045 2,465		  	-494 -28	1,856 2,073	147 196 219 245
Estonia	2015 2016 2017 2018	118 102 32 92		36 18 31 0	-54 -147	138 148	100 105 112 92
Finland	2015 2016 2017 2018	3,489 3,031 3,085 7,646	61 45 26 44	1  	-2,586 -2,304	5,662 5,415	1,050 1,030 983 1,102
Ireland	2015 2016 2017 2018	3,546 3,187 3,593 3,871		  	-340 181	3,527 3,412	752 751 718 661
Latvia	2015 2016 2017 2018	0 4 2 7	0 0 	0 0 1 1	1 -2	3	1 2 2 6
Lithuania	2015 2016 2017 2018	74 17 24 28		8 1 1 3	-13 -29	29 52	8 10 18 18
Republic of Moldova	2015 2016 2017 2018	  	1 0 0	  		1 0 0	0 0 0
Romania	2015 2016 2017 2018	4 7 7 6	36 39 50 65	1 1 0 	0	45	2 2 3 4
Russian Federation	2015 2016 2017 2018	967 1,197 903 1,288	12 15 41 44	95 106 102 157	-38 0	1,144	7 8 6 8
Sweden	2015 2016 2017 2018	369 424 377 535	82 57 74 97	  	  	481 451	46 49 46 63
Ukraine	2015 2016 2017 2018	491 539 518 540	12 17 18 22	24 26 29 19	7 15	492	11 12 11 13

### Production of biofuels and wastes

Terajoules

#### **Table Notes**

The conversion of fuelwood (solid volume, 9.135 TJ/m³) is based on an average 20-30% moisture content of wood from an unspecified species.

The methodology used for estimating fuel bagasse production for certain countries is derived from the work done by the Economic Commission for Latin America and the Caribbean (ECLAC). Although several different methodologies have been devised, the one selected assumes a yield of 3.26 tons of fuel bagasse at 50% humidity per ton of cane sugar produced. This methodology was used for instances where national data on bagasse production were not

available. In these cases, data were derived from sugar production figures extracted from the Sugar Yearbook of the International Sugar Organization (London).

Biogasoline includes Other liquid biofuels.

The total column excludes charcoal as it is the only secondary energy product in the table.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/classification, and xvi to xvii for the descriptions of relevant flows.

Figure 29: Production of fuelwood by region, 1990-2018

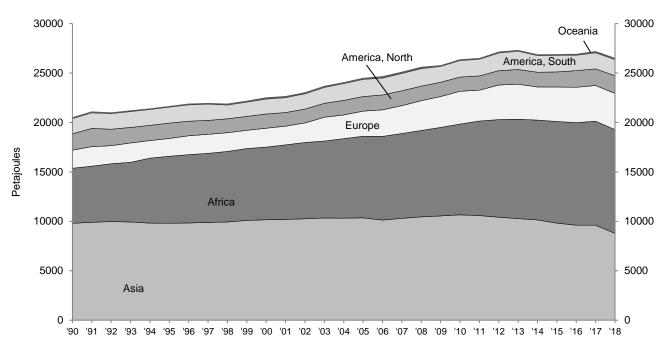


Figure 30: Production of charcoal by region, 1990-2018

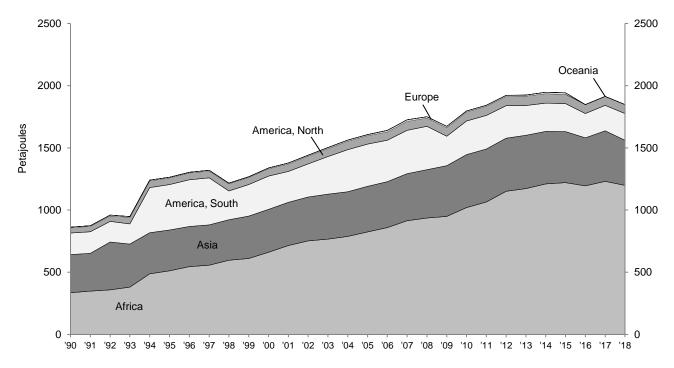


Figure 31: Production of total solid biofuels by region, 2018

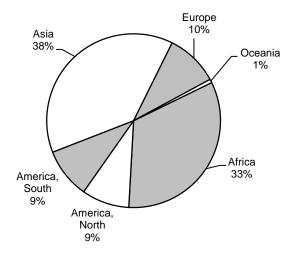


Figure 32: Production of biogases by region, 2018

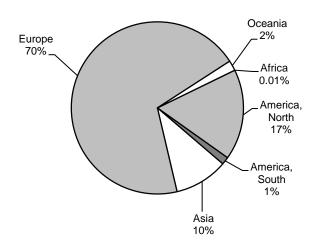


Figure 33: Production of bagasse by region, 2018

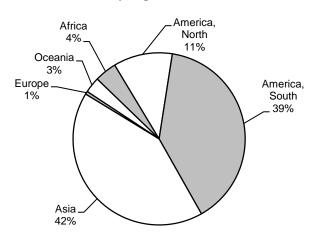


Figure 34: Production of liquids biofuels by region, 2018

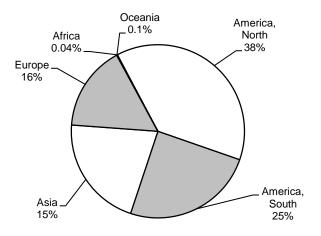
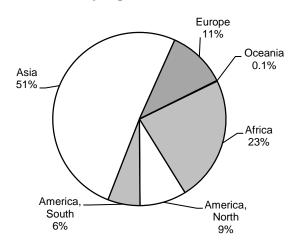


Figure 35: Production of energy from wastes by region, 2018



# Production of biofuels and wastes Terajoules

Country or area	Year	Solid biofuels					
	Teal	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
World	2015 2016 2017 2018	26,909,521 26,934,418 27,213,443 26,540,058	686,897 638,013 631,526 682,878	11,246,139 11,748,646 11,934,311 12,093,629	3,581,014 3,615,699 3,590,488 3,576,323	1,811,988 1,689,690 1,705,817 1,817,819	1,942,794 1,861,914 1,928,079 1,861,374
Africa	2015 2016 2017 2018	10,273,286 10,368,593 10,516,247 10,496,127	158,556 162,097 164,765 168,302	3,162,403 3,244,866 3,324,192 3,407,293	186,072 184,534 141,925 148,818	  	1,220,680 1,195,166 1,230,753 1,198,689
Algeria	2015 2016 2017 2018	292 283 484 1,032	  	  	  	   	  
Angola	2015 2016 2017 2018	154,892 157,116 159,460 161,604	  	100,681 102,127 103,650 105,044	*1,692 *3,058 *3,619 *3,639	   	32,362 32,834 33,276 33,778
Benin	2015 2016 2017 2018	110,625 101,255 110,360 108,829	  	2,973 3,061 3,818 4,411	252 252 *252 *255	  	14,131 14,426 14,927 15,252
Botswana	2015 2016 2017 2018	6,387 6,388 6,389		  	  	  	2,216 2,216 2,216 2,216
Burkina Faso	2015 2016 2017 2018	125,268 126,702 128,164 129,651	  	  	633 633 *633 *633	  	19,850 20,345 20,852 21,372
Burundi	2015 2016 2017 2018	54,801 54,801 54,801 54,801	  	  	579 596 552 492	  	7,788 7,788 7,788 7,788
Cabo Verde	2015 2016 2017 2018	*1,466 *1,448 *1,413 *1,399		  	  	  	*19 *19 *19 *19
Cameroon	2015 2016 2017 2018	255,228 261,985 *268,862 275,912		4,999 5,131 5,266 5,410	  	  	6,785 6,962 7,139 7,346
Central African Rep.	2015 2016 2017 2018	18,270 18,270 18,270 18,270			  	  	6,209 6,308 6,408 6,408
Chad	2015 2016 2017 2018	69,992 70,942 71,920 72,916		  	885 881 *914 *736	  	13,479 13,806 14,131 14,485
Comoros	2015 2016 2017 2018	*3,562 *3,637 3,715 3,799		*16 *17 17 18	  	  	*4 *4 5 *5
Congo	2015 2016 2017 2018	47,114 49,083 51,168 52,518		15,641 15,641 15,641 16,048	  	  	6,461 6,638 6,815 6,992

### Production of biofuels and wastes

Terajoules

<del></del> 1	i	-ala	المناط لعادات	Non-biomass wastes		
Total	Biogases	IEIS Piodiose!	Liquid biofu			
50,806,378 51,564,059 52,275,664 52,376,005	952,682 971,967 995,638 1,019,022	Biodiesel  1,249,218 1,401,748 1,528,047 1,762,222	2,139,111 2,162,499 2,208,843 2,360,464	Municipal waste  1,332,316 1,366,593 1,377,275 1,389,745	897,492 1,034,784 1,090,275 1,133,846	
13,785,134 13,964,836 14,151,518 14,225,598	80 110 104 130		1,608 1,528 1,179 1,822		3,129 3,108 3,106 3,106	
292 283 484 1,032	  	  	  	  	   	
257,265 262,301 266,729 270,287	  	  				
113,850 104,568 114,430 113,495	  	  				
6,387 6,387 6,388 6,389	  	  			- - - -	
125,901 127,372 128,833 130,320	 *36 *36 *36	  	  		- - -	
55,380 55,396 55,353 55,293	  	  	  	  	  	
*1,466 *1,448 *1,413 *1,399	  	  	  	  	  	
260,234 267,123 *274,135 281,329	7 7 7 7	  	  	  		
18,270 18,270 18,270 18,270	  	  	  	  	  	
70,877 71,824 72,834 73,651	  	  	  	  	  	
*3,578 *3,654 3,732 3,816	  	  	  	  	  	
62,755 64,724 66,809 68,566	  	  	  	- - - -	  	

### Table 12

### Production of biofuels and wastes Terajoules

Country or area	Year	Solid biofuels						
	icai	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal	
Côte d'Ivoire	2015 2016	391,481 268,123		1,928 1,986			45,666 44,180	
	2017 2018	264,415 259,853		1,986 2,131			42 740	
Dem. Rep. of the Congo	2015 2016	1,135,176 1,174,908		6,028 6,229				
	2017 2018	1,176,516 1,072,193	 	3,014 4,658	 		404.005	
Djibouti	2015 2016	3,516 3,560					1,534 1,554	
	2017 2018	3,605 3,650					1,574 1,595	
Egypt	2015 2016	162,058 162,325		37,389 39,098	23,286 23,412			
	2017 2018	162,599 162,877		*39,098 *41,088	*23,412 *23,915		40.040	
Equatorial Guinea	2015 2016	4,083 4,083						
	2017 2018	4,083 4,083					310 324	
Eritrea	2015 2016	21,694 21,913	2,551 2,577	1,444 1,459			5,045 5,133	
	2017 2018	22,151 22,407	2,606 2,636	1,475 1,492			5,399 5,605	
Eswatini	2015 2016	12,140 16,114			17,583 14,757		1,434 1,464	
	2017 2018	12,062 12,174			12,365 12,974		*205	
Ethiopia	2015 2016	988,160 999,269	149,058 152,834	146,106 149,807	8,811 8,934			
	2017 2018	1,010,532 1,021,978	156,058 160,026	156,058 156,857	*8,958 *8,958		400.070	
Gabon	2015 2016	*49,968 *50,000		2,257 2,132	592 705		655 667	
	2017	*50,778 *51,975		2,194 2,142	*618 *633		676 687	
Gambia	2015 2016	6,773 6,846						
	2017	6,921 6,997					2.045	
Ghana	2015 2016	99,322 98,907					43,843 43,695	
	2017	107,237 107,702					46,197 46,648	
Guinea	2015 2016	111,730 112,050			604 629		11,455 11,679	
	2017 2018	112,388 112,730			629 *638		11,907 12,140	
Guinea-Bissau	2015 2016	25,499 25,808			 		2,124 2,172	
	2017 2018	26,119 26,434					2,221 2,271	
Kenya	2015 2016	545,871 520,065		24,139 25,223	15,393 14,616		191,316 135,818	
	2017 2018	515,908 *515,908		26,055 25,879	14,367 11,676		151,040 115,758	

### Production of biofuels and wastes

Terajoules

<del></del>			Non-biomass wastes Liquid biofuels			
Total	Biogases	Biodiesel	Biogasoline	ss wastes  Municipal waste	Non-biomas Industrial waste	
		Diodiesei	Diogasoniie	with horpar waste	maddiai wasie	
393,4			**	**	**	
270,1						
266,4 261,9					••	
201,9	•			**		
1,141,2				••	••	
1,181,1						
1,179,5 1,076,8					••	
1,076,8	•		••		••	
3,5						
3,5						
3,6						
3,6	•	••				
222,7						
224,8		••	**	••	••	
225,1	•	••	**	**	••	
227,8	•	**	**	**	**	
4,0						
4,0						
4,0						
4,0						
25,6						
25,0						
26,2						
26,5						
29,7						
29,7						
24,4						
25,1						
4 202 5			404			
1,292,2 1,310,9			134 134			
1,310,9		·· ··	134			
1,347,9		••	161	••	••	
*52,8 *52,8		**	**	**	**	
*E2 E				••	••	
53,5 *54,7						
6,7						
6,8						
6,9 6,9						
99,3						
98,9						
107,2 107,7						
107,7	•				••	
112,3						
112,6	•		•••	••	••	
113,0 113,3	•				••	
113,3	•				••	
25,4						
25,8						
26,1						
26,4	•				••	
585,4						
559,9						
556,3						
6 *553,4						

Table 12

# Production of biofuels and wastes Terajoules

Country or area	Year						
		Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Lesotho	2015	*12,163	*5,022	*1,371			
	2016	*11,370	*4,508	*1,375	••		
	2017 2018	10,576 *9,994	3,995 *3,481	1,441 *1,459		-	150
	2010	0,004	0,401	1,400	••	•	. 100
Liberia	2015	76,056					
	2016 2017	78,534 81,091	••		••		0.004
	2017	83,734	···	···	••	• •	0.407
I. Share	0045	04.005					0.075
Libya	2015 2016	24,095 24,330					2.204
	2017	24,602			••	•	2 224
	2018	24,884					3,363
Madagascar	2015	203,203			2,189		*25,665
aaagaooa.	2016	256,698			2,726		22 655
	2017	266,494			2,851		
	2018	*271,382			*2,896	-	*25,075
Malawi	2015	52,350			7,300		. 16,309
	2016 2017	52,882			6,772		
	2017	53,435 54,010			6,772 *6,772	•	17 120
						•	
Mali	2015	*148,334			*1,457	-	
	2016 2017	*150,965 *153,587			1,457 *1,457	•	15 240
	2018	*155,249			*1,457		15 100
Mauritania	2015	10 726					6 245
Mauritania	2015 2016	18,736 19,092			••	•	ຣ໌ລດດ
	2017	19,448					. 6,534
	2018	19,805				-	6,667
Mauritius	2015	155			11,104		. 18
	2016	154			9,946		
	2017 2018	153 148			9,382 8,690		15
	2010	140			0,090	-	. 13
Morocco	2015	39,335			718		
	2016 2017	63,752 63,022			*718 *718	-	FOO
	2018	61,744	···	···	*718	-	E00
Mozambiana	2015	275.040		10 224	0.212		27 720
Mozambique	2015 2016	275,940 263,550		19,324 20,088	9,313 8,811		44.070
	2017	262,416		20,673	*8,046		45,017
	2018	270,174		21,006	*7,344	-	46,345
Namibia	2015	13,419		1,449			4,750
	2016	13,419		1,449	••		4,750
	2017 2018	13,711 15,718		1,481 1,622			. 4,868 . 5,399
	2010	13,7 10		1,022		-	. 3,399
Niger	2015	63,457	*542	*435			
	2016 2017	65,581 *54,496	*562 *584	*452 *470	••		1 502
	2018	*65,932	*607	*488		-	1 650
Nigeria	2045	0 244 574		0 205 740	270		
Nigeria	2015 2016	2,341,574 2,388,629		2,325,740 2,387,458	378 503	•	110 397
	2017	2,445,144		2,450,305	*507		. 122,160
	2018	2,407,570		2,515,866	*510		. 125,228
Rwanda	2015	*83,476	••		126		. *18,113
	2016	*83,476			126		*18,113
	2017 2018	*84,179 *84,526			*130 *131	-	*10 167
	2010	04,520			131	•	10,407

117224 1188 1189 1189 1189 1189 1189 1189 118		ı	Non-biomass constant		Nam b:=	
18.55 11.52	Total	Biogases	Biodiesel	Biogasoline Liquid bio	s wastes Municipal waste	Industrial waste
117224 1188 1189 1189 1189 1189 1189 1189 118		L	Diodicaci	Diogasolilie	Municipal Waste	maasinai wasic
16.01 174.92 179.02 181.03 181.03 181.03 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 182.43 183.63 183	*18,556	**	**	**	••	
14.93	*17,254					
76.05 77.25 78.51 79.53	16,012 *14 934					
	17,507	<del></del>		••		
81.00 83.73 24.00 24.03 24.03 24.03 24.03 24.03 24.03 24.03 24.03 24.03 25.04 24.03 25.04	76,056	<del></del>				
	78,534					
	81,091 93 73 <i>4</i>					••
	03,734	<del></del>	••	••	••	••
	24,095	••				
	24,330					
	24,602					
	24,004	<del></del>	••	••	••	••
	205,392		<del></del>			
198	259,423					
98	269,345					
99	~274,278					
99	59.748					*98
*98        60,38         *98        *149,78           *152,42           *155,70           *156,70           19,09           19,44           67       10,16           67       10,16           61       9,59           61       9,59           67,41       3,00         3,009         65,47            292,44            291,13            14,86            14,88                           3,008	59,753					*99
**149,79	60,30					*98
**152.42 **156,70 **156,70 ***156,70 ***156,70 ***156,70 ***18,73 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***10,10 ***19,00 ***10,10 **10,10 **	60,880		••			*98
**152.42 **156,70 **156,70 ***156,70 ***156,70 ***156,70 ***18,73 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***19,00 ***10,10 ***19,00 ***10,10 **10,10 **	*149 791					
**155,04* **156,70* **156,70* **19,00* **19,00* **19,00* **19,00* **19,00* **19,00* **19,00* **19,00* **19,00* **19,00* **19,00* **19,00* **19,00* **19,00* **19,00* **10,16*	*152,422					
18,73 19,00	*155,044					
	*156,706		••			
	10 726					
	19.092					
	19,448					
	19,805					
	44.00	70				
	11,333	73 67				
3,031	9.596	61				
3,009	8,919	81				
3,009						0.004
3,008	43,084		•••	**	••	3,031
3,008	67,480 66 748					3,009 3,008
	65.47					3.008
292,44 291,13 298,52						.,
	304,57		**	••	••	••
14,86	292,449		••	••		
	291,130		••	••		
		<del></del>	••	**	**	
15,19 17,34	14,868					
17,34	14,868		••			
	15,192 17 340				••	
	17,540	••				
	64,434			**		
*67,02	66.595					
4,667,69 4,667,69 4,776,59 4,895,95 4,923,94	*55,550 *07,00					
4,776,59 4,895,95 4,923,94	~67,02 <i>i</i>					
	4,667.692		••		==	
	4,776,590					
*83,60 	4,895,957					
	4,923,946					
	*83 603					
*84,30	*83 602	**	••	**	••	••
	*84,309					
	*84,657			<u></u>	<u></u>	

Country or area	Country or area Year		A : 1 ( 1	DI 1.1			
	+	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Sao Tome and Principe	2015	1,023					
	2016	1,029					
	2017 2018	1,033 1,039					200
	2010	1,000	••	••	••		200
Senegal	2015	65,076		1,071	2,052		10,148
	2016 2017	60,730		1,136	2,768		
	2017	64,534 63,838		252 252	2,706 3,536	•• ••	E 200
		•		v_	3,333		0,000
Seychelles	2015	29	**	••		••	••
	2016	29 29	**	**		••	••
	2017	29		••			
Sierra Leone	2015	52,965		*72	201		
	2016	53,330 53,723		*72 *72	201 201		12,224
	2018	54,143		*72	*201	••	12 620
Somalia	2015	128,241			579 570	••	34,854
	2016 2017	135,387 138,909			579 *527	•• ••	27 447
	2018	142,539			*530		20.046
0 " 15"	004-	0.40.000		440.000			
South Africa	2015	218,908 221,774	••	112,603 113,240	41,000 39,817	••	44 004
	2017	221,774		114,735	3,325	•• ••	44 200
	2018	218,093		115,570	3,641	•••	24.405
South Sudan	2015 2016	8,022 8,103				••	225
	2010	6,890					266
	2018	6,937					200
0.11	0045						
St. Helena and Depend.	2015	6 6				••	••
	2017	6				···	••
	2018	5					
Cudan	2045	420.050		47 440	*40.405		47.040
Sudan	2015	138,952 139,884		47,113 47,215	*16,425 *16,711	•• ••	17 246
	2017	140,834		47,319	*16,711	•••	17 246
	2018	141,830		48,466	*16,989		17,346
Togo	2015	110,919		1,056			20,119
Togo	2016	113,533		1,358			20 504
	2017	105,704		1,245			21,093
	2018	111,890	••	1,641		••	22,332
Tunisia	2015	34,558	1,383	3,800			6,284
runisia	2016	39,262	1,616			••	6 424
	2017	39,427	1,523	4,370			6,579
	2018	39,708	*1,551	*4,377			6,726
Uganda	2015	716,992			*16,603		55,433
- 3	2016	742,912			*18,170		*EC 1C1
	2017	773,962	**	**	*15,321	••	
	2018	806,413	••		*23,398	••	60,960
United Rep. of Tanzania	2015	538,053		138,743	1,152		45,076
	2016	545,532		142,969	1,242		46,345
	2017	553,309 570,051		147,316	1,297	••	
	2018	570,051		151,773	1,297		49,088
Zambia	2015	308,903		47,940	*3,321		35,843
	2016	318,791		49,404	*3,398		36,934
	2017	328,608 338,895		50,883 52,387	*3,475 *3,475	••	20 164
	2010	330,093		52,367	3,475		39,104

1	r	Non-biomass wastes Liquid biofuels			
Total	Biogases	Biodiesel	Liquid b Biogasoline	ss wastes  Municipal waste	Non-biomas Industrial waste
		DIOGICSCI	Diogasoniie	withinityal waste	הועטטנוומו Wasic
1,023					
1,029					
1,033					
1,039					
68,199					
64,634	••		••		**
67,492	••				
67,626					
29					
29 29					
29					
29					
53,238					
53,603					
53,996					
54,416	**				**
128,820					
135,966		••		••	••
139,436					
143,069					
270 544					
372,511 374,831					
339,806		••			
337,304					
8,022 8,103					
6,890			**	••	••
6,937		···			
6	••				
6 6 5	••				••
5					
202,490					
203,810					
204,864 207,284	••				••
201,204	••	••			
111,975					
114,891					
114,891 106,949 113,531					
113,531					
39,741					
45,248					
45,320	**				**
45,636	••				••
733,595					
761,082		···		••	
789,282					
829,811					
677,948					
689,743					
701,921					
723,120					
000 404					
360,164 371,593					
371,593		••			
394,757		···	••	···	

Country or orga	Solid biofuels						
Country or area	Year	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Zimbabwe	2015 2016	192,976 199,977		118,085 122,369	1,843 2,117		266 266
	2017	204,860		125,357	2,180		266
	2018	207,767	••	127,136	2,687		266
America, North	2015 2016 2017 2018	1,527,348 1,671,417 1,687,880 1,783,881	373,303 317,313 308,947 354,331	686,818 591,162 537,731 615,405	309,205 346,456 390,372 396,350	952,141 827,488 808,160 903,830	71,530
Anguilla	2015	*2					
	2016 2017	*2 *2					
	2018	*2					
Aruba	2015	19					6
	2016	20					6
	2017 2018	20 21					7 7
Dahamaa							
Bahamas	2015 2016	308 308					33 33
	2017	309					34
	2018	309					34
Barbados	2015	44			455		9
	2016 2017	44 44			462 478		9 9 9
	2018	43			539		9
Belize	2015	1,151			3,433		23
	2016	1,151			3,429		23
	2017 2018	1,151 1,151			4,270 4,295		23 24
Bermuda	2015						
Jennada	2016			···			
	2017 2018						
							<del></del>
British Virgin Islands	2015 2016	14 14					2 2 2 2
	2017	14					2
	2018	15					2
Canada	2015	328,264				187,758	
	2016 2017	299,283 312,305	••			177,749 175,549	
	2018	315,589				178,289	
Costa Rica	2015	11,053		4,279	11,269		57
Joola I lioa	2016	10,349		4,298	11,269		45
	2017	10,284 8,646		3,939 3,780	10,669 11,388		30 18
Cuba	2015 2016	9,858 10,111	••	*88 *88	38,163 29,295		2,227 2,726
	2017	9,638		*88	40,413		2,272
	2018	8,805		*88	48,463		1,894
Dominica	2015	69					7
	2016 2017	68 68					7 7
	2018	68					7
Dominican Republic	2015	10,140		454	8,138		1,596
•	2016	10,313		468	9,229		1,658
	2017	10,446 10,667		490 516	11,410 11,514		1,720 1,796

	The state of the s	ofuele	Liquid bis	ass wastes Liquid b			
Total	Biogases	Biodiesel	Biogasoline	Municipal waste	Industrial waste		
	<u> </u>						
314,378			1,474				
325,857			1,394				
333,442		••	1,045 1,662		••		
339,251		···	1,002	••	••		
21 5,792,330	197,721	164,790	1,217,843	306,219	56,942		
45 5,772,961	174,645	206,117	1,265,945	320,869	51,550		
53 5,784,287	176,153	208,582	1,308,003	310,065	48,394		
26 6,160,165	173,626	240,746	1,328,279	312,927	50,790		
*2							
^2		••			••		
*2 *2 *2 *2			••	••			
2		**	•••		••		
19							
20							
20		••					
21		••		••			
000							
308 308	••	••	••				
200				••	••		
309		 			••		
	••	••	••	"			
499		••			<del></del>		
506		••					
522	••	••		••	••		
582							
4 504							
4,584 4,580		···	••				
4,560					••		
5,446			··				
,							
*605				*605			
*605		••		*605			
*590				*590			
*600				*600			
14							
14	••	••	••		••		
14	··						
15							
77 592,780	16,977	9,973	36,368	7,658	5,783		
77 557,550	16,977	13,984	35,939	7,658	5,960		
77 568,235 77 574,865	16,977 16,977	13,027 13,027	36,582 37,011	7,658 7,658	6,137 6,314		
374,003	10,577	10,027	37,011	7,000	0,014		
4 27,310	4		705				
4 26,550	4		630	••			
9 25,526	9		625				
9 24,426	9		604				
40 457			*240				
48,457 39,841		···	*348 *348	••	••		
59,641	••	••	*348	••	••		
57,704	••		*348				
69 68							
68		••					
68 68		••	••	••			
08							
37 18,869	*137						
57 20,167	*157		··				
57 22,503	*157	••	••				
57 22,853	*157						

Country or area	Year Solid biofuels						
	1001	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
El Salvador	2015	14,411			9,876		1,013
	2016	11,568		••	11,424		
	2017 2018	11,334 10,007		••	14,073 14,053		700
	2010	10,007	•••	••	14,055		739
Greenland	2015						
	2016						
	2017 2018						
	2010			••	••	••	••
Grenada	2015	359			20		. 61
	2016	363 377			20 21		63 65
	2017	391			22		60
	2010	001	••	••			00
Guatemala	2015	210,264			55,979		
	2016	223,935			85,152		
	2017 2018	237,545 242,245			53,779 51,340		1,000
		_ :=,= :0					
Haiti	2015	137,436		••	958		
	2016 2017	139,415 141,050			972 983		20.026
	2017	143,143		••	998		20 506
							00,000
Honduras	2015	90,483			10,228		
	2016	86,381 59,076		••	13,115 17,116		9
	2017	80,973			11,860		*6
					,000		•
Jamaica	2015	5,006			3,660		
	2016	5,006 5,006	••	•••	2,868 1,965	**	1,100
	2017	*5,006			1,544		4 404
		0,000			.,0		.,
Mexico	2015	253,164		37,151	68,415	1	
	2016 2017	251,887 250,601	••	38,276 0	70,264 126,554	3 6	
	2017	249,078		0	131,794	6	 
Nicaragua	2015	42,000		4,899	16,735		
	2016	45,266 42,526		4,067 3,592	14,221 14,226		207
	2018	45,582		3,598	14,277		205
		,		,			
Panama	2015	7,146			4,764		. 36 . 35
	2016 2017	7,102 7,059	••		6,319 5,997		2.4
	2018	7,015			5,846		22
St. Lucia	2015	*697					136
	2016 2017	*670 *643			••		. 125 . 115
	2018	*617					106
0. 5		_					
St. Pierre-Miquelon	2015 2016	5 5	••	•••	•••	**	••
	2017	5					•••
	2018	5					
Ot Mineral C	0045						
St. Vincent-Grenadines	2015 2016	66 66		••			. 11 . 11
	2017	65	••				11
	2018	65			••		11
Tabaldad and Tel		202					
Trinidad and Tobago	2015 2016	286 284		••			50
	2010				••		39
	2017	281					. 59

		-£1-				
Total	Biogases	Otuels	Liquid b	s wastes	Non-biomas	
	-	Biodiesel	Biogasoline	Municipal waste	Industrial waste	
24,876	589					
23,523	531	·· ··				
25,917	510	··				
24,555	510 495					
98				98		
94 94 *94				94		
94				94		
^94		••	••	*94		
379						
383			••		••	
397	**					
412						
		-		-	-	
266,454	212					
309,286	199					
291,653	329 459		••			
294,044	459					
138,635			241			
140,628			241			
142,274 144,382		••	241 241		••	
144,302			241		••	
104,287				3,576		
108,928				9,432		
85,751				9,559		
100,279				7,446		
				, -		
8,665		••		••		
7,874			••		••	
6,971						
*6,550						
204 405	4.004				470	
361,165	1,961	••	••		473	
362,894 380,323	1,912 2,265	••	••		552 897	
387,086	2,265 2,515	••	••		3,693	
307,000	2,313	••	**	**	3,093	
63,634						
63.554						
60,343						
63,457		••		••		
11,910						
13,42 <sup>2</sup> 13,056 12,86 <sup>2</sup>				••		
13,056		••		••		
12,861					••	
*00						
*697 *670		••		••		
*643		••		••		
*617			••	••	••	
017	••		••	••	••	
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66 66 65 65	••	••	**	**	••	
65						
000						
286	••	**	**	**	**	
284 281						
281 279						
219						

Country or area	Year		Solid biofuels					
	Icai	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal	
Turks and Caicos Islands	2015	10					4	
	2016 2017	11 11					4	
	2017	*11					4	
United States	2015	405,092	*373,303	*639,948	77,113	*764,382	28,969	
United States	2015	567,795	*317,313	*543,965	88,418	*649,736	25,134	
	2017	588,020	*308,947	*529,623	*88,418	*632,605	25,134	
	2018	654,148	*354,331	*607,424	*88,418	*725,535	25,134	
America, South	2015	1,658,747		708,885	1,453,286	126,319	224,988	
	2016	1,561,671		763,878	1,499,902	158,887	196,382	
	2017 2018	1,605,825 1,644,242		829,987 922,395	1,491,047 1,407,338	160,256 165,667	204,959 214,182	
Argontina	2015	34,816			41,406		12,331	
Argentina	2016	34,652			42,711		11,771	
	2017	34,873			49,522		11,977	
	2018	39,250			54,974		11,918	
Bolivia (Plur. State of)	2015	7,094		252	31,460		1,357	
	2016 2017	7,452		184 242	33,447		1,416	
	2017	6,005 5,756		670	33,305 *33,367		1,416 1,446	
Brazil	2015	1,006,403		648.338	1,255,521		190,098	
Diazii	2016	935,588		704,438	1,301,691		163,578	
	2017	990,234		774,475	1,278,872		169,271	
	2018	1,039,645		867,675	1,218,269		177,295	
Chile	2015	237,262				64,768	2,154	
	2016	227,188				94,908	1,918	
	2017	241,105 240,328				93,577 100,675	3,629 4,160	
Colombia	2015	135,480			75,268	12,429	590	
Colombia	2016	129,077			74,891	12,688	295	
	2017	105,566			80,843	12,859	590	
	2018	106,425			56,020	13,190	649	
Ecuador	2015	10,834			12,033			
	2016 2017	10,596 10,378			12,524 14,103			
	2018	10,127			12,170			
Falkland Is. (Malvinas)	2015	7					3	
Tainana 13. (Waivinas)	2016	8		···	·· ··		3	
	2017	8					3	
	2018	8					4	
Guyana	2015	1,228			5,998		47	
	2016 2017	1,073 1,057		••	5,587 5,552		42 43	
	2018	1,073			3,913		40	
Paraguay	2015	120,454		23,530			12,686	
raiagaay	2016	113,888		24,563			12,139	
	2017 2018	117,769 101,576		23,335			13,103 12,801	
	2010	101,576		23,931			12,001	
Peru	2015 2016	66,494 65,032		6,021 5,967	20,733 19,880		5,517 5,015	
	2016	61,497		5,967 5,269	20,938		5,015 4,750	
	2018	63,159		5,449	20,986		5,694	
Suriname	2015	1,220		821				
	2016	914		735				
	2017 2018	915 916		736 737			**	
	2010	910		131		••	<u></u>	

Non-biomas	se wastes I	Liquid bio	ofuele I	T	1
Industrial waste	Municipal waste	Biogasoline	Biodiesel	Biogases	Total
		•		•	40
					10 11
	 			 	11
	••		••	••	*11
50,686	294,282	1,180,181	154,818	177,841	4,117,645
45,038	303,080	1,228,787	192,133	154,864	4,091,129
41,360	292,164	1,270,206	195,555	155,906	4,102,804
40,783	297,129	1,290,075	227,718	153,014	4,438,575
		664,965	215,393	11,627	4,839,221
		625,684	240,083	11,128	4,861,232
		615,225	262,148	13,066	4,977,553
••		736,426	285,638	14,682	5,176,388
		17,286	66,645		160,152
		18,867	97,851		194,082
		23,450	105,653		213,498
**	**	23,638	89,350	**	207,212
					38,806
	••		••	**	41,083
			••		39,552
					*39,793
		629,693	127,496	6,492	3,673,942
		588,850	121,738	5,728	3,658,033
		574,136	137,433	7,993	3,763,144
		691,896	171,348	8,532	3,997,365
				3,671	305,701
				3,747	325,843
••	••	••	••	3,849 4,465	338,531 345,468
••	••	••		4,403	343,400
	••	9,514	19,283	**	251,974
••	**	9,246	18,768	36	244,706
	••	8,362 11,417	17,296 20,645	99 69	225,025 207,766
		11,417	20,043	00	201,100
		335		479	23,681
		452		282	23,853
	••	817 717	••	567 925	25,866 23,939
••	••	7.11		020	20,000
					7
			••		8
					8 8
		•			
	••		••	••	7,226
			••		6,661 6,609
••	••				4,987
		•			
	••	5,069	••	••	149,052
••	**	6,259 6,479	**	•••	144,710 147,583
		7,071			132,578
••		1,552	118	985	95,902
••	**	364 515	4 66	1,335 558	92,582 88,842
	·· 	0	2,760	691	93,046
		•	_,. 50	551	
••		**		**	2,040
••					1,649 1,650
<del></del>					1,652
					,

Country or area	Voor	Solid biofuels								
Country or area	Year	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal			
Uruguay	2015 2016 2017	25,244 25,176 25,060	 	10,267 11,570 11,807	1,050 863 882 858	49,122 51,291 53,820 51,802				
Venezuela (Bolivar. Rep.)	2018 2015 2016 2017	25,794 12,211 11,027 11,358	  	12,873 19,657 16,422 14,123	9,818 8,307 *7,029	 	207 207 177			
Asia	2018 2015 2016 2017 2018	10,184 9,823,869 9,611,532 9,611,258 8,777,143	141,399 143,703 145,297 145,716	11,060 6,360,866 6,855,674 6,919,184 6,828,990	*6,780 1,477,639 1,429,164 1,431,112 1,498,791	202,695 158,475 178,391 189,175	177 410,543 385,011 406,438 362,693			
Afghanistan	2015 2016 2017 2018	16,368 16,660 16,960 16,960					3,821 3,927 4,037 4,037			
Armenia	2015 2016 2017 2018	5,088 6,194 6,082 4,348	1,307 2,195 2,428 1,289	  	  	  				
Azerbaijan	2015 2016 2017 2018	3,088 1,270 1,380 1,347			  	  	177 6 6 3			
Bahrain	2015 2016 2017 2018	64 65 66 66		  	  		33 34 34 34			
Bangladesh	2015 2016 2017 2018	242,179 239,844 237,541 235,268	119,987 121,178 122,456 123,673	228,381 230,649 232,777 235,395	1,762 1,888 1,753 *1,771		9,922 9,947 9,972 9,998			
Bhutan	2015 2016 2017 2018	46,722 47,088 47,457 47,457	 	  	  	 	207 207 207 207			
Brunei Darussalam	2015 2016 2017 2018	106 106 106 106		  		  	9 9 10 10			
Cambodia	2015 2016 2017 2018	176,140 180,792 185,783 191,160		545 1,118 1,132 1,385		  	26,845 27,229 27,642 28,055			
China	2015 2016 2017 2018	1,574,744 1,545,363 1,517,369 1,489,067		1,580,328 1,613,903 1,753,712 1,788,786	258,327 251,547 259,293 294,675		49,090 49,090 48,689 48,289			
China, Macao SAR	2015 2016 2017 2018	  		  	  	·· ·· ··	  			
Cyprus	2015 2016 2017 2018	555 642 781 786	  	121 146 175 163	  		30 59 59 59			

		fuels	Liquid bi	s wastes	Non-biomas
Total	Biogases	Biodiesel	Biogasoline	Municipal waste	Industrial waste
89,051 92,268 94,735 94,551	  	1,851 1,722 1,700 1,535	1,517 1,646 1,466 1,688	  	  
41,686 35,756 32,510 28,024	  	  	  	  	 
19,259,657 19,640,359 19,859,751 19,205,789	63,463 74,554 81,120 102,459	411,237 505,815 548,298 704,336	136,415 147,754 158,089 163,466	196,072 166,862 162,807 170,161	446,003 546,826 624,194 625,552
16,368 16,660 16,960 16,960	  	  	  	  	  
6,396 8,390 8,510 5,637	  	   	  	  	  
6,125 4,042 4,162 4,313	  	  		3,037 2,772 2,782 2,966	  
64 65 66 66	  	  	  	  	  
592,309 593,559 594,527 596,107	  	   	- - -	  	  
46,722 47,088 47,457 47,457	  	  	  	  	  
106 106 106 106	  	  		  	  
176,685 181,910 186,915 192,545	  	  		  	  
3,964,501 3,999,891 4,211,159 4,233,165	  	256,893 275,474 321,757 *323,840	93,543 100,307 *106,664 *106,664	  	200,666 213,297 252,365 230,133
*4,968 *5,292 *5,616 5,897	  	  	  	*4,968 *5,292 *5,616 5,897	  
1,332 1,486 1,656 1,712	471 492 504 554	37 0 37	  	24 9 37 51	124 197 122 158

Country or area	Year	Solid biofuels					
— Country of area	1 cui	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Georgia	2015	16,572	48	78		••	
•	2016	16,007	102	123			
	2017 2018	15,115 11,233	103 125	59 42			
	2010	11,233	125	42	••	••	••
India	2015	3,612,485		3,567,415	726,800		87,114
	2016	3,654,193		3,784,803	624,165		85,668
	2017 2018	3,754,412 *3,439,137		3,752,455 *3,691,161	631,235 *531,720		113,664 *82,187
	2010	3,439,137	••	3,091,101	331,720		02,107
Indonesia	2015	1,152,334		390,782	63,061		14,131
	2016	1,076,605		389,530	56,012		22,096
	2017	1,032,622	**	388,084	*49,751	••	26,609
	2018	901,816		409,291	52,464	••	47,053
Iran (Islamic Rep. of)	2015	73,994	1,175	7,500			27
	2016	*73,994	*1,175	8,400			30
	2017	*73,994 *73,004	*1,175 *1,175	8,715			0
	2018	*73,994	*1,175	8,373	••	••	
Iraq	2015	1,935					767
	2016	2,148					856
	2017	1,982					797 561
	2018	1,977				••	561
Israel	2015	183				••	••
	2016	183					
	2017	183 183	••		••		••
	2018	103	••	••	••	••	••
Japan	2015	58,175		68,386		183,076	354
	2016	68,080		69,938		139,603	354
	2017 2018	77,970		74,928		158,638	354 354
	2016	81,391	••	75,019	••	159,676	354
Jordan	2015	3,133	**		••		1,350
	2016	3,197					1,380
	2017 2018	3,261 3,325	**		**	••	1,410 1,441
	2010	3,323			••	••	1,771
Kazakhstan	2015	2,202	••		••	••	14
	2016	2,202					14
	2017	2,202	••		••		14 47
	2018	2,171	••	••	••	••	47
Korea, Dem.Ppl's.Rep.	2015	46,152					4,809
	2016	46,381					4,838
	2017 2018	46,604 46,740					4,897 4,927
	2010	40,740	••	••	••		4,927
Korea, Republic of	2015	69,022		0	••	9,672	
	2016	67,887		0		9,581	
	2017 2018	77,939 88,260	**	0	**	7,172 8,378	•••
	2010	00,200				0,570	
Kuwait	2015	181					89
	2016	183					90
	2017 2018	185 187					91 92
	2010	107					92
Kyrgyzstan	2015	130					
	2016	43					
	2017 2018	60 96					
		30					••
Lao People's Dem. Rep.	2015	53,348			3,147		6,050
	2016	*52,920			3,147		*6,048 *6,048
	2017 2018	53,063 52,710			*3,286 *3,220		*6,048 *6,136
	2010	52,110	••		5,220	·	0,130

	iciajouics					
Non-bioma					Total	
Industrial waste	Municipal waste	Biogasoline	Biodiesel	Biogases		
				0	16,698	
••		••		0	16,232	
					15,277	
					11,399	
					7,906,700	
••		••			8,063,161	
••		••			8,138,102	
					*7,662,018	
			65,600		1,671,777	
···		···	145 001		1,667,239	
	· · · · · · · · · · · · · · · · · · ·		135,568		1,606,025	
			270 500		1,634,161	
				407	00.700	
				127 282	82,796 *83,851	
••		••		288	*84,172	
				288	*83,830	
					4.00=	
••	**	••	**	**	1,935 2,148	
···		••		••	2,148 1,982	
••		••			1,977	
				559 795	742 978	
				795 960	1,143	
		···		878	1,061	
155,149	52,048	54	515	1,675	519,078	
221,960 235,175	31,100 28,752	54 0		5,844 4,495	537,020 580,400	
255,175 251,446	30,804		4.40	4,495 8,708	607,486	
,	,50					
				90	3,223	
••	•	••		100 100	3,297 3,361	
				*100	3,361	
••		••		.00		
••	•	••			2,202	
					2,202	
				 19	2,202 2,189	
		••		10		
					46,152	
					46,381	
					46,604 46,740	
••	•	••			70,740	
88,702	40,708	8,686	15,198	7,726	239,714	
109,305	39,467	10,823	17,995	6,955	262,013	
134,086 108,143	39,798 40,155	9,426 12,056	19,320 23,515	7,333 7,406	295,074 287,913	
100,143	40,100	12,050	23,313	7,400	201,913	
					181	
					183 185	
					185 187	
					187	
					130	
					130 43	
••	•	••			60 96	
••		••	**	**	96	
					56,495	
••		••			*56,067	
					56,349	
			**		55,930	

Country or area	Year			Solid b			
— Country of area	i cai	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Lebanon	2015	4,971					89
	2016	4,971					89
	2017	*4,971 *4,071					90
	2018	*4,971					89
Malaysia	2015	23,526		9,878	226	••	864
•	2016	23,146		9,878			
	2017	22,780		*8,196			
	2018	22,425		*12,581	*2,394	••	867
Maldives	2015	148					
	2016	149					25
	2017	149					
	2018	150		••	•••	••	26
Mongolia	2015	5,481					
· ·	2016	5,481					
	2017 2018	5,481					
	2010	5,481		••	•••	••	••
Myanmar	2015	426,663		25,637	2,494		856
•	2016	429,209		25,790	*2,494		
	2017	431,655		25,943			
	2018	432,788		26,005	*2,494	••	856
Nepal	2015	351,565	18,338	17,333	11,688		295
•	2016	355,065	18,504	17,505	11,729	••	295
	2017	361,118	18,579	17,804		••	
	2018	367,144	18,889	18,101	*11,833	••	325
Oman	2015	414					200
	2016	425					205
	2017	436					
	2018	436		••	••	••	210
Other Asia	2015	8,058					
	2016	6,888					
	2017	6,281		••	••	••	••
	2018	6,183					
Pakistan	2015	269,784		*172,034	126,411		2,418
	2016	269,784		*175,506	141,268		2,466
	2017	269,784		*178,970		••	
	2018	269,784		*178,971	*149,508	••	2,567
Philippines	2015	175,999	543	39,317	22,365		55,976
	2016	171,236	549	38,750			E0.000
	2017	170,958	557	38,808	32,046		60,800
	2018	170,692	565	38,473	33,588	••	63,042
Qatar	2015	47		•••		••	23
	2016	47		**		••	23
	2017	47					
	2018	47					23
Singapore	2015	276					146
<b>5</b> .	2016	271					
	2017	267					
	2018	262					139
Sri Lanka	2015	156,317			1,517		
	2016	150,651			1,862		
	2017	148,807				••	
	2018	*148,885			*1,693		••
State of Palestine	2015	3,135		*625			
	2016	3,460		564			
	2017	1,964		588			
	2018	2,022		398	••	•	<u></u>

			Liquid b	e wastos T	Non hiomas
ases Total	Biogases	Biodiesel	Liquid b Biogasoline	Municipal waste	Non-biomas Industrial waste
			- 0		
**					
**					
_		0.4 = 0.0			
5 5		24,766		••	••
5		18,437 16,928			**
6		25,502			
				••	••
<del></del>					
<del></del>		••		••	
					<del></del>
45					
45 45					
46					
1 46	;				
11 600	44.00				
11,688 41 11,729 41	11,080				
11,821 42	11,82				
12,019 42	12,019	••		••	
••					
<del></del>		••		••	
250	0.57		4.044	FC 004	
259 6 295 6	208 208		1,214 438	56,994 55,944	
272 6	272		186	54,370	
267 6	267		8	56,726	
56					
58		••			••
*59					
*59					
25		6,496	6,172	955	
25		7,050	8.314	955 447	
25 26		6,591	8,608 11,130	527 543	
26		6,645	11,130	543	
	•	**		••	
2				27,830	
2				27,436	
2				26,742	
2				24,819	
15					
15					
15					
*15					
<u></u>					
<u></u>				••	••

Country or area	Voor	-18		Solid bio	fuels		
Country or area	Year	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Syrian Arab Republic	2015	238				<del></del>	30
,	2016	236					30
	2017	234					30
	2018	217					30
ājikistan	2015	*50,225					
	2016	50,225	••			••	
	2017 2018	*50,225 *50,225					
Thailand	2015	504,764		212,343	225,232	9,947	126,939
	2016 2017	345,454 315,620		448,520 391,430	271,799 262,756	9,291 12,581	91,539 78,057
	2018	233,303		312,620	364,892	21,121	43,159
Γimor-Leste	2015	886					
IIIIOI-Leste	2016	850					••
	2017	813	••	••		••	
	2018	776					
Turkey	2015	77,791		40,163			
•	2016	68,831	••	40,551		••	
	2017	56,773		45,407			
	2018	40,654		32,226			
Turkmenistan	2015	100					
	2016	100					
	2017 2018	121 121					
	2010	121	••	••	••	••	••
Jzbekistan	2015	*1,307					
	2016 2017	*1,763 *924	••			••	
	2017	*926					···
r					04.000		15.517
iet Nam	2015 2016	602,389 616,245		••	34,609 33,040	••	15,517 15,517
	2017	603,615		••	*31,545	••	15,517
	2018	324,561			*48,538		15,340
'emen	2015	4,886					2,331
Cilion	2016	4,999				••	2,390
	2017	5,120					2,449
	2018	5,306	••	**		**	2,537
Europe	2015	3,492,847	13,639	317,828	15,698	510,313	11,827
•	2016	3,585,291	14,900	283,716	19,572	524,767	13,351
	2017 2018	3,612,196 3,663,265	12,517 14,529	311,779 305,816	20,322 19,886	543,284 543,927	13,984 13,541
			14,020	000,010	10,000	040,027	10,041
Albania	2015	8,960					
	2016 2017	7,787 6,959					
	2018	6,710					
	2045						
Andorra	2015 2016		••	••		••	••
	2017						 
	2018						
Austria	2015	152,102		9,631		28,396	30
iaoa ia	2016	153,635		8,878	···	32,785	30
	2017	160,979		8,718		32,663	30
	2018	150,748		8,255		33,651	30
Belarus	2015	68,924		2,701			89
	2016	68,613		2,403		••	118
	2017	75,446		2,345		••	89
	2018	60,492		2,084			89

	T		Liquid biofue	wastes	Non-biomass
Total	Biogases	Biodiesel	Biogasoline	Municipal waste	Industrial waste
220		·	•		<u> </u>
238 236					
234					
217					
*50,225					
50,225					
*50,225					
*50,225					
1,055,686	29,749	39,192	24,951	9,508	
1,177,697	33,341	39,008	25,889	4,395	 
1,100,627	37,778	45,190	31,088	4,183	••
1,073,050	51,723	49,790	31,570	8,029	
886					
850					
813 776					
770		••	••	••	••
134,770	11,119	2,539	1,796		1,362
130,418	14,721	2,318	1,930	••	2,067
126,778 135,268	17,569 20,496	2,466 4,011	2,117 2,037	 171	2,446 35,672
100,200	20,400	4,011	2,007	17.1	00,012
100					
100 121	••		••	••	
121	 				
*1,307 *1,763					
*924	••				••
*926			 		
626 000					
636,998 649,285		••		••	••
635,160					
373,099					
4,886					
4,999				 	 
5,120	••	••	**	••	
5,306					
6,793,449	659,972	452,720	112,888	830,026	387,519
6,991,673	690,757	447,746	116,677	878,862	429,385
7,153,299 7,270,215	706,931 708,711	508,870 531,466	122,188 125,346	904,403 906,657	410,810 450,613
7,270,213	700,711	331,400	120,040	300,037	430,013
8,960					
7,787					
6,959 6,710					
	••		•		
*248	••	••	**	*248	
*255 *306	••		••	*255 *306	
*366				*366	
256,436 262,949	12,628 12,790	12,586 11,040	5,655 5,709	19,347 21,169	16,092 16,943
265,566	13,273	9,090	5,682	18,623	16,538
250,996	9,781	8,538	5,253	19,440	15,330
72 000	398	810			1 157
73,989 73,428	398	736		••	1,157 1,286
80,182	468	736			1,187 1,319
64,908	498	515	••		1,319

Country or area	Voor	Solid biofuels							
Country or area	Year	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal		
Belgium	2015 2016 2017 2018	42,117 45,175 41,907 42,353	266 783 841 741	3,894 3,792 4,083 4,015		1,666 1,762 1,732 1,817	  		
Bosnia and Herzegovina	2015 2016 2017 2018	30,354 30,729 28,596 60,650	  	  			1,298 1,328 1,180 885		
Bulgaria	2015 2016 2017 2018	45,681 42,194 41,930 51,470	  	2,603 1,261 1,103 8,079		2,898 4,733 5,104 4,273	177 118 59 59		
Croatia	2015 2016 2017 2018	63,861 64,080 64,565 62,621	  	19 32 19 32			236 266 266 295		
Czechia	2015 2016 2017 2018	102,917 103,427 103,824 108,298	  	5,581 5,789 6,379 5,576		15,196 15,114 15,281 14,675	- - - -		
Denmark	2015 2016 2017 2018	46,757 46,576 *51,961 56,429	  	19,824 19,921 20,400 17,840			- - - -		
Estonia	2015 2016 2017 2018	41,571 50,850 51,714 55,681	  	7,721 6,206 9,175 11,914		1,340 1,385 1,382 1,404	  		
Finland	2015 2016 2017 2018	187,269 200,688 202,373 201,498	244 239 212 308	1,230 1,684 1,698 1,773		142,056 146,307 154,761 167,032	  		
France	2015 2016 2017 2018	364,489 396,458 383,454 381,782	2,850 2,164 2,193 2,340	7,369 6,395 6,017 6,402	6,126 5,931	35,992 35,462 35,747 31,967	  		
Germany	2015 2016 2017 2018	475,843 454,508 454,708 444,222	3,916 6,068 3,660 3,653	7,610 7,020 8,477 14,692		29,219 25,910 31,453 26,710	974 974 974 974		
Greece	2015 2016 2017 2018	30,587 26,947 27,655 25,977	  	9,293 6,440 6,199 6,769			30 30 30 59		
Hungary	2015 2016 2017 2018	91,443 87,340 86,860 76,209	291 323 256 241	13,222 12,624 11,526 12,509		265 283 310 303	  		
Iceland	2015 2016 2017 2018	455 465 680 902	  	  		  	  		
Ireland	2015 2016 2017 2018	7,223 8,621 9,339 9,249	1,203 866 955 1,091	  		  	  		

Non-biomas	s wastes	Liquid bio	ofuels	T	1
Industrial waste	Municipal waste	Biogasoline	Biodiesel	Biogases	Total
13,074 13,291 12,119 13,037	30,549 30,460 30,894 30,513	6,543 6,354 7,293 7,614	9,126 8,648 10,672 9,274	9,860 9,814 9,423 9,547	117,096 120,079 118,963 118,911
  	  	  	- - - -	  	30,354 30,729 28,596 60,650
765 1,319 1,621 2,990	631 1,061 1,240 1,520	670 724 590 456	1,766 2,282 3,386 4,674	820 2,511 1,958 2,245	55,834 56,084 56,931 75,707
390 425 483 818	  	- - -	626 37 0	1,507 1,952 2,672 3,081	66,403 66,526 67,739 66,552
9,382 10,361 10,228 12,061	5,570 5,968 6,422 6,115	2,814 3,109 2,734 2,010	6,182 5,483 5,778 7,139	25,681 25,161 25,444 25,279	173,323 174,412 176,089 181,153
	34,812 34,271 35,609 33,562	411 192 137 164	  	6,285 9,048 11,053 13,414	108,089 110,008 119,160 121,409
  611	2,819 2,944 3,030 2,117	  	  	550 722 540 571	54,001 62,107 65,841 72,298
1,758 1,644 2,001 2,048	19,742 22,201 23,808 24,865	999 1,288 1,288 1,233	15,309 3,864 11,003 10,157	4,321 4,694 7,147 7,796	372,928 382,609 404,291 416,710
19,879 19,751 15,715 19,833	102,878 108,498 107,544 111,088	26,403 24,451 23,589 26,564	89,571 83,278 89,608 99,323	30,388 32,678 34,356 36,737	685,698 715,262 704,154 721,635
52,659 59,095 54,307 46,695	250,720 259,750 269,372 259,778	20,521 21,419 21,180 19,596	113,528 114,779 118,054 123,059	314,418 320,998 323,250 319,497	1,268,434 1,269,547 1,284,461 1,257,902
3,732 2,517 0 1,213	  	  	5,410 5,594 5,667 6,330	3,826 4,258 4,484 4,724	52,848 45,756 44,005 45,013
2,520 3,546 3,777 4,322	4,728 4,470 3,606 3,417	10,613 11,417 11,792 12,757	5,373 5,741 5,814 5,925	3,335 3,708 4,141 3,850	131,790 129,452 128,082 119,533
	  	  	  	69 71 76 78	524 536 756 980
  	5,265 5,467 9,606 11,953	  	994 994 1,067 1,104	2,287 2,294 2,286 2,108	16,972 18,242 23,253 25,505

Country or area	Year	Solid biofuels  Fuelwood Animal waste Vegetal waste Bagasse Black liquer Charcoal					
	1001	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
sle of Man	2015						
	2016						
	2017						
	2018		••	••	••		••
aly	2015	297,890		*9,433			295
•	2016	293,118		*9,672			295
	2017	317,411		*10,247			295
	2018	284,621	••	*11,211	••		295
ersey	2015						
•	2016						
	2017						
	2018						
Cosovo	2015	10,721					
	2016	14,823					
	2017	15,305					
	2018	15,415					
.atvia	2015	83,986		135			325
.acvia	2015	86,776	••	126			354
	2017	85,124	••	224			384
	2018	102,172		277			266
iechtenstein	2015	200					
lechtenstein	2015 2016	209 202					
	2017	189	••				••
	2018	225					
ithuania	2015 2016	50,437 50,378		585 731			30 30
	2017	54,681	••	721	••	••	
	2018	51,111	••	1 175			30
uxembourg	2015	2,175		217			
	2016 2017	2,461 2,727		201			••
	2018	3,630	••	208			••
		,,,,,,					
Malta	2015			••			••
	2016 2017						
	2017		••				•••
	2010	••			••	••	••
Montenegro	2015	8,304					18
	2016	8,395					24
	2017 2018	9,235 7,964					21 18
	2010	7,904	••	••	••	••	10
Netherlands	2015	40,509		13,534			
	2016	41,401		12,842			
	2017	40,729		16,326			
	2018	44,571		11,457			
North Macedonia	2015	13,431		203			
	2016	11,817		199			
	2017	12,072		223			•••
	2018	10,103		276			••
lorway	2015	35,977					
- <del>-</del> -,	2016	35,715					
	2017	36,657				425	
	2018	36,378				369	
Poland	2015	204,512		60,674		11,013	
Oldifu	2016	206,522	·· ··	EO 006		11,249	
	2017	200,861		47,616		11,574	
	2018	200,785	377			10,788	

Non-biomas	ss wastes	Liquid bi	ofuels		
Industrial waste	Municipal waste	Biogasoline	Biodiesel	Biogases	Total
	*389				*389
	*411				*411
	*396				*396
••	*546				*546
12,696	70,840	5,392	21,234	78,355	495,839
13,082	72,908	7,579	21,197	78,505	496,061
11,765	71,444	8,071	25,466	79,453	523,857
11,989	70,894	9,005	27,674	79,221	494,615
	*732				*732
	*813			••	*813
	*799		···		*799
	*760				*760
					10,721
					14,823
					15,305
					15,415
84	256	80	2,429	3,674	90,644
113	256	134	1,656	3,762	92,833
73	362	241	1,950	3,902	91,887
119	558	214	3,238	3,643	110,222
	*691			22	*923
	*706		••	20	*929
	*703		··	23	*914
**	*759		**	24	*1,008
202	1,337	420	4 2 4 2	001	EQ 444
303 486	1,337 2,495	429 375	4,342 3,790	981 1,341	58,414 59,597
183	2,476	348	4,342	1,350	64,102
595	1,692	456	5,667	1,554	62,250
569	1,365			739	5,065
546	1,400			833	5,426
578	1,557	••		867	5,930
624	1,552			915	6,929
			07	77	44.4
			37 37	77 80	114 117
				77	77
				69	69
					0.004
					8,304 8,395
	 	 			9,235
					7,964
	00.470		50.047	10.000	407.050
••	60,173 61,527		59,947 53,802	13,693 13,339	187,856 182,911
••	60,374		70,987	13,432	201,848
	60,110	1,671	67,675	13,655	199,140
			20		10.710
••			80 0		13,713 12,016
	**		0	••	12,295
			0		10,379
0.540	45.000			4 400	FF 700
3,519 3,356	15,202 14,965		2,208	1,100 1,200	55,798 57,444
3,192	15,558		4,158	1,535	61,525
3,525	16,479		3,717	2,219	62,687
40.00-7	0.500	4 740	00.000	0.504	040.050
16,997 18,795	6,593 15,484	4,718 5,281	28,962 33,046	9,581 10,930	343,050 352,113
22,229	18,078	5,174	33,010	11,747	350,288
27,023	19,412	5,040	32,642	12,072	353,546

Country or area	Year			Solid bio			
	1001	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Portugal	2015 2016 2017	59,877 61,818 58,938		7,606 3,196 5,888	322 428 313	41,179 43,610 44,530	236 266 266
	2018	57,515		10,670		43,232	266
Republic of Moldova	2015	18,815	158	7,736			30
	2016 2017	21,539 26,284	12 6	7,246 4,936			30 30
	2018	28,063	11	4,559			12
Romania	2015	147,416					177
	2016 2017	149,864 149,227					67 36
	2018	144,164					33
Russian Federation	2015	118,109					1,543
	2016 2017	121,911 107,613					2,065 2,163
	2018	119,089					2,328
Serbia	2015	46,240					354
	2016	46,259 45,477					443 585
	2018	46,936					413
Slovakia	2015	17,277		6,813		13,164	118
	2016 2017	19,118 18,957		2,153 2,137		13,672 14,125	103 118
	2018	22,518		2,620		12,861	30
Slovenia	2015	24,436		273			
	2016 2017	25,242 24,525		236 245			
	2018	22,768		217			
Spain	2015	142,420	449	43,829	9,497	24,039	1,062
	2016	145,115 148,741	449 449	38,520 38,923	13,018 14,078	25,917 26,942	1,062 1,062
	2018	145,978	449	39,060	14,287	28,017	1,062
Sweden	2015	216,259	76			163,890	
	2016 2017	227,021 230,319	52 103		••	166,578 167,254	
	2018	219,560	106	<del></del>		166,828	
Switzerland	2015	38,060					
	2016 2017	41,350 40,590			••	••	
	2018	39,990					
Jkraine	2015	87,769			••		4,809
	2016 2017	114,133 121,861					5,753 6,402
	2018	185,678					6,402
Jnited Kingdom	2015	67,466	4,186	76,092			
	2016 2017	72,220 71,724	3,944 3,842	75,348 97,943	••	**	
	2018	78,738	5,212	78,738			
Oceania	2015	133,425		9,338	139,114	20,521	405
	2016	135,914 180,037		9,352 11,439	136,071 115,711	20,073 15,727	410 416
	2018	175,400		13,730	105,139	15,220	420
Australia	2015	31,646		1,006	132,643	20,521	
	2016 2017	34,649 76,467		933 3,018	131,669 110,298	20,073 *15,727	
	2018	73,548		5,257	100,228	15,220	

Non-biomas	s wastes	Liquid bi	ofuels T	1	1
Industrial waste	Municipal waste	Biogasoline	Biodiesel	Biogases	Total
1,011 2,961 2,657 3,233	8,155 8,680 8,739 8,121	110 82 	13,211 12,291 13,174 13,358	3,457 3,364 3,561 3,453	134,928 136,430 137,800 139,583
0 82 93 0	  	0 0 	  	401 361 282 313	27,110 29,240 31,601 32,946
2,968 3,164 3,845 7,203	159 193 207 188	1,045 1,528 1,179 938	5,520 6,293 6,146 6,918	767 739 755 865	157,875 161,780 161,359 160,276
198,890 218,670 215,266 244,991	  	- - - -	  	- - - -	316,999 340,581 322,879 364,080
36 45 44 49	  	  	  	242 307 723 958	46,518 46,611 46,244 47,943
6,905 7,583 7,283 6,784	1,668 1,530 2,214 1,161	3,002 3,136 3,136 3,296	3,901 4,048 4,011 4,048	6,223 6,357 6,384 6,228	58,952 57,597 58,247 59,516
1,802 1,876 2,139 2,530	  	  	0  	1,242 1,264 1,076 1,018	27,753 28,618 27,985 26,533
  2,971	21,102 19,698 21,744 21,280	10,479 6,968 8,871 11,068	40,958 50,048 64,842 63,259	10,954 10,264 10,943 11,089	303,727 309,997 335,532 337,459
749 746 748 755	57,172 59,857 62,730 58,296	5,447 6,802 6,600 6,915	5,115 4,011 2,429 9,494	7,009 7,265 7,445 7,359	455,717 472,332 477,628 469,313
10,234 10,790 12,500 10,870	46,430 48,150 48,350 48,750	  	221 258 294 221	4,585 4,898 5,087 5,238	99,530 105,446 106,821 105,069
 2,507 	  	482 161 563 107	  	600 1,367 1,601 1,995	88,851 115,660 126,532 187,780
9,348 16,912 7,732 7,075	60,453 73,275 78,612 91,364	7,075 9,970 13,722 10,988	5,483 12,586 17,186 17,517	99,897 113,472 116,117 117,617	330,000 377,726 406,877 407,249
3,899 3,915 3,771 3,785	  	5,393 4,912 4,160 5,125	5,078 1,987 147 37	19,818 20,773 18,264 19,414	336,586 332,997 349,256 337,850
3,899 3,915 3,771 	  	5,226 4,770 4,020 4,985	5,078 1,987 147 37	16,693 17,471 14,970 16,103	216,712 215,468 228,418 219,163

### Production of biofuels and wastes

Country or area	Year			Solid bio			
	icai	Fuelwood	Animal waste	Vegetal waste	Bagasse	Black liquor	Charcoal
Fiji	2015	338			5,591		72
. 4.	2016	338			3,521	···	73
	2017	338			4,533		73
	2018	338			*4,031		73
French Polynesia	2015	42					16
	2016	42				••	16
	2017	42					16
	2018	42					16
Kiribati	2015	29		*500			11
	2016	30		*502			12
	2017	30		*510			12
	2018	30		*512			12
Marshall Islands	2015			*185			
	2016			*190			
	2017			*194			
	2018	••		*195	••		
Micronesia (Fed. States of)	2015	24					11
,	2016	24					11
	2017	24					11
	2018	24		••	••	••	11
New Caledonia	2015	115					18
	2016	115					18
	2017	115		••		••	18
	2018	117					19
New Zealand	2015	47,456					
	2016	47,001				···	
	2017	49,310					
	2018	47,585			••		
Niue	2015	1					0
	2016	1					0
	2017	1					0
	2018	1					0
Papua New Guinea	2015	50,544		*5,263	880		195
	2016	50,544		*5,263	880	···	198
	2017	50,544		*5,263	*880		201
	2018	50,544		*5,315	*880		203
Samoa	2015	1,160		306			15
	2016	1,097		385			16
	2017	*1,089		*377			16
	2018	*1,089		*377	••		*15
Solomon Islands	2015	1,220		*2,079			42
	2016	1,223		*2,079			42
	2017	1,227		*2,078			43
	2018	1,231		*2,074			44
Tonga	2015	19					7
•	2016	19		••			7
	2017	19		••			7
	2018	19		••	••		7
Vanuatu	2015	831					18
	2016	831					18 18
	2017	831					19
	2018	831					19

			- Israjouico					
Total	Biogases	iofuels	Liquid b	ss wastes	Non-bioma			
IUlai	biogases	Biodiesel	Biogasoline	Municipal waste	Industrial waste			
	•							
5,929 3,859 4,871								
3,859								
4,871								
*4,369								
42								
42	••							
42 42 42	••	••		••				
42			••	••	••			
*529								
*532			••	••				
*540			••					
*542			••	••	••			
342		<del></del>	••	••				
*185								
*190	<del></del>	<del></del>	••	••				
*194		<del></del>	••		••			
*194 *195			···					
100	<del></del>	••	••					
24		<u></u>						
24								
24 24 24	••							
24					<u></u>			
120	••		*5		••			
122	<del></del>		*7					
120		••	*5					
123			*5					
50,688 50,410	3,125		107					
50,410	3,302	<del></del>	107					
52.711	3,294		107					
51,003	3,311		107					
1								
1								
1	••							
1	••	••			••			
FC C07								
56,687	••	••		••				
56,687 56,687	••	••		••				
50,00 <i>1</i>	••	••	••		••			
56,739	••	••	••		••			
1,466	0							
1,482	0 0		••	••				
*1,402	0							
*1,466 *1,466	0 0		••	••				
1,400	0		••	••	••			
*3 200								
*3,299 *3,302 *3,305 *3,305	<del></del>	<del></del>	••					
*3 305	<del></del>	<del></del>	••	••				
*3.305			••					
	<del></del>	<del></del>	••	••				
19 19 19								
19								
19								
19								
886			*55					
859			*55 *27					
886 859 859 859			*27					
859			*27					

#### Production, trade and supply of conventional crude oil

Thousand metric tons; kilograms per capita; reserves production ratio (R/P) in years

#### **Table Notes**

0

The **Reserves / Production** ratio refers to crude oil and natural gas liquids.

Data on reserves were taken from the Survey of Energy Resources, World Energy Council.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/classification, and xvi to xvii for the descriptions of relevant flows.

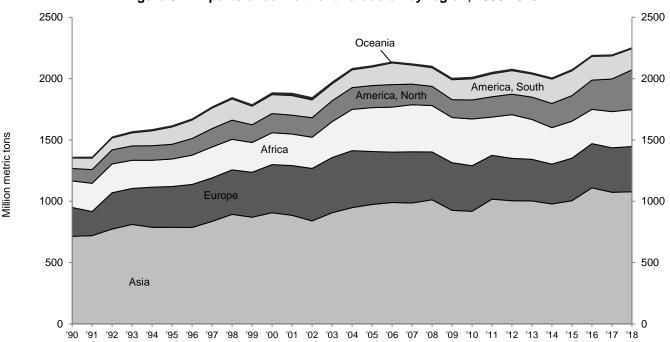
0

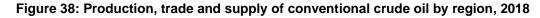
4000 Oceania 4000 3500 3500 America, South 3000 3000 Africa 2500 2500 Million metric tons America, North 2000 2000 Europe 1500 1500 1000 1000 Asia 500 500

Figure 36: Production of conventional crude oil by region, 1990-2018



90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18





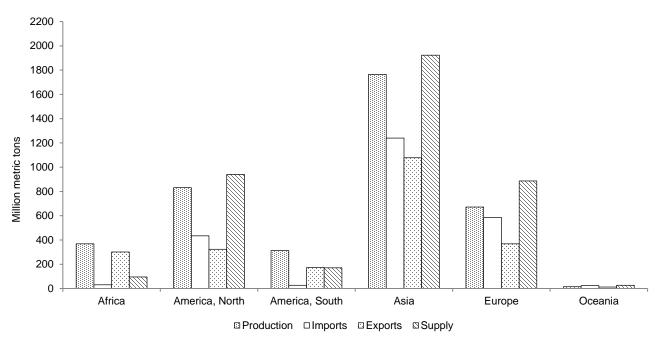


Figure 39: Major crude oil producing countries, 2018

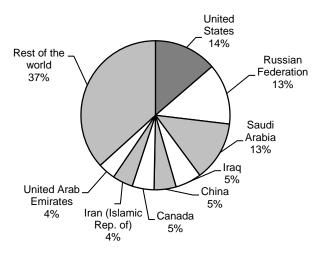


Figure 40: Major crude oil consuming countries, 2018

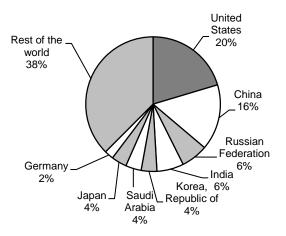


Table 13

	l	Produ	ıction		_ ,	Changes in	Sup	ply
Country or area	Year	Total	Reserves/ Production	Imports	Exports	stocks	Total	Per capita
World	2015 2016 2017 2018	3,854,314 3,902,891 3,883,443 3,962,764	52 51 51 50	2,180,552 2,257,795 2,327,598 2,341,934	2,193,825 2,197,535	4,378 -12,135	3,962,483 4,025,642	533 531 533 530
Africa	2015 2016 2017 2018	364,723 340,767 360,788 367,819	43 46 43 43	32,057 36,085 30,440 31,227	278,657 295,466	-100 862	98,294 94,901	82 81 76 75
Algeria	2015 2016 2017 2018	49,184 50,945 49,468 48,588	23 22 23 23	267 233 222 204	25,227 24,677	-82 287	26,033 24,726	651 642 597 648
Angola	2015 2016 2017 2018	88,131 85,497 80,843 73,245	19 20 20 22	  	82,936 78,088	*-225 *-438	2,786 3,192	93 97 107 92
Cameroon	2015 2016 2017 2018	4,726 4,673 3,845 3,486	4 4 5 5	1,417 1,354 1,114 1,010	4,222 3,474		1,805 1,485	80 75 60 53
Chad	2015 2016 2017 2018	7,200 6,500 5,800 6,500	30 33 37 33	  	5,800 5,100		700 700	50 48 47 45
Congo	2015 2016 2017 2018	12,036 11,795 13,669 16,787	15 16 14 11	  	11,094 12,856	-1 	702 813	147 141 159 157
Côte d'Ivoire	2015 2016 2017 2018	1,349 2,188 2,007 1,672	10 6 7 8	3,083 2,601 2,386 2,469	2,038 1,870		2,751 2,523	133 115 103 105
Dem. Rep. of the Congo	2015 2016 2017 2018	1,048 996 1,198 1,334	23 24 20 18	  	1,048 996 1,198 1,334		0	0 0 0
Egypt	2015 2016 2017 2018	33,195 30,992 30,417 30,850		3,238 5,998 6,283 6,037	11,392 9,594	 	25,598 27,106	260 271 281 267
Equatorial Guinea	2015 2016 2017 2018	12,086 10,186 8,682 7,599	14	  	12,026 10,197 8,727 6,934	*-151 *-145	140 100	141 115 79 76
Gabon	2015 2016 2017 2018	11,503 11,366 10,499 9,487	24 24 26 29	  	10,701 10,516 9,375 8,664	300	850 824	412 423 399 388
Ghana	2015 2016 2017 2018	5,351 4,614 8,380 8,876	11	310 1,446 233 197	8,141	340 306	1,448 166	16 51 6 14

		Produ	ıction			Changes in	Sup	ply
Country or area	Year	Total	Reserves/ Production	Imports	Exports	stocks	Total	Per capita
Libya	2015 2016 2017 2018	19,340 18,193 42,322 53,338	294 310 139 111		14,380 14,683 37,955 48,483		4,960 3,510 4,367 4,855	773 541 664 727
Mauritania	2015 2016 2017 2018	264 236 87 0	11 13 34	  	*264 *236 *87 0		0 0 0	0 0 0
Morocco	2015 2016 2017 2018	5 5 5 5	50 50 50 50	2,690  	  	72  	2,623 5 5 5 5	75 0 0 0
Mozambique	2015 2016 2017 2018	48 49 48 45	42 41 42 44	  	48 49 48 45		0 0 0 0	0 0 0 0
Niger	2015 2016 2017 2018	746 822 911 829	27 24 22 24	  	  	-1 *86 *32	746 736 879 829	37 35 41 37
Nigeria	2015 2016 2017 2018	103,128 88,901 90,529 93,117	47 55 54 52	  	102,892 86,058 86,490 90,830	-1,581 -38 718 756	1,817 2,881 3,321 1,531	10 15 17 8
Senegal	2015 2016 2017 2018	  		1,085 1,162 1,200 1,024	  	-74 -68 *-119 -26	1,159 1,230 1,319 1,050	80 82 86 66
South Africa	2015 2016 2017 2018	255 28 32 26	5 30 21 22	17,973 20,818 17,103 18,706	 452  		18,350 20,394 17,135 17,876	331 363 301 309
South Sudan	2015 2016 2017 2018	7,388 5,866 6,100 6,400	64 81 77 74	  	7,320 5,796 6,029 6,326	  	68 70 71 74	6 6 7 7
Sudan	2015 2016 2017 2018	5,405 4,718 4,095 3,818	37 43 49 53	472 1,103 744 *450	977 949 167 		4,900 4,872 4,673 4,268	126 122 114 102
Tunisia	2015 2016 2017 2018	2,334 2,197 1,852 1,818	22 23 27 28	879 886 635 512	1,798 1,744 1,590 1,329	39 -79	1,398 1,300 976 1,058	125 115 85 91
Zambia	2015 2016 2017 2018	  		643 484 520 618	  	  	643 484 520 618	40 30 31 36
America, North	2015 2016 2017 2018	743,162 714,441 739,641 831,699	42 43 42 37	429,652 455,015 448,436 434,728	208,168 238,357 266,271 323,418	11,112 3,477 -13,314 2,311	953,534 927,622 935,120 940,697	1,679 1,620 1,619 1,616

Table 13

Country or orga	Voor	Produ	ction	lmnorto	Cynorto	Changes in	Sup	ply
Country or area	Year	Total	Reserves/ Production	Imports	Exports	stocks	Total	Per capita
Barbados	2015 2016 2017 2018	34 34 32 30	7 7 8 8	  	34 34 32 28	0	0 0 0 0	0 0 0 0
Belize	2015 2016 2017 2018	77 66 53 44	3 4 5 6	  	59 49 39 29	4	14	34 35 36 31
Canada	2015 2016 2017 2018	154,620 158,046 170,757 188,258	165 160 149 135	45,844 46,689 40,562 39,311	123,175 143,984 144,695 157,340	-700 226	66,398	2,138 1,689 1,808 1,885
Costa Rica	2015 2016 2017 2018	  		  	  	0		2 0 
Cuba	2015 2016 2017 2018	2,822 2,619 2,522 2,463	1 1 1	4,408 3,712 2,840 2,550	  	  	6,331	638 559 473 442
Curaçao	2015 2016 2017 2018	  	 	9,232 8,091 4,357 3,250	  	  	8,091 4,357	57,754 50,237 26,897 19,969
Dominican Republic	2015 2016 2017 2018	  	  	813 1,163 990 1,245	  	-2 44	1,164 947	78 112 90 119
Guatemala	2015 2016 2017 2018	497 446 481 459	22 25 23 24	  	431 368 393 309	0	56 88	4 3 5 8
Jamaica	2015 2016 2017 2018	  	 	1,396 1,243 1,165 1,035	  		1,396 1,243 1,165 1,035	483 428 399 353
Mexico	2015 2016 2017 2018	117,001 111,482 100,827 95,073	12 12 14 15	  192	59,932 63,247 62,607 63,556	128 561	48,107 37,659	471 390 302 243
Nicaragua	2015 2016 2017 2018	  	  	754 619 709 648	  	*-40 *8	659 701	126 105 110 105
Trinidad and Tobago	2015 2016 2017 2018	4,055 3,695 3,702 3,277	22 25 24 28	4,043 5,228 4,554 3,233	1,599 1,449 1,408 1,137		7,474 6,848	4,743 5,426 4,948 3,866
United States	2015 2016 2017 2018	464,056 438,053 461,267 542,095	12 13 12 10	363,163 388,271 393,259 383,263	22,938 29,226 57,097 101,019	4,065 -14,153	811,582	2,471 2,455 2,497 2,517

Country	Vest	Produ	ction	lmnc +t-	Even a rita	Changes in	Sup	ply
Country or area	Year	Total	Reserves/ Production	Imports	Exports	stocks	Total	Per capita
America, South	2015 2016 2017 2018	368,120 358,616 341,343 312,941	79 81 85 92	30,676 24,155 23,708 26,169	203,178 193,022 188,150 173,245	-1,631 -5,271	191,380 182,172	470 460 434 401
Argentina	2015 2016 2017 2018	27,499 26,440 24,766 25,281	11 11 12 11	837 820 1,117 396	1,878 2,643 1,481 3,197	-60 78	24,677 24,324	609 567 554 506
Bolivia (Plur. State of)	2015 2016 2017 2018	2,404 2,224 2,110 1,967	7 7 7 7	  	0 0 0	-63 -40	2,287 2,150	224 207 192 180
Brazil	2015 2016 2017 2018	116,835 129,203 134,534 132,713	15 14 13 14	15,273 7,937 7,415 9,530	37,794 43,419 53,337 55,164	496 -223	93,225 88,835	456 452 427 415
Chile	2015 2016 2017 2018	244 203 169 154	71 82 72 53	8,297 8,183 8,468 8,553	  	-49 7	8,435 8,630	473 463 467 468
Colombia	2015 2016 2017 2018	51,841 45,796 44,029 44,619	6 7 8 7	  	40,747 32,276 32,466 30,800	-1,545 -4,538	15,065 16,101	223 313 329 345
Ecuador	2015 2016 2017 2018	27,268 27,610 26,676 26,240	43 42 44 45	0 0 3 	20,688 19,515 18,351 18,019	-350 -558	8,445 8,887	429 512 529 505
Peru	2015 2016 2017 2018	2,854 1,991 2,143 2,404	27 31 31 31	4,223 5,188 6,164 5,542	392 114 77 319	-14 63	7,079 8,167	210 229 260 246
Suriname	2015 2016 2017 2018	840 814 807 811	14 15 15 15	41 41 14 9	  	12 	843 821	1,569 1,492 1,440 1,425
Uruguay	2015 2016 2017 2018	  	 	2,005 1,986 527 2,139	  	20	2,045 587	554 597 171 628
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	138,335 124,335 106,108 78,752	183 203 237 316	  	101,679 95,055 82,438 65,746		29,280 23,670	1,219 981 805 450
Asia	2015 2016 2017 2018	1,697,816 1,797,988 1,763,206 1,765,095	63 59 60 61	1,076,587 1,148,888 1,210,259 1,240,432	1,004,039 1,109,695 1,073,868 1,077,373	4,840 9,700	1,832,341 1,889,897	398 409 418 422
Azerbaijan	2015 2016 2017 2018	39,035 38,253 36,032 35,925	23 23 25 25	 63 	32,843 32,479 30,488 30,141	24 -23	5,750 5,630	650 591 572 583

Table 13

Country on one	V	Produ	ction	lusa a sata	Francis	Changes in	Sup	ply
Country or area	Year	Total	Reserves/ Production	Imports	Exports	stocks	Total	Per capita
Bahrain	2015 2016 2017 2018	10,049 10,102 9,830 9,682	1 1 1 1	10,753 10,476 10,953 10,951	7,453 7,724 7,601 7,693		12,854 13,182	9,731 9,015 8,823 8,245
Bangladesh	2015 2016 2017 2018	  	14 12 10 10	1,093 1,308 1,687 1,209	  	  	1,093 1,308 1,687 1,209	7 8 11 7
Brunei Darussalam	2015 2016 2017 2018	5,936 5,431 4,995 4,943	23 25 27 27	  	5,763 5,209 4,871 4,571		269 240 198 222	648 572 466 517
China	2015 2016 2017 2018	214,556 199,685 191,506 189,324	12 13 13 13	335,483 381,007 419,462 461,886	2,866 2,941 4,861 2,627	6,238 17,428 17,018 10,091	540,935 560,323 589,090 638,492	385 396 415 447
Georgia	2015 2016 2017 2018	40 39 32 30	124 130 156 166	133 43 60 2	153 18 7 9	0 -5	14 64 89 22	4 16 22 5
India	2015 2016 2017 2018	36,950 36,801 36,468 34,200	19 19 19 20	202,850 218,618 225,282 226,500	  	0 0 	000 700	183 193 196 193
Indonesia	2015 2016 2017 2018	40,324 40,063 41,901 40,691	11 11 11 11	18,431 17,452 15,889 15,404	13,542 15,131 12,035 8,929	884 -2,725 34 1,769	45,109	172 172 173 170
Iran (Islamic Rep. of)	2015 2016 2017 2018	139,415 187,209 191,392 175,835	132 100 97 104	  	56,230 104,500 106,951 91,446		83,021 82,709 84,461 84,389	1,058 1,040 1,047 1,032
Iraq	2015 2016 2017 2018	171,889 220,339 224,404 224,404	112 87 85 85	  	147,539 187,360 186,774 189,721	-2,287 3,140 385 634	26,637 29,839 37,245 34,049	749 815 992 886
Israel	2015 2016 2017 2018	76 115 76 88	26 17 26 23	11,718 10,332 11,698 11,533	  	649	10,832	1,463 1,336 1,349 1,440
Japan	2015 2016 2017 2018	205 187 180 166	9 9 10 10	157,858 155,851 155,740 149,208	  	-636 -1,546 -896 442	156,816	1,240 1,233 1,230 1,171
Jordan	2015 2016 2017 2018	0 0 0 1	548 563 862 250	3,513 2,978 2,795 2,366	  	87 23 16 11		370 309 284 236
Kazakhstan	2015 2016 2017 2018	66,521 65,570 72,925 90,360	49 50 46 43	74 23 42 25	51,886 49,774 56,684 69,805	197 *57	14,290 15,622 16,226 20,138	813 876 897 1,099

0	V	Produ	ction	lassa sata	Formanda	Changes in	Sup	ply
Country or area	Year	Total	Reserves/ Production	Imports	Exports	stocks	Total	Per capita
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	  	  	532 532 532 532	  		532 532 532 532	21 21 21 21
Korea, Republic of	2015 2016 2017 2018	16 15 30 26	  	138,751 145,537 150,613 150,281	  	1,302 947 -29 -2,144	137,465 144,605 150,672 152,451	2,705 2,836 2,949 2,979
Kuwait	2015 2016 2017 2018	144,919 149,758 137,090 138,731	92 89 96 95	  	99,637 107,879 102,782 104,172		45,282 41,879 34,308 34,559	11,806 10,584 8,458 8,353
Kyrgyzstan	2015 2016 2017 2018	107 145 173 200	47 34 29 25	224 250 297 *410	0 7 20 70	1 5	323 387 445 *549	54 64 72 *87
Malaysia	2015 2016 2017 2018	31,347 32,113 31,071 30,917	14 14 14 14	8,097 10,488 9,793 8,927	15,533 16,045 14,453 14,506		23,966 26,624 26,124 24,903	792 868 840 790
Mongolia	2015 2016 2017 2018	1,038 976 902 756	34 36 39 46	  	963 949 889 733	28	0 0 0 0	0 0 0
Myanmar	2015 2016 2017 2018	789 653 589 487	4 5 5 6	 	144 149 241 242	-1	631 472 349 245	12 9 7 5
Oman	2015 2016 2017 2018	48,067 49,409 47,685 48,784	15 14 15 15	  	41,356 43,266 39,596 39,522		6,711 6,143 8,089 9,262	1,573 1,371 1,734 1,918
Other Asia	2015 2016 2017 2018	8 8 5 4	4 4 6 8	43,931 44,837 44,517 45,959	  	224 -141 247 -481	43,715 44,986 44,275 46,444	1,856 1,905 1,870 1,957
Pakistan	2015 2016 2017 2018	4,203 4,285 4,448 4,368	11 10 10 10	5,928 8,368 10,404 9,029	308 208 412 572		9,823 12,445 14,440 12,825	49 61 69 60
Philippines	2015 2016 2017 2018	329 275 217 173	22 22 25 27	10,644 10,743 10,590 11,702	334 247 193 146	-239	10,603 10,551 10,853 11,719	104 102 103 110
Qatar	2015 2016 2017 2018	31,915 31,798 29,199 29,233	38 36 38 39	  	28,216 28,051 25,647 25,676	  	3,699 3,747 3,552 3,557	1,442 1,412 1,304 1,279
Saudi Arabia	2015 2016 2017 2018	508,238 523,010 508,235 514,362	66 64 66 65	  	357,172 373,168 347,464 367,570	-7,220 -3,772	148,778 157,062 164,543 152,204	4,691 4,841 4,971 4,516

Table 13

0	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Produ	ction	lana anta	Formanda	Changes in	Sup	ply
Country or area	Year	Total	Reserves/ Production	Imports	Exports	stocks	Total	Per capita
Singapore	2015 2016 2017 2018	  		49,438 52,776 57,954 55,189	1,064 1,026 1,250 111		51,750	8,650 9,153 9,934 9,566
Sri Lanka	2015 2016 2017 2018	  	  	1,677 1,685 1,499 1,763	  	117	1,692 1,746 1,646 1,763	81 83 78 83
Syrian Arab Republic	2015 2016 2017 2018	1,074 961 961 904	296 328 328 347	5,490 6,118 6,900 6,456	  	  	7,079 7,861	365 405 460 434
Tajikistan	2015 2016 2017 2018	25 25 24 23	80 80 85 86	  45	  		25 25 24 69	3 3 3 8
Thailand	2015 2016 2017 2018	13,087 13,531 12,645 12,124	3 2 3 3	44,509 43,862 46,278 48,925	40 1,546 1,670 1,531	-6,288	62,398 62,135 63,531 63,632	908 901 918 917
Timor-Leste	2015 2016 2017 2018	3,095 2,455 2,010 1,641	19 24 29 36	  	*3,095 *2,455 *2,010 *1,641		0 0 0 0	0 0 0 0
Turkey	2015 2016 2017 2018	2,516 2,573 2,553 2,851	18 18 18 16	25,067 24,958 25,767 20,972	  	165 233	26,693 27,366 28,087 23,904	340 343 346 290
Turkmenistan	2015 2016 2017 2018	12,050 11,080 10,300 9,650	6 7 7 8	  	3,450 2,480 1,700 1,050		8,600 8,600 8,600	1,545 1,519 1,494 1,470
United Arab Emirates	2015 2016 2017 2018	148,838 154,189 149,937 149,985	70 68 70 70	  	124,538 120,236 118,463 114,539	 417	24,300 33,953 31,057 33,982	2,623 3,627 3,274 3,528
Uzbekistan	2015 2016 2017 2018	1,000 868 814 746	30 31 29 28	212 212 263 456	  		1,077	39 34 34 37
Viet Nam	2015 2016 2017 2018	18,746 15,200 13,557 11,989	30 37 41 46	182 435 1,181 704	9,486 6,848 6,806 352	*1,087 1,822	7,700 6,110	90 82 65 108
Yemen	2015 2016 2017 2018	1,413 867 1,021 1,492	269 425 366 272	  	430 0 		867 1,021	37 32 37 52
Europe	2015 2016 2017 2018	662,048 673,315 663,035 670,912	23 22 22 22	586,392 571,675 592,170 585,335	346,804 360,756 361,706 368,815	-2,080 -4,096		1,201 1,187 1,201 1,184

Country on area	V	Produ	ction	luono o uto	Curanta.	Changes in	Sup	ply
Country or area	Year	Total	Reserves/ Production	Imports	Exports	stocks	Total	Per capita
Albania	2015 2016 2017 2018	1,279 1,056 959 911	20 25 27 29		987 888 488 583	-16 -42	184	95 64 178 103
Austria	2015 2016 2017 2018	854 786 698 670	8 9 10 10	8,079 7,332 7,219 8,333	  	80 -66 -148 34	8,065	1,020 936 914 1,009
Belarus	2015 2016 2017 2018	1,645 1,645 1,650 1,670	16 16 16 15	22,919 18,142 18,130 18,244	1,615 1,617 1,621 1,640	-80 -448 -31 7	18,190	2,440 1,971 1,925 1,933
Belgium	2015 2016 2017 2018	  	  	32,080 31,870 34,117 33,017	  	-99	34,087	2,840 2,816 2,985 2,876
Bosnia and Herzegovina	2015 2016 2017 2018	  	  	916 911 845 683	  	2 75 77 -14	836 768	267 247 229 210
Bulgaria	2015 2016 2017 2018	25 24 24 22	80 83 83 91	6,068 6,195 6,859 5,858	  	56 -40 99 -6	6,259	839 875 955 835
Croatia	2015 2016 2017 2018	619 684 689 688	10 9 9	2,328 2,513 2,818 2,966	  	84 -27 24 64	3,224 3,483	676 766 833 864
Czechia	2015 2016 2017 2018	128 117 108 110	16 17 19 18	7,132 5,325 7,814 7,439	28 28 24 22	16 -8 34 4	5,422 7,864	681 511 739 705
Denmark	2015 2016 2017 2018	7,690 6,924 6,737 5,666	10 11 11 13	4,164 3,835 4,823 4,714	4,523 3,877 4,098 2,809	74 -27 -32 25	6,909	1,276 1,210 1,307 1,312
Finland	2015 2016 2017 2018	  	  	10,073 11,249 11,014 11,511	  	-136	11,190 11,150	1,758 2,035 2,023 2,082
France	2015 2016 2017 2018	835 815 758 774	13 13 15 14	57,452 54,894 57,053 52,727	40 0 67 0	-863 400	56,572 57,344	873 846 855 802
Germany	2015 2016 2017 2018	2,414 2,357 2,217 2,070	13 13 14 15	91,275 91,244 90,738 85,211	333 101 	-761 -249	94,261 93,204	1,145 1,147 1,128 1,056
Greece	2015 2016 2017 2018	62 176 142 206	16 6 7 5	22,085 23,462 23,667 24,330	80 156 163 202	295 -385	23,187 24,031	2,034 2,184 2,274 2,312

Table 13

Occupa		Produ	ction		F	Changes in	Sup	ply
Country or area	Year	Total	Reserves/ Production	Imports	Exports	stocks	Total	Per capita
Hungary	2015 2016 2017 2018	623 712 714 808	5 4 4 4	6,211 6,012 5,984 6,677	96 75 161 394	261 12 12 51	6,637 6,525	662 681 671 725
Ireland	2015 2016 2017 2018	  	  	3,642 3,197 2,918 2,986	0  	-265	3,194 3,183	723 680 670 628
Italy	2015 2016 2017 2018	5,470 3,746 4,138 4,684	15 22 20 17	62,457 60,878 66,348 62,053	709 624 697 502	-586 -319	64,586 70,108	1,105 1,064 1,155 1,104
Lithuania	2015 2016 2017 2018	75 64 56 46	13 16 18 22	8,491 9,321 9,817 9,653	50 52 42 45	9	9,324 9,821	2,895 3,227 3,452 3,459
Netherlands	2015 2016 2017 2018	1,396 957 952 901	17 24 25 27	52,236 54,318 52,851 54,306	292 326 440 434	557 -162	54,392 53,525	3,116 3,203 3,145 3,221
Norway	2015 2016 2017 2018	77,899 79,836 78,413 73,721	11 11 11 12	1,179 493 1,797 3,283	64,943 69,254 67,076 61,535	-906	10,344 14,040	2,695 1,970 2,651 2,771
Poland	2015 2016 2017 2018	928 1,001 996 1,010	16 15 15 15	26,492 24,573 24,648 26,847	254 224 220 296	-426	25,776 25,144	686 679 663 712
Portugal	2015 2016 2017 2018	  	  	13,969 13,731 14,191 12,651	  	54	13,908 14,137	1,336 1,347 1,374 1,223
Republic of Moldova	2015 2016 2017 2018	7 6 5 5	  	0 0 0 0	 	0 -1 1 0	7 4	2 2 1 1
Romania	2015 2016 2017 2018	3,902 3,686 3,538 3,486	20 21 22 22	6,596 7,468 7,754 8,265	49 14 37	-165 -188	11,305 11,443	521 571 582 598
Russian Federation	2015 2016 2017 2018	510,230 521,715 514,536 523,321	26 26 26 25	2,196 0 0 0	242,733 252,844 252,169 259,830	485 -1,605	268,386 263,972	1,845 1,847 1,814 1,792
Serbia	2015 2016 2017 2018	1,022 930 889 877	7 7 8 8	1,799 2,190 2,447 2,686	  	4.4	3,106 3,333	414 439 473 508
Slovakia	2015 2016 2017 2018	10 8 6 5	83 100 125 143	5,902 5,792 5,587 5,436	10 9 56 5	53 -20	5,738 5,557	1,091 1,054 1,020 995

# **Production, trade and supply of conventional crude oil**Thousand metric tons; kilograms per capita; reserves/production ratio (R/P) in years

O complete a consequence		Produ	ction			Changes in	Sup	ply
Country or area	Year	Total	Reserves/ Production	Imports	Exports	stocks	Total	Per capita
Spain	2015 2016 2017 2018	232 141 120 87	82 135 158 218		  	-73 -676 40 -220	64,988 66,038	1,393 1,394 1,416 1,454
Sweden	2015 2016 2017 2018	  	  	19,689	  	-8 -384	19,697 19,445	1,987 2,003 1,963 2,017
Switzerland	2015 2016 2017 2018	  	  	2,785 2,930 2,847 3,018	16 	-16 -3	2,930 2,850	336 348 336 352
Ukraine	2015 2016 2017 2018	1,877 1,623 1,505 1,624	21 24 25 24	905	8  83 	5 41	2,120 2,286	47 47 51 53
United Kingdom	2015 2016 2017 2018	42,826 44,306 43,185 47,550	8 8 8 7	43,960	34,264	32 -326	53,061 53,207	843 800 797 767
Oceania	2015 2016 2017 2018	18,446 17,765 15,430 14,297	24 25 28 31		13,338	-128 -16	26,532 25,957	744 656 633 638
Australia	2015 2016 2017 2018	15,381 15,024 12,993 12,179	26 27 30 34	15,323 15,959	9,698	-141 -67	19,819 19,321	987 817 786 811
New Zealand	2015 2016 2017 2018	1,856 1,575 1,399 1,075	8 10 11 14	5,286 5,215		45 -30	5,313 5,305	1,170 1,140 1,128 1,054
Papua New Guinea	2015 2016 2017 2018	1,209 1,166 1,038 *1,043	20 21 23 23	619 1,368 1,412 *1,419		-32 81	1,400	75 169 158 *155

#### Production of additives and other hydrocarbons

Thousand metric tons

#### **Table Notes**

**Additives** production refers to any quantities of additives (as per the definition in page x) which come from non-energy sources, such as Tetraethyllead (TEL) or detergents.

**Additives** from other sources refers to quantities of additives (as per the definition in page x) already accounted for in energy statistics, such as oxygenates from a biomass or hydrocarbon origin.

**Other hydrocarbons** production refers to quantities of other hydrocarbons which are oils obtained by non-conventional production techniques and are primary for the purposes of energy statistics.

Other hydrocarbons from other sources refers to the oils extracted from extra heavy oils, oil sands, coal and oil shale whose production has been already accounted for in energy statistics, together with the output of GTL plants.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/classification, and xvi to xvii for the descriptions of relevant flows.

Figure 41: Major additives producing countries, 2018

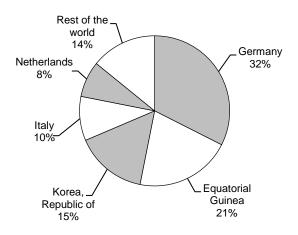
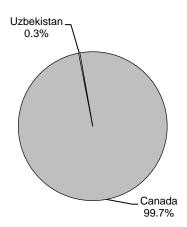


Figure 42: Major other hydrocarbons producing countries, 2018



		Additi	ves	Other hydrocarbons		
Country or area	Year —	Production	From other sources	Production	From other sources	
World	2015 2016 2017 2018	4,055 4,415 4,545 4,836	3,143 3,079 2,803 2,797	61,808 46,994 57,114 55,944	30,099 29,899 29,799 28,853	
Africa	2015 2016 2017 2018	815 1,069 1,083 999		  	5,522 4,455 4,680 5,035	
Equatorial Guinea	2015 2016 2017 2018	815 1,069 1,083 999	  	  	  	
Nigeria	2015 2016 2017 2018		  	  	200 201 200 200	
South Africa	2015 2016 2017 2018		  	  	5,322 4,254 4,480 4,835	
America, North	2015 2016 2017 2018	321 274 197 240	2,889 2,775 2,550 2,587	53,192 46,863 56,975 55,799	7,375 7,230 7,225 7,912	
Canada	2015 2016 2017 2018		373  	53,192 46,863 56,975 55,799	3,364 3,129 3,037 3,728	
Mexico	2015 2016 2017 2018	321 274 197 240	  	  	62 37 33 36	
United States	2015 2016 2017 2018		2,516 2,775 2,550 2,587		3,949 4,064 4,155 4,148	
America, South	2015 2016 2017 2018	 	 	8,442  	 451 518 329	
Brazil	2015 2016 2017 2018		 	8,442  	 451 472 283	
Chile	2015 2016 2017 2018				  46 46	
Asia	2015 2016 2017 2018	642 674 688 748	  	137 131 139 145	9,218 10,288 12,478 10,134	

		Addit	ives	Other hydr	ocarbons
Country or area	Year -	Production	From other sources	Production	From other sources
China	2015 2016 2017 2018	   		   	2,494 3,978 7,044 5,818
Israel	2015 2016 2017 2018	  	- - - -	  	112 99 114 98
Korea, Republic of	2015 2016 2017 2018	642 674 688 748	  	  	
Malaysia	2015 2016 2017 2018	  	  	  	407 569 509 *531
Qatar	2015 2016 2017 2018	  	 	  	5,788 5,180 4,319 3,173
Turkey	2015 2016 2017 2018	  	  	  	417 462 492 517
Uzbekistan	2015 2016 2017 2018	  		137 131 139 145	  
Europe	2015 2016 2017 2018	2,277 2,398 2,577 2,849	254 304 253 210	37 0 0 	7,903 7,343 4,898 5,443
Belarus	2015 2016 2017 2018	  	22 20 20 	  	  
Belgium	2015 2016 2017 2018	  		  	   34
Bulgaria	2015 2016 2017 2018	  	   9	  	99 169 188 152
Croatia	2015 2016 2017 2018	  	 	  	60 71 67 75
Czechia	2015 2016 2017 2018	81 70 105 89	7 5 18 23	 	  

0	V	Addi	tives	Other hyd	rocarbons
Country or area	Year	Production	From other sources	Production	From other sources
Estonia	2015 2016 2017 2018	   	 	  	854 724 1,016 1,111
Finland	2015 2016 2017 2018	  	  		229 208
France	2015 2016 2017 2018	228 177 206 139			 
Germany	2015 2016 2017 2018	1,215 1,344 1,444 1,570		  	 
Hungary	2015 2016 2017 2018	 14 50 53		0	33
Ireland	2015 2016 2017 2018	  	  	  	48 40
Italy	2015 2016 2017 2018	360 320 360 460		  	
Netherlands	2015 2016 2017 2018	208 321 278 375			 
Norway	2015 2016 2017 2018	74 85 68 70		  	
Poland	2015 2016 2017 2018	1 11 1 7	  	  	628 589 584 636
Portugal	2015 2016 2017 2018	  	 7 	 	71
Romania	2015 2016 2017 2018	25 22 22 31		 	77 89 74
Russian Federation	2015 2016 2017 2018	  	  	  	*5 654

0 1		Additi	ives	Other hydrocarbons		
Country or area	Year -	Production	From other sources	Production	From other sources	
Serbia	2015 2016 2017 2018	10 12 13 16	  		26 26 23 28	
Slovakia	2015 2016 2017 2018	  	225 215 215 178	  	149 141 146 131	
Ukraine	2015 2016 2017 2018	75 22 30 39	 57  	  	  	
United Kingdom	2015 2016 2017 2018	  	  	31 0 0	  	
Oceania	2015 2016 2017 2018	  	  	  	81 132 0 0	
Australia	2015 2016 2017 2018	 	  		81 132 0	

#### 2017

				Expo	rters	,		
Importers	World	Angola	Azerbaijan	Canada	Colombia	Iran (Islamic Rep. of)	Iraq	Kazakhstan
Australia	15,959							
Bahrain	10,953							
Belarus	18,130							64
Belgium	34,117			29		432	806	
Brazil	7,415						357	
Canada	40,562	333	2,735		439	••	140	293
Chile	8,468							
China	419,462	50,416	1,282	438	9,303	29,152	36,815	2,502
Finland	11,014							0
France	57,053	899	1,550		0	6,992	484	9,063
Germany	90,738	205	2,451	0	138	794	4,675	8,114
Greece	23,667		146			4,342	10,148	2,399
India	225,282	7,780	1,130	122	264	17,285	42,171	2,749
Indonesia	15,889	916	1,061			141		
Italy	66,348	931	12,299	780	144	9,324	8,655	3,476
Japan	155,740	522			352	7,124	2,945	1,791
Korea, Republic of	150,613					18,838	17,126	3,594
Netherlands	52,851			30	0	1,301	6,792	
Philippines	10,590							
Poland	24,648			90		257	1,102	882
Portugal	14,191	689	1,855				861	1,416
Singapore	57,954				125		977	204
South Africa	17,103	3,420						
Spain	65,958	2,578	940	979	934	4,383	4,054	4,417
Sweden	19,061						612	
Thailand	46,278							
Turkey	25,767			74	255	6,492	7,056	471
United Kingdom	43,960	127		283				
United States	393,259	6,358	346	141,316	16,611	<del></del>	29,632	

2017

				Expo	ters				
Kuwait	Mexico	Nigeria	Norway	Qatar	Russian Federation	Saudi Arabia	United Arab Emirates	United Kingdom	Venezuela (Bolivar. Rep.)
					433		2,601		
						10,577	288		
					18,065				
689	354	2,048	2,622		16,339	6,364		3,239	93
		1,067				3,751		0	
	267	1,863	1,874		292	5,089		976	
								132	
18,243	1,232	1,205	889	1,014	59,538	52,180	10,158	5,670	21,761
			529		10,138	98			
112	66	4,796	5,383		8,940	6,180	276	1,491	
176	345	4,916	10,303		33,512	1,021		8,555	654
					1,978	2,167		0	
11,175	8,162	16,979		3,299	3,058	35,849	16,561		19,426
		3,280				4,131	246		
3,680	199	1,663	1,293		6,539	6,055		0	193
11,558	1,995			10,916	8,310	62,307	39,201	83	140
21,478	4,209	0	100	1,154	5,233	42,562	12,342	4,627	
3,593	641	3,125	5,967		21,174	1,279		5,717	. 0
3,389				541	113	3,470	1,568		
			386		19,682	1,789		80	
168	208	133	79		3,397	1,549			
6,323		66		4,241	1,432	10,365	15,239	319	
107		4,106				8,183	107		
	9,689	9,477	2,637		2,234	6,380		1,548	1,050
		2,880	5,016		6,976			97	1,147
			81	2,395			12,223		
1,725		134			2,075	1,821			
		4,464	21,035		2,974	1,589			175
7,116	29,971	15,260	1,828		2,402	46,833		1,168	30,504

#### 2018

				Expo	rters			
Importers	World	Angola	Azerbaijan	Canada	Colombia	Iran (Islamic Rep. of)	Iraq	Kazakhstan
Australia	17,674	39						
Bahrain	10,951	••						••
Belarus	18,244							••
Belgium	33,017	107		167		130	1,296	••
Brazil	9,530						771	
Canada	39,311		1,706		358			
Chile	8,553			90	119			
China	461,886	47,388	547	477	10,768	28,063	45,044	2,287
Finland	11,511							
France	52,727	1,124	1,089	95		3,201	1,189	8,142
Germany	85,211	85	3,063	238		273	3,031	6,821
Greece	24,330					2,497	10,904	3,071
India	226,500	6,473	575	133	895	24,402	47,838	804
Indonesia	15,404	1,247	884					
Italy	62,053	956	11,793	775		6,179	9,078	2,887
Japan	149,208	331			227	5,299	2,217	1,292
Korea, Republic of	150,281			162	135	7,835	18,742	7,522
Netherlands	54,306			51		1,433	6,423	
Philippines	11,702							
Poland	26,847					127	427	695
Portugal	12,651	2,069	1,667	183			573	1,124
Singapore	55,189						1,305	364
South Africa	18,706	2,352						
Spain	67,586	2,693	1,272	1,137	755	4,894	4,678	4,476
Sweden	19,969						272	
Thailand	48,925	4						
Turkey	20,972		30		76	7,108	6,612	1,214
United Kingdom	44,163	80	273	931				
United States	383,263	4,459	660	152,866	14,547		25,561	1,095

2018

				Expo	rters				
Kuwait	Mexico	Nigeria	Norway	Qatar	Russian Federation	Saudi Arabia	United Arab Emirates	United Kingdom	Venezuela (Bolivar. Rep.)
		1,378			213		3,049		
			••			10,861			
					18,244				
4	295	3,931	2,283		12,856	5,696		3,689	434
		2,323				3,206			
	174	679	1,057		220	5,804		519	
								276	
23,212	572	465	1,204	1,348	71,494	56,734	12,199	6,795	16,635
			1,006		10,273				
256		5,806	3,314		7,542	7,950		774	
353	191	5,468	10,044		30,969	1,425		6,685	666
					2,794	1,797		261	
11,381	9,315	16,827		2,301	2,221	39,489	16,052	100	17,453
		4,509	89	56		4,825			
1,041		2,274	1,219		5,679	7,236		168	138
11,502	1,256			10,479	6,650	57,820	38,345		
21,724	4,339	1,217	692	952	5,337	42,991	9,773	4,254	
3,545	819	3,202	5,988		21,787	1,327		6,136	
3,950		51		326	169	4,272	2,842		
		399	827		20,742	2,115	120	661	
168	142		170		2,472	1,229			
6,956		127		10,078	1,743	10,684	10,650		
		6,745		133		8,780	94		
	9,381	10,264	1,559		1,018	7,492		650	629
		3,812	5,474		6,548	99		357	875
						12,024	17,433		
1,405		490	••		1,898	1,757			
		5,707	17,136		2,256	1,136			102
3,843	32,807	8,656	2,636		3,609	42,919		2,807	24,937

#### Refinery distillation capacity, throughput and output

Thousand metric tons

#### **Table Notes**

**Output** is equal to the sum of "production from refineries" for aviation gasoline, bitumen, gas/diesel oil, ethane, feedstocks, gasoline-type jet fuel, kerosene-type jet fuel, other kerosene, liquefied petroleum gas, lubricants, motor gasoline, naphtha, petroleum coke, other oil products, paraffin waxes, fuel oil, refinery gas and white spirits.

**Throughput** is equal to the sum of "transformation in refineries" for conventional crude oil, feedstocks, other hydrocarbons, additives and oxygenates, and natural gas liquids.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

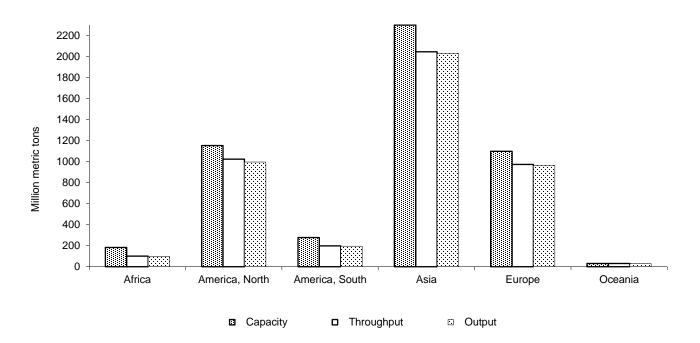


Figure 43: Refinery distillation capacity, throughput and output by region, 2018



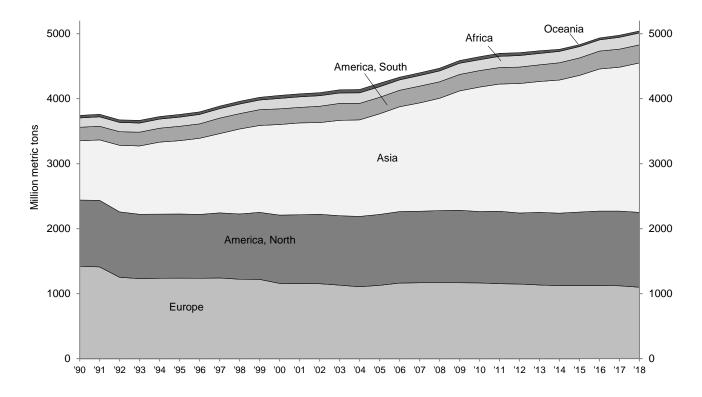


Table 16

Country or area	Year	Capacity	Throughput	Output
World	2015	4,830,837	4,239,220	4,134,955
	2016	4,932,998	4,258,094	4,184,043
	2017	4,975,375	4,345,050	4,264,089
	2018	5,041,451	4,371,129	4,311,094
Africa	2015	175,276	105,054	101,927
	2016	171,444	101,873	100,221
	2017	182,976	100,437	95,477
	2018	183,375	100,948	98,586
Algeria	2015	32,459	29,903	29,713
	2016	32,459	29,355	29,160
	2017	32,459	28,513	28,317
	2018	32,858	30,784	29,914
Angola	2015	4,005	2,600	2,598
	2016	4,005	2,656	2,641
	2017	4,005	2,577	2,547
	2018	4,005	1,852	1,853
Cameroon	2015	*2,100	1,825	1,613
	2016	*2,100	1,805	1,596
	2017	2,100	1,485	1,313
	2018	2,100	1,346	1,180
Chad	2015	998	800	*774
	2016	*998	700	*677
	2017	*998	700	*677
	2018	*998	700	*689
Congo	2015	1,047	737	688
	2016	1,047	723	649
	2017	*1,047	837	716
	2018	*1,047	849	716
Côte d'Ivoire	2015	3,192	3,265	3,172
	2016	3,192	3,474	3,186
	2017	3,192	3,296	*3,064
	2018	*3,192	3,433	3,366
Egypt	2015	38,040	26,087	25,595
	2016	38,040	24,955	25,052
	2017	38,040	27,107	23,888
	2018	38,040	26,328	26,083
Gabon	2015	1,197	802	801
	2016	1,197	850	849
	2017	*1,197	811	793
	2018	*1,197	816	799
Ghana	2015	2,244	104	89
	2016	2,244	769	739
	2017	2,244	24	16
	2018	*2,244	405	309
Libya	2015	18,953	4,368	4,306
	2016	18,953	4,063	4,004
	2017	18,953	4,835	4,772
	2018	18,953	5,647	5,595
Mauritania	2015 2016 2017 2018	998 *998 *998 *998	 	  

Country or area	Year	Capacity	Throughput	Output
Morocco	2015 2016 2017 2018	10,000 7,726 7,725 7,725	0	0
Niger	2015 2016 2017 2018	*1,200 1,200 *1,200 *1,200	734 *881	572 *795
Nigeria	2015 2016 2017 2018	22,195 21,135 22,195 *22,195	3,503 4,722	3,351 4,380
Senegal	2015 2016 2017 2018	1,248 1,248 1,248 1,248	1,231 1,319	1,124 1,202
Sierra Leone	2015 2016 2017 2018	499 499 499 *499		  
South Africa	2015 2016 2017 2018	25,087 24,589 35,062 *35,062	20,933 17,998	20,809 17,918
Sudan	2015 2016 2017 2018	6,074 6,074 6,074 6,074	*4,384 *3,799	4,165 3,609
Tunisia	2015 2016 2017 2018	1,800 1,800 1,800 1,800	1,194 912	1,185 906
United Rep. of Tanzania	2015 2016 2017 2018	743 *743 *743 *743		
Zambia	2015 2016 2017 2018	1,197 1,197 1,197 1,197	544 620	463 564
America, North	2015 2016 2017 2018	1,129,264 1,147,766 1,149,870 1,152,192	1,012,953 1,019,557	987,258 991,031
Aruba	2015 2016 2017 2018	*11,463 *11,463 *11,463 *11,463	 	 
Canada	2015 2016 2017 2018	100,125 102,618 95,342 95,342	91,734 92,850 97,882	87,753 88,966 92,861

Table 16

Country or area	Year	Capacity	Throughput	Output		
Cuba	2015 2016 2017 2018	6,135 6,135 6,135 6,135	*2,305 *2,763	2,205 2,632		
Curaçao	2015 2016 2017 2018	15,960 16,708 16,708 *16,708	8,539 4,598	8,216 4,321		
Dominican Republic	2015 2016 2017 2018	1,721 1,721 1,721 1,721	810 1,171 955 1,279	1,097 899		
Guatemala	2015 2016 2017 2018	247 247 247 *249	56 88	56 85		
Jamaica	2015 2016 2017 2018	1,795 1,155 1,796 1,115		2016 1,795 1,155 2017 1,796 1,115		1,094 1,048
Mexico	2015 2016 2017 2018	81,796 79,900 81,147 81,796	55,732 45,496	50,634 44,357		
Nicaragua	2015 2016 2017 2018	995 995 998 998	682 701	. 656 673		
Trinidad and Tobago	2015 2016 2017 2018	8,379 8,379 8,379 *8,379	7,663	7,303 6,388		
United States	2015 2016 2017 2018	900,648 917,805 925,935 927,606	834,534 842,800 859,220 876,457	827,031 837,767		
America, South	2015 2016 2017 2018	268,119 276,519 277,897 277,789	213,646 205,310	210,744 201,172		
Argentina	2015 2016 2017 2018	31,621 31,621 31,621 31,621	27,387 26,205 25,559 24,082	26,363 25,741		
Bolivia (Plur. State of)	2015 2016 2017 2018	3,394 *3,394 3,394 3,394	2,700	2,417 2,250		
Brazil	2015 2016 2017 2018	120,742 123,309 123,309 123,122	101,798 97,091 93,719	104,248 97,217 93,083		

Country or area	Year	Capacity	Throughput	Output	
Chile	2015 2016 2017 2018	11,628 10,972 11,471 *11,471		9,429 9,648	
Colombia	2015 2016 2017 2018	14,506 20,948 20,948 20,948	17,542 18,323	16,786 17,596	
Ecuador	2015 2016 2017 2018	8,728 8,723 8,786 8,865	8,134 8,350	7,695 7,759	
Paraguay	2015 2016 2017 2018	370 370 370 370			
Peru	2015 2016 2017 2018	9,923 9,923 9,923 9,923	9,632	8,561 9,373	
Suriname	2015 2016 2017 2018	743 745 743 743	514 655	536 674	
Uruguay	2015 2016 2017 2018	2,494 2,494 2,494 2,494	1,888 2,043 585 2,165	1,994 557	
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	63,970 64,020 64,838 64,838	40,556 35,854	39,747 34,492	
Asia	2015 2016 2017 2018	2,103,024 2,184,811 2,214,318 2,299,116	1,934,789 2,006,630	1,911,078 1,979,868	
Azerbaijan	2015 2016 2017 2018	10,000 10,000 5,985 *5,985	6,000 5,878	5,865 5,568	
Bahrain	2015 2016 2017 2018	*13,317 *13,317 *13,317 *13,317	12,854 13,182	13,058 13,303	
Bangladesh	2015 2016 2017 2018	1,502 1,502 1,502 1,920	1,268 1,621	1,174 1,432	
Brunei Darussalam	2015 2016 2017 2018	*1,000 *900 900 900	332 285	306 232	

Table 16

Country or area	Year	Capacity	Throughput	Output
China	2015 2016 2017 2018	*700,000 *748,130 *790,000 *835,611	621,892 621,529 666,438 698,397	633,757 678,284
Georgia	2015 2016 2017 2018	*5,440 *5,440 *5,440 *5,440	*14 26 25 24	25 24
India	2015 2016 2017 2018	230,066 233,966 247,566 249,366	241,175 253,745 260,935 265,465	253,122 260,900
Indonesia	2015 2016 2017 2018	46,957 46,957 46,957 58,210	39,388 44,250 44,402 42,375	37,793 38,923
Iran (Islamic Rep. of)	2015 2016 2017 2018	85,366 92,347 92,347 *92,347	85,812 87,369 89,736 88,823	89,102 87,782
Iraq	2015 2016 2017 2018	25,935 26,434 26,421 40,648	20,556 22,325 26,640 30,130	20,404 23,921
Israel	2015 2016 2017 2018	14,300 14,300 15,225 15,225	14,765 14,172 14,088 14,782	14,174 14,088
Japan	2015 2016 2017 2018	195,347 195,347 175,960 175,511	164,296 165,375 161,082 154,241	163,395
Jordan	2015 2016 2017 2018	4,509 4,509 *4,509 *4,509	3,615 3,193 3,005 2,521	2,861
Kazakhstan	2015 2016 2017 2018	16,958 16,958 16,958 16,958	*14,720 *13,703 *14,523 16,257	12,827 13,595
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	3,541 3,541 3,494 3,494	532 532 532 532	515 515
Korea, Republic of	2015 2016 2017 2018	147,581 152,780 158,404 166,883	144,693 152,491 161,936 165,075	146,029 153,142
Kuwait	2015 2016 2017 2018	46,683 46,683 39,202 36,708	43,450 41,749 33,813 35,101	37,847

Country or area	Year	Capacity	Throughput	Output
Kyrgyzstan	2015 2016 2017 2018	*700 *750 *800 *800	323 387 445 *549	379 431
Malaysia	2015 2016 2017 2018	26,862 26,862 26,862 26,862	23,772 26,596 26,333 24,727	24,249 26,501
Myanmar	2015 2016 2017 2018	2,545 2,545 2,545 2,545	*619 *428 *410 223	394 406
Oman	2015 2016 2017 2018	11,072 11,072 15,112 15,112	10,822 10,877 *11,814 *13,719	10,876 11,712
Other Asia	2015 2016 2017 2018	65,382 65,382 56,898 56,898	46,644 46,994 46,162 48,248	45,114 44,315
Pakistan	2015 2016 2017 2018	18,790 19,370 19,950 20,818	12,133 12,497 *14,440 13,856	12,276 13,751
Philippines	2015 2016 2017 2018	13,766 13,766 *13,766 *13,766	10,349 10,671 10,380 11,743	10,089 9,847
Qatar	2015 2016 2017 2018	14,115 21,397 21,446 21,446	11,970 12,935 15,313 15,947	12,853 15,828
Saudi Arabia	2015 2016 2017 2018	130,166 140,279 142,475 140,960	139,790 149,752 150,891 149,454	146,396 148,540
Singapore	2015 2016 2017 2018	67,057 67,057 67,057 67,057	49,624 51,034 54,785 54,209	50,852 53,684
Sri Lanka	2015 2016 2017 2018	2,494 2,494 2,494 2,494	1,692 1,746 1,646 1,675	1,647 1,636
Syrian Arab Republic	2015 2016 2017 2018	11,963 11,963 11,963 11,963	6,564 7,079 7,861 7,360	6,996 7,768
Tajikistan	2015 2016 2017 2018	*150 150 150 *150	25 25 24 45	24 23

Table 16

Country or area Year		Capacity	Throughput	Output	
Thailand	2015 2016 2017 2018	62,418 61,571 61,571 61,571	61,539 61,267 62,657 62,698	58,277 59,620	
Turkey	2015 2016 2017 2018	33,067 33,067 *33,067 *33,067	29,412 29,751 32,071 28,498	29,605 31,940	
Turkmenistan	2015 2016 2017 2018	13,017 13,017 13,017 13,017	8,906 8,896 8,888 8,882	8,540 8,532	
United Arab Emirates	2015 2016 2017 2018	56,119 56,119 56,119 56,210	51,885 51,141 53,299 51,926	49,179 50,401	
Uzbekistan	2015 2016 2017 2018	7,880 *7,880 *7,880 *7,880	3,653 3,807 3,971 4,215	3,653 3,609	
Viet Nam	2015 2016 2017 2018	9,975 9,975 *9,975 16,484	7,118 7,150 6,128 *10,309	6,656 6,127	
Yemen	2015 2016 2017 2018	6,983 6,983 *6,983 *6,983	942 842 992 1,448	769 867	
Europe	2015 2016 2017 2018	1,125,893 1,123,197 1,119,656 1,098,296	971,510 964,495 983,564 972,919	945,978 968,685	
Albania	2015 2016 2017 2018	1,496 1,494 1,494 1,494	276 184 513 298	183 503	
Austria	2015 2016 2017 2018	10,169 9,661 9,576 9,576	9,277 8,721 8,653 9,281	8,554	
Belarus	2015 2016 2017 2018	24,605 24,605 24,605 27,082	23,196 18,717 18,471 18,778	18,717 18,471	
Belgium	2015 2016 2017 2018	41,658 38,738 38,703 *38,703	35,390 33,755 35,511 34,344	33,631 35,283	
Bosnia and Herzegovina	2015 2016 2017 2018	*11,970 *11,970 *11,970 *11,970	914 836 768 697	826 862	

Country or area Year		Capacity	Throughput	Output
Bulgaria	2015	9,726	6,935	6,681
	2016	9,726	7,268	6,942
	2017	*9,726	7,588	7,145
	2018	*9,726	6,486	6,189
Croatia	2015	10,699	3,376	3,342
	2016	10,699	3,765	3,715
	2017	*10,699	3,946	3,884
	2018	*10,699	3,980	3,930
Czechia	2015	9,676	7,542	7,508
	2016	9,676	5,710	5,604
	2017	*9,676	8,250	8,183
	2018	*9,676	7,864	7,848
Denmark	2015	8,449	9,127	8,923
	2016	8,449	9,141	9,091
	2017	9,027	8,797	8,759
	2018	*9,027	9,152	9,095
Finland	2015	13,017	12,601	12,565
	2016	13,017	14,563	14,308
	2017	13,017	14,806	14,726
	2018	13,017	14,798	14,468
France	2015	70,120	60,752	60,242
	2016	70,120	59,877	59,365
	2017	70,124	59,828	59,348
	2018	70,124	56,115	55,639
Germany	2015	109,122	101,403	99,200
	2016	109,176	102,772	100,381
	2017	104,400	103,934	101,529
	2018	*104,400	99,453	97,088
Greece	2015	*26,234	28,507	28,427
	2016	*26,234	30,232	30,217
	2017	*26,234	31,777	31,765
	2018	*26,234	32,786	32,771
Hungary	2015	8,030	7,557	7,473
	2016	8,030	7,403	7,334
	2017	8,100	7,227	7,153
	2018	8,229	7,737	7,658
Ireland	2015	3,541	3,380	3,365
	2016	3,541	3,233	3,180
	2017	3,741	3,192	3,189
	2018	3,741	3,061	3,058
Italy	2015	100,404	74,675	73,935
	2016	100,418	72,039	71,361
	2017	100,904	75,646	74,944
	2018	100,904	72,400	71,742
Lithuania	2015	9,476	9,018	8,920
	2016	*10,220	9,914	9,790
	2017	*10,220	10,129	10,020
	2018	10,220	9,891	9,783
Netherlands	2015	60,503	59,585	59,091
	2016	60,503	60,492	60,097
	2017	65,835	60,004	59,665
	2018	65,835	61,096	60,917

Table 16

Country or area	Country or area Year		Throughput	Output	
North Macedonia	2015	2,494	0	0	
	2016	2,494	0	0	
	2017	2,494	0	0	
	2018	2,494	0		
Norway	2015	15,910	16,254	16,151	
	2016	15,910	13,028	13,014	
	2017	17,955	16,094	16,178	
	2018	*17,955	17,046	17,036	
Poland	2015	29,250	27,821	27,502	
	2016	29,250	27,470	27,027	
	2017	29,250	27,220	26,692	
	2018	29,250	28,866	28,226	
Portugal	2015	16,459	15,092	15,092	
	2016	16,459	14,915	14,915	
	2017	16,459	15,478	15,478	
	2018	16,459	13,847	13,797	
Republic of Moldova	2015	19 11		11	
	2016	19 16		16	
	2017	19 15		15	
	2018	19 10		10	
Romania	2015	18,968	11,530	11,530	
	2016	18,824	12,194	12,194	
	2017	18,853	12,484	12,461	
	2018	*18,853	12,596	12,583	
Russian Federation	2015	287,200	283,262	282,886	
	2016	287,200	285,274	273,944	
	2017	287,200	289,136	281,548	
	2018	*287,200	286,135	285,776	
Serbia	2015	10,715	3,402	3,382	
	2016	10,715	3,456	3,435	
	2017	10,715	3,659	3,638	
	2018	*10,715	3,880	3,859	
Slovakia	2015	5,736	6,487	6,437	
	2016	5,736	6,274	6,214	
	2017	*5,736	6,150	6,119	
	2018	*5,736	5,950	5,930	
Slovenia	2015 2016 2017 2018	673 673 673 673		  	
Spain	2015	71,197	65,663	64,967	
	2016	71,197	65,696	64,893	
	2017	71,197	66,825	65,766	
	2018	71,197	68,717	67,599	
Sweden	2015	21,796	21,214	21,367	
	2016	21,796	21,085	21,211	
	2017	*21,796	20,703	21,132	
	2018	*21,796	21,994	21,649	
Switzerland	2015	3,392	2,874	2,837	
	2016	3,392	3,007	3,005	
	2017	3,392	2,895	2,877	
	2018	3,392	3,070	3,070	

Country or area	Year	Capacity	Throughput	Output
Ukraine	2015 2016 2017 2018	43,878 43,944 43,566 *19,600	2,949 3,014 3,584 3,890	2,851 3,050
United Kingdom	2015 2016 2017 2018	69,312 69,312 *62,300 *62,300	61,440 60,444 60,281 58,701	
Oceania	2015 2016 2017 2018	29,262 29,262 30,658 30,683	33,503 30,339 29,552 31,024	28,763 27,855
Australia	2015 2016 2017 2018	22,329 22,329 22,329 22,354	27,260 23,410 22,604 24,064	21,873 21,134
New Zealand	2015 2016 2017 2018	5,337 5,337 6,733 6,733	5,635 5,522 5,527 5,532	5,522 5,343
Papua New Guinea	2015 2016 2017 2018	1,596 1,596 *1,596 *1,596	608 1,407 1,421 *1,428	1,368 1,378

#### Production, trade and supply of liquefied petroleum gases (LPG)

Thousand metric tons and kilograms per capita

#### **Table Notes**

**Production** includes output from refineries and plants.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

Figure 45: Production of LPG by region, 1990-2018

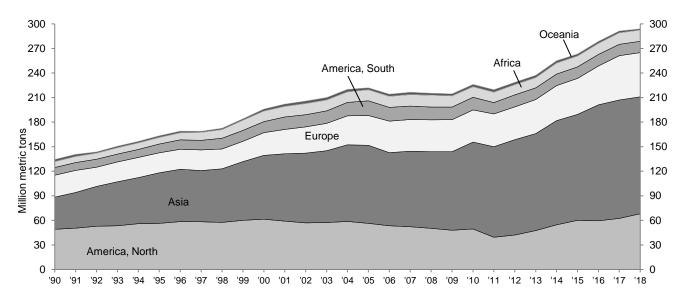
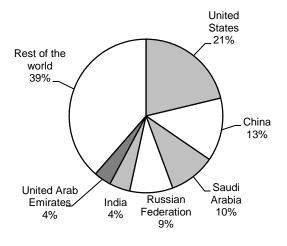


Figure 46: Major LPG producing countries, 2018

Figure 47: Major LPG consuming countries, 2018



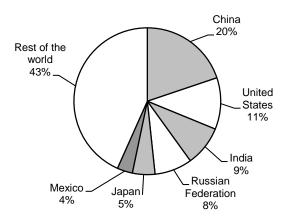


Table 17

		5			Changes in	Sup	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
World	2015 2016 2017 2018	263,403 278,695 291,397 294,067	98,967 109,939 115,259 121,989	106,212 121,705 126,318 126,664	768 -2,408 -146 267	255,390 269,338 280,484 289,126	35 36 37 38
Africa	2015 2016 2017 2018	13,168 13,662 14,122 13,609	6,655 6,986 7,517 7,874	8,619 8,525 8,736 8,390	-479 -176 183 27	11,683 12,299 12,720 13,065	10 10 10 10
Algeria	2015 2016 2017 2018	9,351 9,358 9,155 8,972	  	7,564 7,310 6,932 6,617	-110 9 24 27	1,897 2,039 2,199 2,328	48 50 53 55
Angola	2015 2016 2017 2018	26 252 968 839	166 71 327 336	330 360 957 1,045	*-289 *-148 *110 *-73	151 111 228 203	5 4 8 7
Benin	2015 2016 2017 2018	  	15 16 16 22	  	2 -1 -1	13 17 17 22	1 2 2 2
Botswana	2015 2016 2017 2018	  	6 11 11 12	  	  	6 11 11 12	3 5 5 5
Burkina Faso	2015 2016 2017 2018	  	66 74 85 100	  	*4 *2 *6 *11	62 72 79 89	3 4 4 5
Burundi	2015 2016 2017 2018	  	1 0 0 0	  	  	1 0 0 0	0 0 0 0
Cabo Verde	2015 2016 2017 2018	  	*12 13 *13 *13	  	  	*12 13 *13 *13	*23 24 *24 *24
Cameroon	2015 2016 2017 2018	13 13 11 10	73 80 66 60	  	  	86 93 77 70	4 4 3 3
Central African Rep.	2015 2016 2017 2018	  	2 2 2 2	  	  	2 2 2 2	0 0 0 0
Chad	2015 2016 2017 2018	*59 *52 *52 *52	 	*38 *31 *30 *30	 	*21 *21 *22 *22	*1 *1 *1
Comoros	2015 2016 2017 2018	  	*1 *1 *1 *1	  	  	*1 *1 *1 *1	*1 *1 *1 *2

				s Exports	Changes in	Supply	
Country or area	Year	Production	Imports		stocks	Total	Per capita
Congo	2015 2016 2017 2018	7 7 8 8	  			7 7 8 8	1 1 2 2
Côte d'Ivoire	2015 2016 2017 2018	14 22 *16 23	233 248 *297 341	15 1 1 1	  	232 269 *312 363	10 11 *13 14
Djibouti	2015 2016 2017 2018	  	19 15 *15 *15	  		19 15 *15 *15	21 16 *16 *16
Egypt	2015 2016 2017 2018	1,939 1,852 1,763 1,890	2,333 2,444 2,444 2,327	  	-18 -25 35 0	4,290 4,321 4,172 4,217	46 46 43 43
Equatorial Guinea	2015 2016 2017 2018	542 605 660 587	  	553 604 656 574	*-23 -17	25 24 22 23	21 20 17 17
Eritrea	2015 2016 2017 2018	  	5 6 6 7	  	  	5 6 6 7	1 2 2 2
Eswatini	2015 2016 2017 2018	  	*4 *2 0 4	  		*4 *2 0 4	*4 *2 0 4
Ethiopia	2015 2016 2017 2018	  	7 8 5 5	  	  	7 8 5 5	0 0 0 0
Gabon	2015 2016 2017 2018	13 14 41 41	23 23 36 27	  	 9 	36 37 68 68	18 18 33 32
Gambia	2015 2016 2017 2018	  	*2 *2 *2 *2 *2	  		*2 *2 *2 *2	*1 *1 *1 *1
Ghana	2015 2016 2017 2018	2 114 114 88	198 178 202 306	0 25 40 5		200 267 276 389	7 9 9 13
Guinea-Bissau	2015 2016 2017 2018	  	*3 *3 *3 *3	  	  	*3 *3 *3 *3	*2 *2 *2 *2
Kenya	2015 2016 2017 2018	0 0 0	154 172 190 222	6 3 1 	0 0 0	149 169 189 222	3 3 4 4

Table 17

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Lesotho	2015 2016 2017 2018	  	7 7 9 10			7 7 9 10	3 4 4 5
Liberia	2015 2016 2017 2018	  	*3 *3 *3 *3	  	  	*3 *3 *3 *3	*1 *1 *1 *1
Libya	2015 2016 2017 2018	316 311 320 327	  	52 42 43 46	  	264 269 277 281	41 41 42 42
Madagascar	2015 2016 2017 2018	  	12 13 12 14	  	-1 *6 -2 0	13 8 13 14	1 0 1 1
Malawi	2015 2016 2017 2018	  	*2 *3 *3 *3	  	  	*2 *3 *3 *3	0 0 0 0
Mali	2015 2016 2017 2018	  	11 15 20 *18	  	*-2 0 *4 0	13 15 16 *18	1 1 1 *1
Mauritania	2015 2016 2017 2018	  	*56 62 61 58	  	 -2 *-3	*56 62 64 61	*14 15 15 14
Mauritius	2015 2016 2017 2018	  	72 167 149 169	 *91  	-1 1 74 91	73 75 75 78	58 59 59 62
Morocco	2015 2016 2017 2018	29 0 	2,306 2,472 2,493 2,592	  	-31 7 -59 -13	2,366 2,465 2,552 2,605	67 69 71 71
Mozambique	2015 2016 2017 2018	  	19 19 30 32	  	-1 0 2 -1	19 19 28 33	1 1 1 1
Namibia	2015 2016 2017 2018	  	11 22 37 55	  	  	11 22 37 55	5 9 15 22
Niger	2015 2016 2017 2018	44 35 47 53	2 0 0 1	14 4 *15 16	0 0 0	31 32 32 38	2 2 1 2
Nigeria	2015 2016 2017 2018	39 66 79 48	   57			39 66 79 105	0 0 0 1

				Exports	ts Changes in	Supply		
Country or area	Year	Production	Imports		stocks	Total	Per capita	
Rwanda	2015 2016 2017 2018	  	4 6 11 17			17	0 0 1 1	
Sao Tome and Principe	2015 2016 2017 2018	  	0 0 0 0	  	  	0 0 0 0	*1 0 0 0	
Senegal	2015 2016 2017 2018	5 3 3 3	127 147 151 138	9 14  	0 -1 	123 137 154 141	8 9 10 9	
Seychelles	2015 2016 2017 2018	  	4 3 5 4	  	  	5	44 36 52 37	
Somalia	2015 2016 2017 2018	  	*6 *6 *6 *6	  	  	*6 *6 *6 *6	0 0 0 0	
South Africa	2015 2016 2017 2018	299 420 405 246	53 105 105 114	37 41 60 56	  	315 484 450 304	6 9 8 5	
South Sudan	2015 2016 2017 2018	  	4 3 3 3	  	  	2	0 0 0 0	
Sudan	2015 2016 2017 2018	304 373 329 277	142 57 115 161	  	  	446 430 444 439	11 11 11 10	
Togo	2015 2016 2017 2018	  	10 7 12 12	  	  -1	12	1 1 2 2	
Tunisia	2015 2016 2017 2018	156 160 142 136	384 363 420 443	  	3 -3 0 	526 562	48 47 49 50	
Uganda	2015 2016 2017 2018	  	6 *5 *4 *5	  	  	6 *5 *4 *5	0 0 0 0	
United Rep. of Tanzania	2015 2016 2017 2018	  	71 107 121 128	  	  	107	1 2 2 2	
Zambia	2015 2016 2017 2018	10 5 9 9	  	1 1 1 1	  	9 4 8 8	1 0 0 0	

Table 17

	.,				Changes in	Supply		
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita	
Zimbabwe	2015 2016 2017 2018		20 25 26 26			20 25 26 26	1 2 2 2	
America, North	2015 2016 2017 2018	60,031 59,554 62,389 68,121	9,799 11,739 13,903 15,130	22,972 28,596 32,791 36,096	1,573 -2,023 -277 102	45,284 44,720 43,778 47,053	80 78 76 81	
Anguilla	2015 2016 2017 2018	  	9 9 *9 *9	  	  	9 9 *9 *9	637 630 *590 *590	
Antigua and Barbuda	2015 2016 2017 2018	  	*4 *4 *4 *4	  		*4 *4 *4 *4	*37 *38 *38 *38	
Aruba	2015 2016 2017 2018	  	*11 *11 *11 *11	  	  	*11 *11 *11 *11	*103 *102 *104 *105	
Bahamas	2015 2016 2017 2018	  	19 14 14 19	  	  	19 14 14 19	51 38 37 49	
Barbados	2015 2016 2017 2018	  	7 8 8 8	  	0 0 0 0	7 8 8 8	26 26 27 27	
Belize	2015 2016 2017 2018	1 1 1 1	21 23 25 27	  	  	22 24 26 28	60 66 70 73	
Bermuda	2015 2016 2017 2018	  	3 26 4 16	  	  	3 26 4 16	54 403 70 247	
Bonaire, St Eustatius, Saba	2015 2016 2017 2018	  	*8 *8 *9 *9	  	  	*8 *8 *9 *9	*338 *336 *335 *350	
Canada	2015 2016 2017 2018	1,272 1,165 1,524 1,362	123 244 249 200	356 137 144 120	-121 -110 33 -9	1,160 1,382 1,596 1,451	32 38 43 39	
Cayman Islands	2015 2016 2017 2018	  	4 5 5 4	  	  	4 5 5 4	65 80 79 64	
Costa Rica	2015 2016 2017 2018	  	140 158 173 167	  	-3 1 4 -4	143 157 169 171	29 32 34 34	

Country		<b>.</b>			Changes in	Supply		
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita	
Cuba	2015 2016 2017 2018	51 36 51 30	79 77 115 135		*-28  	130 141 167 165	12 12 15 15	
Curaçao	2015 2016 2017 2018	59 45 24 18	0 0 	49 38 20 15		10 7 4 3	63 43 25 18	
Dominica	2015 2016 2017 2018	  	*2 *2 *2 *2	  	  	*2 *2 *2 *2	*33 *33 *32 *32	
Dominican Republic	2015 2016 2017 2018	7 16 11 14	918 961 977 1,012	  	4 -2 -2 3	921 980 989 1,023	90 94 94 96	
El Salvador	2015 2016 2017 2018	0 0 	287 311 322 449	6 110 142 137	  	281 201 180 312	44 32 28 49	
Greenland	2015 2016 2017 2018	  	0 0 0 0	  	  	0 0 0 0	1 1 1 *1	
Grenada	2015 2016 2017 2018	  	4 4 4 4	  	  	4 4 4 4	41 37 38 39	
Guatemala	2015 2016 2017 2018	  	340 369 581 544	103 109 169 154	3 8 17 -21	235 251 395 411	14 15 23 24	
Haiti	2015 2016 2017 2018	  	15 20 17 18	  	  	15 20 17 18	1 2 2 2	
Honduras	2015 2016 2017 2018	  	130 135 370 401	387 201 222 205	-384 -218 -13 11	127 152 161 185	14 16 17 19	
Jamaica	2015 2016 2017 2018	7 9 13 11	72 68 87 85	  	0 1 1 1	78 76 99 95	27 26 34 32	
Mexico	2015 2016 2017 2018	5,171 4,722 4,311 3,674	3,488 4,556 5,587 6,169	1 154 178 86	186 39 -54 -36	8,472 9,085 9,774 9,793	70 74 78 78	
Montserrat	2015 2016 2017 2018	  	1 0 1 *1	  	0 0 0	1 0 1 *1	101 60 120 *126	

Table 17

				Exports	Changes in	Supply		
Country or area	Year	Production	Imports		stocks	Total	Per capita	
Nicaragua	2015 2016 2017 2018	13 18 20 17	100	  	-1 0 0	118 125	17 19 20 19	
Panama	2015 2016 2017 2018	  	222 222 288 323	0 0 0	23 -40	199 328	48 49 80 76	
Sint Maarten (Dutch part)	2015 2016 2017 2018	  	*2 *2 *2 *2	  	  	*2 *2 *2	*50 *49 *46 *45	
St. Kitts-Nevis	2015 2016 2017 2018	  	*2 *2 *2 *2 *2	  	  	*2 *2 *2 *2	*39 *41 *40 *42	
St. Lucia	2015 2016 2017 2018	  	7 7 9 8	  	  	7 9	38 37 51 46	
St. Vincent-Grenadines	2015 2016 2017 2018	  	11 9 8 8	  	  	0	104 79 68 74	
Trinidad and Tobago	2015 2016 2017 2018	665 561 610 493		494 379 433 362	188 163	-6 14	42 -4 10 -1	
United States	2015 2016 2017 2018	52,785 52,981 55,824 62,501	4,386	21,576 27,468 31,483 35,017	-1,924	31,823 29,643	104 99 91 100	
America, South	2015 2016 2017 2018	14,225 13,993 13,820 13,932	3,953 4,131	1,021 1,185 1,280 1,476	-91	16,956 16,762	41 41 40 40	
Argentina	2015 2016 2017 2018	2,583 2,604 2,577 2,668		855 879 891 1,133	-27 35	1,752 1,651	40 40 38 35	
Bolivia (Plur. State of)	2015 2016 2017 2018	426 533 523 543		49 128 115 107	-22 -38	427 446	40 39 40 40	
Brazil	2015 2016 2017 2018	5,477 5,417 5,492 5,350	1,864 1,777	15 0 1 0	-40 59	7,321 7,209	35 36 35 34	
Chile	2015 2016 2017 2018	305 251 286 434	1,070 1,047	37 12 72 114	-31 -6	1,340 1,267	56 74 69 72	

Country or area		5			Changes in	Supply		
	Year	Production	Imports	Exports	stocks	Total	Per capita	
Colombia	2015 2016 2017 2018	742 800 873 546	1 12 62 81	20 46 35		723 766 900 627	15 16 18 13	
Ecuador	2015 2016 2017 2018	141 252 256 390	890 814 814 957	  	-1 1 -1 0	1,032 1,065 1,071 1,347	64 65 64 79	
Guyana	2015 2016 2017 2018	  	17 16 16 17	  	0 -2 -1 -2	17 18 17 19	22 24 22 24	
Paraguay	2015 2016 2017 2018	  	85 92 84 90	  	2 11 3 4	83 81 81 87	12 12 12 12	
Peru	2015 2016 2017 2018	1,655 1,641 1,551 1,495	19 34 222 378	25 0 54 6	-21 -84 -140 -146	1,670 1,759 1,858 2,012	55 57 59 63	
Suriname	2015 2016 2017 2018	  	14 13 13 13	  	  	14 13 13 13	26 23 24 22	
Uruguay	2015 2016 2017 2018	80 96 22 106	42 38 96 24	  	-1 0 -3 2	123 135 121 128	36 39 35 37	
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	2,816 2,399 2,239 2,400	  	20 120 112 116	  	2,796 2,279 2,127 2,284	93 76 72 79	
Asia	2015 2016 2017 2018	129,325 141,597 144,666 142,895	55,917 63,055 65,649 69,043	53,725 61,673 61,712 57,848	-295 133 -132 51	131,812 142,847 148,735 154,039	30 32 33 34	
Armenia	2015 2016 2017 2018	  	7 4 6 16	  	  	7 4 6 16	2 1 2 5	
Azerbaijan	2015 2016 2017 2018	172 200 212 216	  	15 59 82 82	4 0 -3 1	153 141 133 132	16 14 14 13	
Bahrain	2015 2016 2017 2018	159 162 149 166	  	71 79 66 66	26 18 14 29	62 65 69 71	45 46 46 45	
Bangladesh	2015 2016 2017 2018	18 18 18 15	 	  	  	18 18 18 15	0 0 0 0	

Table 17

2					Changes in	Supply		
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita	
Bhutan	2015 2016 2017 2018	  	7 9 9 10			7 9 9 10	10 12 12 13	
Brunei Darussalam	2015 2016 2017 2018	18 16 17 17	 	  	  	18 16 17 17	43 38 40 40	
Cambodia	2015 2016 2017 2018		162 194 224 245	  	  	162 194 224 245	10 12 14 15	
China	2015 2016 2017 2018	29,344 35,039 36,625 39,156	12,440 16,785 19,219 19,664	1,442 1,323 1,322 1,135	160	40,082 50,340 54,581 57,334	28 36 38 40	
China, Hong Kong SAR	2015 2016 2017 2018	  	378 362 378 373	0 0 	-11	375 373 337 339	52 51 46 46	
China, Macao SAR	2015 2016 2017 2018	  	45 43 42 41	  	  	45 43 42 41	75 70 67 65	
Cyprus	2015 2016 2017 2018	  	54 53 55 54	  	0  1 	54 53 54 54	47 45 46 45	
Georgia	2015 2016 2017 2018	  	15 13 15 21	  	-3 -4 -1 -1	18 16 17 21	5 4 4 5	
India	2015 2016 2017 2018	11,057 11,326 12,380 *12,786	8,885 11,026 11,382 13,235	195 317 359 417	0 0 	22,035 23,403	15 17 17 19	
Indonesia	2015 2016 2017 2018	2,331 2,302 2,033 2,034	6,044 4,435 5,475 5,517	26 65 93 1	 -41	8,349 6,672 7,456 7,549	32 26 28 28	
Iran (Islamic Rep. of)	2015 2016 2017 2018	7,717 8,160 7,523 7,456	0  	4,514 5,344 *5,325 *5,116	0	3,202 2,816 2,198 2,340	41 35 27 29	
Iraq	2015 2016 2017 2018	820 1,369 1,622 1,782	248 297 0	  206	1 -29	1,479 1,665 1,651 1,576	42 45 44 41	
Israel	2015 2016 2017 2018	381 354 362 422	245 273 308 202	167 170 186 164	-2 6	459 478	58 57 58 55	

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Japan	2015 2016 2017 2018	4,320 4,210 4,416 3,755	10,913 10,542 10,740 10,608	90 76 86 66	136 -56 -29 -94	15,007 14,732 15,099 14,391	117 115 118 113
Jordan	2015 2016 2017 2018	80 81 78 65	335 327 368 357	  	  -6	415 408 446 428	45 43 46 43
Kazakhstan	2015 2016 2017 2018	2,068 *2,111 2,315 2,488	1 2 1 0	1,997 1,876 2,031 1,826	0 8 	72 *229 285 662	4 *13 16 36
Korea, Republic of	2015 2016 2017 2018	2,187 2,244 2,773 2,922	5,270 7,250 6,363 6,515	107 164 210 430	-297 78 169 -203	7,647 9,252 8,757 9,210	150 181 171 180
Kuwait	2015 2016 2017 2018	4,892 6,032 6,877 7,042	  	4,791 5,574 6,353 6,462	  	101 458 524 580	26 116 129 140
Kyrgyzstan	2015 2016 2017 2018	13 27 44 55	5 11 45 36	  1	 -1  4	18 39 89 86	3 6 14 14
Lao People's Dem. Rep.	2015 2016 2017 2018	  	4 *4 *4 *4	  	  	4 *4 *4 *4	1 *1 *1 *1
Lebanon	2015 2016 2017 2018	  	239 239 235 229	  	  	239 239 235 229	37 36 34 33
Malaysia	2015 2016 2017 2018	1,823 3,074 2,602 2,732	322 450 405 491	250 326 191 419	-148 -28 -19 -102	2,043 3,226 2,835 2,906	67 105 91 92
Maldives	2015 2016 2017 2018	  	12 14 14 15	  	  	12 14 14 15	27 29 29 29
Myanmar	2015 2016 2017 2018	4 6 8 13	23 22 39 18	  	-3 -2 -3	29 30 50 31	1 1 1 1
Nepal	2015 2016 2017 2018	  	214 313 371 429	  	  	214 313 371 429	8 11 13 15
Oman	2015 2016 2017 2018	564 532 657 689	  	422 376 464 560	  	142 156 193 129	33 35 41 27

Table 17

0 1					Changes in	Supply		
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita	
Other Asia	2015 2016 2017 2018	936 1,108 1,018 1,131	1,353 1,722 1,260 1,742	8 4 26 80	12 -30 -31 50	2,269 2,856 2,283 2,743	96 121 96 116	
Pakistan	2015 2016 2017 2018	641 667 *963 *774	199 498 495 478	  		840 1,165 *1,458 *1,252	4 6 *7 *6	
Philippines	2015 2016 2017 2018	454 460 446 509	832 997 1,194 1,307	5 3 6 1	4 4 13 9	1,277 1,449 1,621 1,806	13 14 15 17	
Qatar	2015 2016 2017 2018	10,115 10,169 10,014 7,158	  	9,152 9,232 9,030 6,148	  	963 937 984 1,010	375 353 361 363	
Saudi Arabia	2015 2016 2017 2018	27,369 29,169 28,804 26,729	  	20,293 25,103 *24,601 23,797	-3 14 -12	7,079 4,052 4,216 2,932	223 125 127 87	
Singapore	2015 2016 2017 2018	318 333 224 833	83 9 218 400	223 236 317 242	  	178 106 125 991	32 19 22 172	
Sri Lanka	2015 2016 2017 2018	10 9 19 22	277 345 205 413	  	-7 -2 -187 -9	293 356 412 444	14 17 19 21	
State of Palestine	2015 2016 2017 2018	  	167 172 190 167	  	  	167 172 190 167	37 37 40 34	
Syrian Arab Republic	2015 2016 2017 2018	144 149 157 152	305 334 381 352	  	  	449 483 538 504	25 28 31 30	
Tajikistan	2015 2016 2017 2018	  	336 349 353 381	  		336 349 353 381	40 40 40 42	
Thailand	2015 2016 2017 2018	6,136 6,352 6,689 6,782	1,370 456 642 682	36 82 247 385	  	7,470 6,726 7,084 7,079	109 98 102 102	
Turkey	2015 2016 2017 2018	899 972 1,015 913	3,462 3,419 3,387 3,312	258 214 269 110	145 -25 41 -14	3,958 4,202 4,092 4,129	50 53 50 50	
Turkmenistan	2015 2016 2017 2018	1,034 998 1,015 1,067	 	  	  	1,034 998 1,015 1,067	186 176 176 182	

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
United Arab Emirates	2015 2016 2017 2018	11,724 12,140 11,841 10,716	40 438 	9,323 10,777 10,448 9,833	  	2,440 1,800 1,393 883	263 192 147 92
Uzbekistan	2015 2016 2017 2018	682 856 830 819	27  	  	-7 12 -2 -1	715 844 832 819	23 27 26 25
Viet Nam	2015 2016 2017 2018	728 799 761 1,408	1,083 1,231 1,364 1,445	300 272  302	  	1,511 1,758 2,125 2,551	16 19 22 27
Yemen	2015 2016 2017 2018	168 *156 *158 73	*517 *419 *261 *285	40  		*645 *575 *419 *358	*24 *21 *15 *13
Europe	2015 2016 2017 2018	43,984 47,489 54,149 53,888	22,434 23,629 23,443 24,906	18,687 20,595 20,577 21,613	50 -229 205 65	47,680 50,752 56,811 57,116	64 68 76 76
Albania	2015 2016 2017 2018	  	184 189 252 196	0 0 0	48 49 90 25	136 140 162 171	47 49 56 59
Andorra	2015 2016 2017 2018	  	*2 *2 *2 *2	  	  	*2 *2 *2 *2	*28 *28 *29 *31
Austria	2015 2016 2017 2018	139 122 102 111	54 53 62 62	83 68 62 86	3 2 -3 -1	107 105 105 88	12 12 12 10
Belarus	2015 2016 2017 2018	472 358 410 465	61 65 251 177	446 346 591 601	-3 -11 -4 -1	90 88 74 42	10 9 8 4
Belgium	2015 2016 2017 2018	671 697 738 829	1,891 1,681 1,671 2,128	764 818 845 672	-8 23 -13 9	1,806 1,537 1,577 2,276	160 135 138 198
Bosnia and Herzegovina	2015 2016 2017 2018	24 19 24 19	45 63 76 72	 	1  	68 82 100 91	20 24 30 27
Bulgaria	2015 2016 2017 2018	102 103 120 97	395 416 407 410	15 19 20 29	11 -6 5 -2	471 506 502 480	65 71 71 68
Croatia	2015 2016 2017 2018	248 248 284 254	36 54 47 41	143 155 188 159	1 2 -1 -3	140 145 144 139	33 34 34 33

Table 17

					Changes in	Sup	pply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Czechia	2015 2016 2017 2018	220 255 358 356	176 183 172 231	140 139 90 134	5 -1	294 441	24 28 41 42
Denmark	2015 2016 2017 2018	123 102 118 126	32	95 78 85 87	-2 3	58 65	11
Estonia	2015 2016 2017 2018	  	26 36 40 25	7 13 14 5	1	22 25	17
Finland	2015 2016 2017 2018	241 275 285 254	776 738 707 785	1 10  5	-57 103	1,060 889	188 193 161 197
France	2015 2016 2017 2018	1,581 1,528 1,618 1,421		1,248 1,188 1,225 1,056	-12 15	3,835 3,693	
Germany	2015 2016 2017 2018	2,656 2,744 3,419 3,224		259 189 201 161	-3 -7 1 13	3,352 4,161	
Greece	2015 2016 2017 2018	703 824 837 847	66 33 43 31	179 250 309 329	-2 6 -3 1	601 574	56 57 54 52
Hungary	2015 2016 2017 2018	362 222 188 185	375	91 94 96 87		500 547	63 51 56 56
Iceland	2015 2016 2017 2018		3 3 2 3	 	  	3 2	9 6
Ireland	2015 2016 2017 2018	46 41 49 58	108 122 132 140			146 156	30 31 33 35
Italy	2015 2016 2017 2018	1,299 1,236 1,348 1,228	2,403 2,361	236 326 305 227	-25 40 -44 -36	3,273 3,448	55 54 57 54
Kosovo	2015 2016 2017 2018	  	35 35 33 31	  	  	35	
Latvia	2015 2016 2017 2018	  	210 232 239 227	121 139 145 142	-1 2 2 	91	

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Lithuania	2015	307	107	211	-1	204	70
	2016	345	79	213	0	211	73
	2017	363	82	242	-2	205	72
	2018	342	82	237	1	186	66
Luxembourg	2015 2016 2017 2018	  	12 14 10 8	2 3 1 1	 	10 11 9 7	18 19 15 12
Malta	2015 2016 2017 2018	  	23 17 24 27	  	 1 -3 2	23 16 27 25	53 37 62 57
Montenegro	2015 2016 2017 2018	  	20 19 19 20	  	2 2 2 2	18 17 17 18	29 27 27 29
Netherlands	2015	1,745	4,531	2,546	74	3,656	216
	2016	1,650	3,686	2,420	-107	3,023	178
	2017	1,557	3,217	2,056	-21	2,739	161
	2018	1,481	3,958	2,167	30	3,242	190
North Macedonia	2015 2016 2017 2018	0 0 0	72 79 79 80	1 2 2 2	0 0 1 1	70 77 77 78	34 37 37 37
Norway	2015	6,860	142	5,926	118	958	184
	2016	6,852	363	6,347	-83	951	181
	2017	7,380	206	6,459	21	1,106	209
	2018	6,902	283	7,419	35	-269	-50
Poland	2015	575	2,035	216	-6	2,400	63
	2016	601	2,196	259	12	2,526	66
	2017	545	2,488	448	-2	2,587	68
	2018	605	2,562	545	3	2,619	69
Portugal	2015	175	741	72	-1	845	81
	2016	240	685	66	7	852	83
	2017	214	595	32	-5	782	76
	2018	205	547	63	15	674	66
Republic of Moldova	2015 2016 2017 2018	  	74 77 72 72	0 0 0 0	-2 -1 0 1	76 78 72 71	19 19 18 18
Romania	2015	567	169	244	0	492	25
	2016	597	179	297	-1	480	24
	2017	617	233	312	5	533	27
	2018	624	226	324	-2	528	27
Russian Federation	2015	18,622	125	3,686	-46	15,107	104
	2016	22,259	112	4,877	-46	17,540	121
	2017	27,605	143	4,461	81	23,206	159
	2018	28,730	99	4,945	-5	23,890	164
Serbia	2015	176	146	59	0	263	37
	2016	166	183	66	-2	285	40
	2017	127	144	54	-6	224	32
	2018	83	120	51	4	148	21

Table 17

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Slovakia	2015 2016 2017 2018	181 176 177 180	43 49 54 67	63 69 65 82	2 -2 -1 1	159 158 167 164	29 29 31 30
Slovenia	2015 2016 2017 2018	  	81 80 88 94	0 0 	-1 0 2 1	82 80 86 93	40 39 41 45
Spain	2015 2016 2017 2018	1,699 1,541 1,401 1,311	780 1,443 1,296 1,366	395 462 563 474	7 -40 -90 55	2,077 2,562 2,224 2,148	45 55 48 46
Sweden	2015 2016 2017 2018	473 481 421 499	986 1,324 1,215 1,121	568 685 619 575	-58 -26 4 -8	949 1,146 1,013 1,053	97 117 102 106
Switzerland	2015 2016 2017 2018	76 104 107 133	86 71 70 63	3 8 14 21	-2 0 	161 167 163 175	19 20 19 20
Ukraine	2015 2016 2017 2018	341 409 411 397	598 1,081 1,119 1,317	   24	8 27 43 -17	931 1,463 1,487 1,707	21 33 33 39
United Kingdom	2015 2016 2017 2018	3,300 3,294 3,326 2,922	683 904 1,037 1,272	853 972 1,050 872	-14 -8 18 -11	3,144 3,234 3,295 3,333	48 49 49 50
Oceania	2015 2016 2017 2018	2,670 2,399 2,252 1,623	595 577 615 523	1,188 1,131 1,222 1,241	-40 81 -33 71	2,117 1,764 1,678 834	53 44 41 20
Australia	2015 2016 2017 2018	2,468 2,213 2,054 1,422	491 470 512 425	1,149 1,081 1,209 1,234	-49 83 -37 71	1,859 1,519 1,394 542	78 63 57 22
Fiji	2015 2016 2017 2018	  	27 29 30 *35	0 0 1 *3	  	26 29 29 *32	30 33 33 *36
French Polynesia	2015 2016 2017 2018	  	13 11 11 11	  	*2 1 *1	12 10 10 11	42 35 35 39
Kiribati	2015 2016 2017 2018	  	0 0 0 0	  	  	0 0 0 0	2 2 2 *2
Marshall Islands	2015 2016 2017 2018	: : :	0 0 0 0	  	  	0 0 0 0	*3 *3 *3 *3

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Nauru	2015 2016 2017 2018		0 0 0 0	··		0	*1 *1 *1 *1
New Caledonia	2015 2016 2017 2018	  	31 32 37 30		3 . 2	34 35	116 125 127 111
New Zealand	2015 2016 2017 2018	197 173 181 184	24 14	50 12	0	147 183	36 32 39 40
Niue	2015 2016 2017 2018	  	0 0 0 0		 	0	21 *22 *21 *22
Papua New Guinea	2015 2016 2017 2018	5 13 17 *17	1 *1	  		14 17	2 2 2 *2
Samoa	2015 2016 2017 2018	  	5 6 *6 *6		. 0	6 *6	25 30 *31 *31
Tonga	2015 2016 2017 2018	  	2 2 2 2			2 2	16 20 19 21
Tuvalu	2015 2016 2017 2018	  	0 0 0 0	··		0	*12 *12 *11 *11
Vanuatu	2015 2016 2017 2018	  	*1 *1 *1 *1	  		*1 *1 *1	*5 *5 *5 *4
Wallis and Futuna Is.	2015 2016 2017 2018	  	0 0 0 0	••		•	*22 *21 *23 *22

#### Production, trade and supply of motor gasoline

Thousand metric tons and kilograms per capita

#### **Table Notes**

**Production** includes output from refineries and plants, together with quantities from other sources which include any blended biogasoline.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

Figure 48: Production of motor gasoline by region, 1990-2018

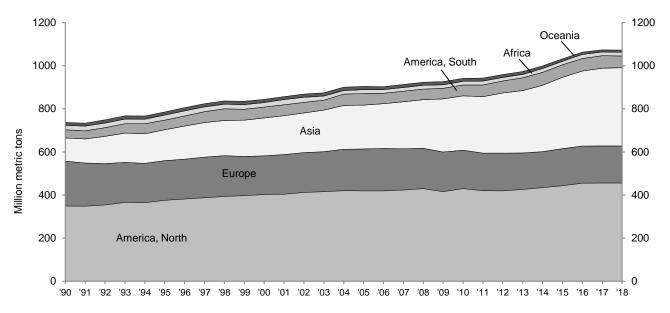


Figure 49: Major motor gasoline producing countries, 2018

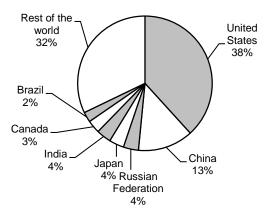
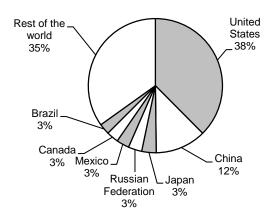


Figure 50: Major motor gasoline consuming countries, 2018



		5			Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
World	2015 2016 2017 2018	1,031,848 1,062,715 1,073,667 1,072,720	214,591 228,320 229,901 240,961	215,029 228,306 233,722 249,997	-1,826 2,990 -1,606 -1,796	1,033,235 1,059,739 1,071,453 1,065,480	140 142 142 140
Africa	2015 2016 2017 2018	16,616 19,410 17,215 17,784	32,914 35,507 35,064 30,131	4,167 2,601 2,402 2,091	136 827 118 -2,220	45,227 51,489 49,759 48,043	38 42 40 38
Algeria	2015 2016 2017 2018	2,798 2,613 2,547 3,749	1,601 1,608 1,554 124	  	21 -13 19 336	4,378 4,234 4,082 3,537	110 104 99 84
Angola	2015 2016 2017 2018	16 33 35 5	1,232 1,030 958 1,794	7 7 8 8	  	1,241 1,057 985 1,792	45 37 33 58
Benin	2015 2016 2017 2018	  	777 1,164 1,191 1,314	  	15 -2 -19 -2	762 1,166 1,210 1,316	72 107 108 115
Botswana	2015 2016 2017 2018	  	307 409 440 460	  	  	307 409 440 460	145 190 200 204
Burkina Faso	2015 2016 2017 2018	  	314 257 320 465	  	*67 *-22 *-45 *51	248 278 365 415	14 15 19 21
Burundi	2015 2016 2017 2018	  	53 62 70 *91	  	1 0 	52 62 70 *91	5 6 6 *8
Cabo Verde	2015 2016 2017 2018	  	8 9 *9 *10	  	  	8 9 *9 *10	15 16 *17 *18
Cameroon	2015 2016 2017 2018	295 292 240 218	237 248 212 192	38 40 39 35	-5 0 	499 500 413 375	21 21 17 15
Central African Rep.	2015 2016 2017 2018	  	*18 *20 *23 *24	  	  	*18 *20 *23 *24	*4 *4 *5 *5
Chad	2015 2016 2017 2018	*264 *231 *231 *235	 	*224 *190 *190 *193	  	*40 *41 *41 *42	*3 *3 *3
Comoros	2015 2016 2017 2018	  	*12 *13 *19 *22		  	*12 *13 *19 *22	*15 *16 *24 *26

0 1		<b>.</b>			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Congo	2015 2016 2017 2018	68 56 64 64	102 134 88 88	  	  	170 190 152 152	35 38 30 29
Côte d'Ivoire	2015 2016 2017 2018	641 693 *888 771	  	288 230 *309 289	-16 0 -17	369 462 *596 482	16 19 *24 19
Dem. Rep. of the Congo	2015 2016 2017 2018	  	303 239 257 264	  	  	303 239 257 264	4 3 3 3
Djibouti	2015 2016 2017 2018	  	12 13 14 *14	  		12 13 14 *14	13 14 15 *14
Egypt	2015 2016 2017 2018	4,487 4,536 4,453 4,827	2,554 2,933 2,765 2,725	153 196 128 299		6,888 7,273 7,090 7,253	75 77 74 74
Equatorial Guinea	2015 2016 2017 2018	  	*59 *62 *65 *67	  	  	*59 *62 *65 *67	*50 *51 *52 *51
Eritrea	2015 2016 2017 2018	  	10 10 10 10	  	  	10 10 10 10	3 3 3 3
Eswatini	2015 2016 2017 2018	  	107 115 123 128	  		107 115 123 128	97 103 109 113
Ethiopia	2015 2016 2017 2018	  	308 367 443 473	  	0 0	308 367 443 473	3 4 4 4
Gabon	2015 2016 2017 2018	72 76 32 32	8 6 44 44	  	  	80 82 76 76	41 41 37 36
Gambia	2015 2016 2017 2018	  	*25 *25 *25 *26	  	  	*25 *25 *25 *26	*12 *12 *11 *11
Ghana	2015 2016 2017 2018	32 244 7 102	1,182 1,236 1,304 1,326	10 272 184 67	0 0 42 0	1,204 1,208 1,084 1,360	43 42 37 46
Guinea	2015 2016 2017 2018	  	281 306 362 279	  	  	281 306 362 279	25 26 30 22

					Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Guinea-Bissau	2015 2016 2017 2018	  	*2 *2 *2 *2 *2			*2 *2 *2 *2 *2	*1 *1 *1 *1
Kenya	2015 2016 2017 2018	0 0 0	3,537 1,810 1,701 1,239	2,441 537 553 	  	1,096 1,273 1,148 1,239	23 26 23 24
Lesotho	2015 2016 2017 2018	  	87 94 99 103	  	  	87 94 99 103	42 45 47 49
Liberia	2015 2016 2017 2018	  	149 *148 *130 *111	  	  	149 *148 *130 *111	33 *32 *28 *23
Libya	2015 2016 2017 2018	497 399 470 391	3,235 3,556 3,484 3,559	  	  	3,732 3,955 3,954 3,950	581 609 601 591
Madagascar	2015 2016 2017 2018	  	103 107 115 108	 	8 *8 5 -11	95 99 111 118	4 4 4 5
Malawi	2015 2016 2017 2018	  	99 123 137 155	  		99 123 137 155	6 7 8 9
Mali	2015 2016 2017 2018	  	*130 *132 *135 *138	*12 10 *10 *10		*118 *122 *125 *128	*7 *7 *7 *7
Mauritania	2015 2016 2017 2018	  	*35 *39 42 51	  	 *6 *10	*35 *39 36 41	*9 *9 8 9
Mauritius	2015 2016 2017 2018	  	155 169 172 172	  	4 3 -2 -5	151 165 174 177	120 131 138 140
Morocco	2015 2016 2017 2018	186 0 	437 649 650 670	0 1 	20 -24 -41 -22	603 672 691 692	17 19 19 19
Mozambique	2015 2016 2017 2018	  	294 502 522 304	   8	0 *45 96	294 457 426 296	11 16 15 10
Namibia	2015 2016 2017 2018	  	320 341 318 318	  		320 341 318 318	138 145 132 130

2		<b>.</b>			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Niger	2015 2016 2017 2018	174 184 228 197	23 0 0 1	71 90 *94 101	0 0 0 	94	6 5 6 4
Nigeria	2015 2016 2017 2018	261 931 675 368	10,366 13,557 12,461 8,028	  	 851 73 -2,536	10,627 13,637 13,063 10,932	59 73 68 56
Rwanda	2015 2016 2017 2018	  	88 96 96 98	  	  	88 96 96 98	8 8 8 8
Sao Tome and Principe	2015 2016 2017 2018	  	*8 *9 *9 *9	  	  	*8 *9 *9 *9	*42 *43 *43 *44
Senegal	2015 2016 2017 2018	101 116 97 93	81 68 94 134	25 23 2	-1 	165 162 189 227	11 11 12 14
Seychelles	2015 2016 2017 2018	  	19 20 27 41	  		19 20 27 41	204 211 282 423
Sierra Leone	2015 2016 2017 2018	  	*74 *76 *76 *69	  	  	*74 *76 *76 *69	*10 *10 *10 *9
Somalia	2015 2016 2017 2018	  	*34 *34 *34 *34	  	  	*34 *34 *34 *34	*2 *2 *2 *2
South Africa	2015 2016 2017 2018	5,583 7,693 5,983 5,668	1,383 1,033 1,565 1,624	803 858 764 979	••	6,784	111 140 119 109
South Sudan	2015 2016 2017 2018	  	62 51 45 38	  	  	62 51 45 38	6 5 4 3
St. Helena and Depend.	2015 2016 2017 2018	  	*1 1 *1 *1	  	  	*1 1 *1 *1	*102 117 *117 *116
Sudan	2015 2016 2017 2018	1,054 1,196 1,063 925	 267 349	96 147 122 103		958 1,050 1,209 1,171	25 26 30 28
Togo	2015 2016 2017 2018		98 121 125 155	 	-4 -4 -4 -6	102 125 129 161	14 17 17 20

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Tunisia	2015 2016 2017 2018	 22 79 3	560 516 530 650		33 -15 6 -35	527 553 603 688	47 49 53 59
Uganda	2015 2016 2017 2018	  	558 601 662 689	  	  	558 601 662 689	15 15 16 16
United Rep. of Tanzania	2015 2016 2017 2018	  	827 813 752 753	  	  	827 813 752 753	16 15 14 13
Zambia	2015 2016 2017 2018	87 95 124 136	270 248 188 137	  	  	357 343 312 273	22 21 18 16
Zimbabwe	2015 2016 2017 2018	  	372 328 328 454	  	  	372 328 328 454	27 23 23 31
America, North	2015 2016 2017 2018	442,971 455,018 455,918 455,695	57,933 63,757 61,955 67,172	37,480 44,388 46,452 49,654	-1,823 819 85 981	465,246 473,568 471,337 472,233	819 827 816 811
Anguilla	2015 2016 2017 2018	  	7 *7 *6 *6	  	  	7 *7 *6 *6	462 *457 *432 *434
Antigua and Barbuda	2015 2016 2017 2018	  	*43 *44 *44 *45	*3 *3 *3	  	*40 *41 *41 *42	*427 *434 *430 *436
Aruba	2015 2016 2017 2018	  	*63 *63 *65 *66	  	  	*63 *63 *65 *66	*602 *598 *617 *620
Bahamas	2015 2016 2017 2018	  	150 112 173 322	1 0 *1 	  	149 112 172 322	397 295 451 834
Barbados	2015 2016 2017 2018	  	94 95 90 87	  	5 5 -1 	89 90 90 87	311 316 316 302
Belize	2015 2016 2017 2018	  	83 76 75 78	  	  	83 76 75 78	231 206 199 203
Bermuda	2015 2016 2017 2018	: :	15 22 18 21	 	-9 0 0	24 22 18 21	376 350 289 342

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Bonaire, St Eustatius, Saba	2015 2016 2017 2018	  	*10 *10 *10 *10	   		*10 *10 *10 *10	*399 *400 *402 *405
British Virgin Islands	2015 2016 2017 2018	  	*15 *15 *12 *11	  	  	*15 *15 *12 *11	*497 *494 *392 *369
Canada	2015 2016 2017 2018	32,392 33,983 35,699 33,343	2,887 3,785 3,477 4,011	7,155 7,301 8,144 6,588	-261 -81 -19 78	28,385 30,548 31,051 30,688	788 840 845 828
Cayman Islands	2015 2016 2017 2018	  	39 37 40 48	  		39 37 40 48	632 591 631 743
Costa Rica	2015 2016 2017 2018	  	837 926 1,005 925	  	-21 21 10 -17	858 905 995 942	177 185 201 188
Cuba	2015 2016 2017 2018	446 185 139 212	320 299 169 254	376 *246 *45 *212	  	390 238 262 254	34 21 23 22
Curaçao	2015 2016 2017 2018	1,818 1,788 1,107 808	70 71 71 70	1,818 1,788 1,107 808	  	70 71 71 70	438 441 438 430
Dominica	2015 2016 2017 2018	  	*10 *10 *10 *10	  	0 0 0 0	*10 *11 *10 *10	*145 *148 *141 *145
Dominican Republic	2015 2016 2017 2018	158 229 189 256	806 819 866 908	 	-10 7 1 -20	974 1,041 1,055 1,184	95 100 100 111
El Salvador	2015 2016 2017 2018	  	551 591 642 662	  2	  	551 591 642 660	87 93 100 103
Greenland	2015 2016 2017 2018	  	13 15 16 16	  	-1 -1 -1 *-1	14 16 16 17	247 287 288 293
Grenada	2015 2016 2017 2018	  	26 24 25 26	  	0 0 0 -2	26 24 25 28	237 217 224 254
Guatemala	2015 2016 2017 2018	  	1,303 1,387 1,605 1,629	132 106 51 33	-15 -17 27 -3	1,187 1,297 1,527 1,599	73 78 90 93

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Haiti	2015 2016 2017 2018	  	196 222 259 321		  	196 222 259 321	18 20 24 29
Honduras	2015 2016 2017 2018	  	540 601 643 689	  11	-66 1 12 10	606 600 631 668	66 65 67 70
Jamaica	2015 2016 2017 2018	151 133 143 119	317 397 379 378		4 -6 7 	465 536 515 497	161 184 176 169
Mexico	2015 2016 2017 2018	15,785 13,563 10,715 8,654	17,353 20,575 21,695 24,129		-514 280 10 157	33,652 33,858 32,400 32,626	276 275 260 259
Montserrat	2015 2016 2017 2018	  	6 3 3 *3	 	  	6 3 3 *3	1,188 583 581 *601
Nicaragua	2015 2016 2017 2018	100 91 101 96	196 240 252 227	  	-3 1 0	299 330 353 323	48 52 55 50
Panama	2015 2016 2017 2018	  	768 874 912 903		-69 -26 -47 -30	836 900 959 933	211 223 234 223
Sint Maarten (Dutch part)	2015 2016 2017 2018	  	*14 *14 *14 *14			*14 *14 *14 *14	*350 *345 *333 *322
St. Kitts-Nevis	2015 2016 2017 2018	  	*17 *18 *18 *18	  	  	*17 *18 *18 *18	*334 *341 *342 *343
St. Lucia	2015 2016 2017 2018	  	*43 *42 *43 *42	  	  	*43 *42 *43 *42	*240 *233 *240 *233
St. Pierre-Miquelon	2015 2016 2017 2018	  	*4 *4 *4 *3	  		*4 *4 *4 *3	*634 *657 *663 *582
St. Vincent-Grenadines	2015 2016 2017 2018	  	22 26 26 30	  		22 26 26 30	198 241 237 271
Trinidad and Tobago	2015 2016 2017 2018	2,111 2,453 2,007 1,823	0 0 0	1,560 1,972 1,496 1,395	-7 -11 -7 20	558 492 518 408	407 357 374 294

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
United States	2015 2016 2017 2018	390,010 402,592 405,819 410,384	31,117 32,336 29,288 31,210	26,435 32,972 35,605 40,602	-855 646 91 788	395,547 401,310 399,411 400,204	1,233 1,242 1,229 1,224
America, South	2015 2016 2017 2018	57,889 57,784 57,846 54,317	8,598 10,490 12,140 10,162	3,850 3,565 2,729 3,953	-172 -6 -193 -221	62,809 64,715 67,450 60,748	152 156 161 144
Argentina	2015 2016 2017 2018	6,802 6,946 7,451 7,457	11 183 308 457	  *788	-37 61 -34 -47	6,850 7,068 7,793 7,173	159 162 177 162
Bolivia (Plur. State of)	2015 2016 2017 2018	823 1,055 1,035 993	275 150 242 322	  	-66 -75 -80 -65	1,164 1,280 1,357 1,380	107 116 121 122
Brazil	2015 2016 2017 2018	28,402 28,788 29,411 26,295	2,172 2,821 3,323 2,393	451 534 349 1,029	0 33 49 -142	30,123 31,042 32,336 27,801	147 151 156 133
Chile	2015 2016 2017 2018	2,823 2,974 3,055 2,964	488 455 526 549	70 22 40 28	30 -2 44 2	3,211 3,409 3,497 3,483	179 187 189 186
Colombia	2015 2016 2017 2018	3,193 3,038 3,281 4,104	1,397 2,255 2,155 1,096	0 139 46 61	-9 -3 4 -37	4,599 5,157 5,386 5,176	97 107 110 104
Ecuador	2015 2016 2017 2018	995 1,599 1,535 1,513	2,281 1,877 1,923 1,853	21 61 0	-72 12 -31 13	3,326 3,403 3,489 3,352	205 206 208 196
Falkland Is. (Malvinas)	2015 2016 2017 2018	  	0 0 0 0	  		0 0 0 0	59 67 60
Guyana	2015 2016 2017 2018	  	149 153 140 155	 	2 3 -2 -4	147 150 141 159	191 195 182 204
Paraguay	2015 2016 2017 2018	174 216 223 244	459 622 686 814	  	-14 6 -64 -14	647 832 973 1,071	97 123 142 154
Peru	2015 2016 2017 2018	3,174 3,420 3,463 3,349	581 800 892 967	1,916 2,142 2,289 2,042	2 -40 -66 58	1,837 2,118 2,132 2,216	60 68 68 69
Suriname	2015 2016 2017 2018	2 35 64 66	152 136 137 136	 3 5 5		154 168 196 198	276 297 343 343

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Uruguay	2015 2016 2017 2018	519 598 203 588	54 14 430 11	0 0 0 0	-9 -1 -12 14	581 612 645 586	170 179 188 170
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	10,982 9,116 8,125 6,745	580 1,025 1,378 1,408	1,392 664 	0 0 0	10,170 9,477 9,503 8,153	338 317 323 282
Asia	2015 2016 2017 2018	330,946 348,083 361,219 362,976	77,234 79,003 81,919 98,464	77,535 84,514 87,326 100,452	-10 412 -1,210 229	330,655 342,160 357,022 360,758	75 76 79 79
Afghanistan	2015 2016 2017 2018	  	872 580 569 909	  	  	872 580 569 909	25 16 16 24
Armenia	2015 2016 2017 2018	  	130 141 142 139	  	  	130 141 142 139	45 48 48 47
Azerbaijan	2015 2016 2017 2018	1,224 1,153 1,215 1,186	46 81 130 131	5 4 7 	-50 -35 31 19	1,315 1,265 1,307 1,298	137 130 133 130
Bahrain	2015 2016 2017 2018	821 784 744 741		4 4 0 0	39 -1 -53 -102	778 781 797 843	567 548 533 537
Bangladesh	2015 2016 2017 2018	122 133 125 195	34 151 33 33	  	  	156 284 158 227	1 2 1 1
Bhutan	2015 2016 2017 2018	  	25 27 29 35	  	  	25 27 29 35	34 36 39 46
Brunei Darussalam	2015 2016 2017 2018	156 92 73 133	119 181 213 141	  	-2 -5 8 -5	277 278 278 279	668 662 655 650
Cambodia	2015 2016 2017 2018	  	481 491 560 613	  	  	481 491 560 613	31 31 35 38
China	2015 2016 2017 2018	120,251 128,465 133,934 142,647	170 208 16 445	5,893 9,693 10,514 12,879	1,463 1,542 260 -140	113,066 117,438 123,176 130,353	80 83 87 91
China, Hong Kong SAR	2015 2016 2017 2018	: : : : : : : : : : : : : : : : : : : :	512 506 475 482	5 8 11 12	53 30 1 11	454 467 463 459	63 64 63 62

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
China, Macao SAR	2015 2016 2017 2018		76 77 79 86		1 2 1 1	75 75 78 85	125 122 125 135
Cyprus	2015 2016 2017 2018	  	362 356 350 339	  	14 4 0 -5	348 352 350 344	300 301 297 289
Georgia	2015 2016 2017 2018	0 7 2 1	441 576 534 548	1 0 1 1	18 -14 -2 8	423 598 537 540	105 149 134 135
India	2015 2016 2017 2018	35,321 36,593 37,784 38,039	993 476 174 670	15,893 15,417 14,035 12,885	-1,346 0 	21,767 21,652 23,923 25,824	17 16 18 19
Indonesia	2015 2016 2017 2018	9,916 12,089 11,641 11,160	14,714 12,500 13,704 14,093	2 52 68 76	  	24,628 24,537 25,277 25,177	95 94 96 94
Iran (Islamic Rep. of)	2015 2016 2017 2018	16,338 16,798 22,130 17,743	2,699 2,270 3,271 4,516	  		19,037 19,069 25,401 22,259	243 240 315 272
Iraq	2015 2016 2017 2018	1,853 2,117 2,483 2,832	1,394 2,145 2,396 2,526	  	-807 0 	4,054 4,262 4,879 5,358	114 116 130 139
Israel	2015 2016 2017 2018	3,012 2,945 2,766 3,055	491 674 645 843	564 558 487 827	97 -33 10 	2,842 3,094 2,914 3,071	356 382 353 366
Japan	2015 2016 2017 2018	40,808 40,099 39,795 38,117	1,195 622 902 1,576	2,926 2,285 2,771 2,446	-8 18 -77 21	39,085 38,418 38,003 37,226	305 301 298 293
Jordan	2015 2016 2017 2018	653 583 557 483	670 832 923 964	  	 *-31 48 *37	1,323 1,446 1,432 1,410	143 151 146 141
Kazakhstan	2015 2016 2017 2018	2,864 2,938 3,055 3,955	1,362 1,134 1,073 595	0 1 2 20	13 -397 -208 23	4,213 4,469 4,334 4,507	240 251 240 246
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	178 178 178 178	15 17 14 14	  	  	193 195 192 192	8 8 8
Korea, Republic of	2015 2016 2017 2018	17,729 17,266 18,343 19,601	45 161 130 20	9,296 8,911 9,611 10,291	-169 61 12 216	8,647 8,455 8,850 9,114	170 166 173 178

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Kuwait	2015 2016 2017 2018	2,041 2,405 2,113 2,097	  	473 609 522 677	-1,156 -1,577 -1,614 -1,564	2,724 3,373 3,205 2,984	710 852 790 721
Kyrgyzstan	2015 2016 2017 2018	115 171 235 219	625 719 468 632	32 7 7 28		925	116 152 112 126
Lao People's Dem. Rep.	2015 2016 2017 2018	  	173 *170 *167 *170	  	  	173 *170 *167 *170	26 *25 *24 *24
Lebanon	2015 2016 2017 2018	  	1,905 2,026 2,097 1,983	  	  	1,905 2,026 2,097 1,983	292 302 307 289
Malaysia	2015 2016 2017 2018	4,788 4,801 7,855 5,258	7,216 8,139 4,901 10,130	382 436 268 2,941	-75 -261 -47 9	12,765 12,535	386 416 403 395
Maldives	2015 2016 2017 2018	  	39 48 58 69	  		39 48 58 69	85 101 116 133
Mongolia	2015 2016 2017 2018	  	434 385 411 435	  	  	434 385 411 435	145 126 132 137
Myanmar	2015 2016 2017 2018	234 143 145 56	894 1,276 1,091 1,821	  	209 12 -141 		17 27 26 35
Nepal	2015 2016 2017 2018	  	170 289 346 402	  	  	170 289 346 402	6 11 13 14
Oman	2015 2016 2017 2018	3,061 3,018 2,990 2,380	0 0 57 265	50 0 167 0	4	2,855 2,876	692 637 616 581
Other Asia	2015 2016 2017 2018	7,843 9,247 8,463 8,537	149 124 126 99	4,113 4,497 4,201 3,962	198 146 -244 64	4,632	156 200 196 194
Pakistan	2015 2016 2017 2018	1,590 1,839 2,212 2,383	3,926 5,156 5,235 5,591	0 0 	0 0 		28 34 36 38
Philippines	2015 2016 2017 2018	1,983 2,197 2,153 2,435	1,757 1,822 1,991 2,205	195 229 85 230	490 -33 80 169	3,824 3,979	30 37 38 40

0 1			, <u>,</u>		Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Qatar	2015 2016 2017 2018	1,583 1,963 1,937 1,604	  147	162 296 111 129	0	1,421 1,667 1,826 1,622	554 628 670 583
Saudi Arabia	2015 2016 2017 2018	21,165 24,065 23,949 23,418	9,468 8,600 8,488 14,114	7,175 9,054 10,314 17,738	108 322 -170	23,350 23,289 22,293 19,794	736 718 673 587
Singapore	2015 2016 2017 2018	10,046 9,096 9,108 8,491	14,757 15,964 16,683 16,641	23,938 24,650 25,567 27,198	206 *-200 *-400 192	659 610 624 -2,258	118 108 109 -392
Sri Lanka	2015 2016 2017 2018	154 166 165 165	899 957 1,097 1,128	 	217 -341 -227 7	836 1,463 1,489 1,286	40 70 70 61
State of Palestine	2015 2016 2017 2018	  	216 236 233 226	  	0 0  0	216 236 233 226	48 51 49 47
Syrian Arab Republic	2015 2016 2017 2018	539 581 645 604	370 395 442 415	  	  	909 976 1,087 1,019	51 56 64 60
Tajikistan	2015 2016 2017 2018	0 1 1 1	215 194 177 173	  	  	215 195 177 174	25 22 20 19
Thailand	2015 2016 2017 2018	7,186 7,805 8,099 8,417	571 1,131 1,287 1,143	1,109 1,022 1,180 1,246	462 1,060 1,172 1,101	6,186 6,854 7,034 7,213	90 99 102 104
Timor-Leste	2015 2016 2017 2018	  	*23 *22 *22 *23	  	  	*23 *22 *22 *23	*19 *18 *18 *18
Turkey	2015 2016 2017 2018	5,180 5,175 5,444 4,767	  	3,119 2,890 3,172 2,442	-8 45 -32 57	2,069 2,240 2,304 2,268	26 28 28 28
Turkmenistan	2015 2016 2017 2018	2,610 2,610 2,610 2,610		1,105 1,105 1,105 1,105		1,505 1,505 1,505 1,505	270 266 261 257
United Arab Emirates	2015 2016 2017 2018	4,931 5,863 3,819 3,578	3,187 4,004 6,390 8,308	851 2,571 2,862 3,110	 373 	7,267 7,296 6,974 8,776	785 779 735 911
Uzbekistan	2015 2016 2017 2018	1,064 1,134 1,112 1,147	0 0 0	0 0 6	5 3 35 103	1,059 1,131 1,071 1,044	34 36 34 32

Table 18

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Viet Nam	2015 2016 2017 2018	3,511 3,487 3,265 4,668	2,681 2,488 3,180 2,036	243 215 252 208	-59 -26 -34 135	6,227	65 62 66 67
Yemen	2015 2016 2017 2018	76 76 76 76	712 653 610 591	 	  	788 729 686 667	30 27 25 23
Europe	2015 2016 2017 2018	172,386 172,174 171,856 171,986	32,406 33,307 32,294 28,932	91,883 93,158 94,585 93,690	-85 800 -196 -608	111,522	152 149 147 144
Albania	2015 2016 2017 2018	  	159 133 148 133	 	41 26 42 27		41 37 37 36
Andorra	2015 2016 2017 2018	  	19 19 19 21		  	19 19 19 21	238 246 253 271
Austria	2015 2016 2017 2018	1,812 1,759 1,781 2,029	821 800 749 710	973 873 864 1,059	-29 36 13 -48	1,650 1,653	195 189 187 194
Belarus	2015 2016 2017 2018	3,925 3,573 3,481 3,356	35 206 108 20	2,841 2,621 2,411 2,123	7 14 11 -7		118 121 123 133
Belgium	2015 2016 2017 2018	4,965 4,860 4,748 4,173	1,252 1,440 890 1,541	5,132 5,136 4,687 4,269	-20 -15 -37 99	1,179 988	98 104 87 117
Bosnia and Herzegovina	2015 2016 2017 2018	130 140 142 116	124 132 118 118	53 78 60 59	8 -7 10 -7	193 201 190 182	56 59 57 55
Bulgaria	2015 2016 2017 2018	1,788 1,785 1,848 1,508	234 215 269 216	1,559 1,524 1,646 1,262	-33 7 -9 -6	469 480	69 66 68 66
Croatia	2015 2016 2017 2018	843 864 1,005 895	218 194 160 134	519 517 643 479	10 7 9 51	534	126 127 123 120
Czechia	2015 2016 2017 2018	1,653 1,213 1,638 1,519	518 805 583 716	593 403 624 567	3 8 -4 64	1,607	149 151 150 150
Denmark	2015 2016 2017 2018	2,404 2,167 2,309 2,256	668 494 390 428	1,336 1,087 1,222 1,185	24 -20 -25 -32	1,594 1,502	301 279 262 266

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Estonia	2015 2016 2017 2018	  	402 482 455 513	142 256 167 266	25 -25 26 -22	235 251 262 269	179 191 199 203
Faeroe Islands	2015 2016 2017 2018	  	*11 *11 *11	  	  	*11 *11 *11 *11	*220 *221 *225 *225
Finland	2015 2016 2017 2018	3,678 4,210 4,531 4,570	499 594 606 579	2,384 2,991 3,123 3,005	8 -27 12 21	1,785 1,840 2,002 2,123	326 335 363 384
France	2015 2016 2017 2018	11,885 11,913 12,085 11,264	699 1,220 1,467 1,366	4,109 4,607 4,349 3,172	-83 110 13 -58	8,558 8,416 9,190 9,516	128 126 137 142
Germany	2015 2016 2017 2018	20,127 20,871 20,975 21,923	1,919 1,513 2,158 2,440	4,443 5,051 5,719 5,052	42 89 -210 -16	17,561 17,244 17,624 19,327	215 210 213 233
Gibraltar	2015 2016 2017 2018	  	34 37 40 44	  	  	34 37 40 44	1,008 1,097 1,198 1,299
Greece	2015 2016 2017 2018	4,611 5,169 5,291 5,351	516 560 321 352	2,787 3,398 3,935 4,499	-79 197 40 -136	2,419 2,134 1,637 1,340	227 201 155 127
Hungary	2015 2016 2017 2018	1,202 1,154 1,080 1,187	466 606 598 508	294 331 318 258	35 29 -14 9	1,339 1,400 1,374 1,428	137 144 141 147
Iceland	2015 2016 2017 2018	2 5 5 7	139 136 138 134	  	7 -1 -1 5	134 142 144 136	406 427 431 404
Ireland	2015 2016 2017 2018	640 589 586 628	853 810 915 542	392 350 486 342	9 88	1,096 1,040 927 819	236 221 195 170
Italy	2015 2016 2017 2018	15,820 15,144 15,717 15,639	502 352 140 353	8,532 8,131 8,445 8,483	-86 -138 -9 -142	7,876 7,503 7,421 7,651	130 124 122 126
Kosovo	2015 2016 2017 2018	   	66 69 63 59	  	  	66 69 63 59	37 39 35 33
Latvia	2015 2016 2017 2018	12 13 12 13	237 234 213 201	45 41 37 26	-4 4 -4 	208 202 192 188	104 102 98 97

		5:			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Lithuania	2015	2,425	66	2,298	29	164	56
	2016	2,627	67	2,532	-2	164	57
	2017	2,752	65	2,672	-21	166	58
	2018	2,576	47	2,438	-9	194	69
Luxembourg	2015 2016 2017 2018	  	286 295 303 332	  	-10 4 1 -3	296 291 303 335	522 502 511 555
Malta	2015 2016 2017 2018	  	77 70 84 79	  	1 -7 6 1	76 77 78 78	175 177 178 178
Montenegro	2015 2016 2017 2018	  	41 43 41 39	10 8 7 7	-5 -2 -3 -5	36 37 37 37	57 59 59 59
Netherlands	2015	5,768	9,917	20,828	87	-5,230	-309
	2016	4,105	9,924	19,600	30	-5,601	-330
	2017	3,287	10,787	20,282	-64	-6,144	-361
	2018	4,521	7,636	23,200	-257	-10,786	-632
North Macedonia	2015	0	105	2	0	103	50
	2016	0	107	3	0	104	50
	2017	0	108	4	1	103	49
	2018		104	4	1	99	47
Norway	2015	4,020	301	3,149	17	1,155	222
	2016	3,815	383	3,339	-7	866	165
	2017	4,660	351	3,614	-32	1,429	270
	2018	4,477	390	3,885	4	978	183
Poland	2015	4,177	363	762	-22	3,800	100
	2016	4,207	345	509	20	4,023	106
	2017	4,163	481	221	35	4,388	116
	2018	4,451	468	367	6	4,546	120
Portugal	2015	2,721	137	1,786	1	1,071	103
	2016	2,653	167	1,742	18	1,060	103
	2017	2,754	124	1,885	-48	1,041	101
	2018	2,508	149	1,644	2	1,011	99
Republic of Moldova	2015 2016 2017 2018	  	164 166 164 169	  	1 -1 0 -1	163 167 164 170	40 41 40 42
Romania	2015	2,982	106	1,785	-26	1,329	67
	2016	3,405	127	2,124	54	1,354	68
	2017	3,285	109	1,930	61	1,403	71
	2018	3,381	104	2,165	-58	1,378	71
Russian Federation	2015	39,235	808	4,746	-83	35,380	244
	2016	40,004	171	5,216	232	34,727	239
	2017	38,027	32	4,415	182	33,462	230
	2018	39,053	31	4,210	26	34,849	239
Serbia	2015	484	39	121	0	402	57
	2016	482	51	125	-6	414	59
	2017	499	78	143	14	420	60
	2018	516	68	150	11	423	60

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Slovakia	2015	1,536	237	1,174	0	599	110
	2016	1,535	258	1,157	23	613	113
	2017	1,456	263	1,136	-37	620	114
	2018	1,420	207	1,025	23	579	106
Slovenia	2015 2016 2017 2018	  	551 603 643 610	116 168 220 198	4 11 10 -10	431 424 413 422	208 204 199 203
Spain	2015	9,403	103	4,741	12	4,753	102
	2016	9,765	160	4,442	158	5,325	114
	2017	9,318	417	4,514	-108	5,329	114
	2018	9,451	441	4,347	-129	5,674	122
Sweden	2015	5,230	1,697	3,860	12	3,055	313
	2016	5,116	1,877	3,647	-16	3,362	342
	2017	4,909	1,504	3,830	-161	2,744	277
	2018	5,278	785	3,650	-21	2,434	244
Switzerland	2015	715	1,645	4	-114	2,470	296
	2016	720	1,724	18	-19	2,445	290
	2017	689	1,639	2	-37	2,363	278
	2018	688	1,586	2	-72	2,344	274
Ukraine	2015	659	1,468	29	-16	2,114	47
	2016	*365	*1,806	0	0	*2,171	*49
	2017	802	1,268	7	-1	2,064	46
	2018	56	1,138		23	1,171	26
United Kingdom	2015	17,534	3,904	10,338	146	10,954	166
	2016	17,946	3,901	11,133	7	10,707	161
	2017	18,021	3,273	10,967	56	10,271	154
	2018	17,176	3,411	10,292	49	10,246	153
Oceania	2015	11,040	5,505	112	129	16,304	409
	2016	10,246	6,256	80	138	16,283	403
	2017	9,613	6,529	228	-211	16,125	393
	2018	9,961	6,101	156	43	15,862	382
Australia	2015	9,592	4,046	87	120	13,431	561
	2016	8,757	4,854	54	124	13,433	554
	2017	8,281	5,081	162	-131	13,331	542
	2018	8,587	4,662	112	64	13,073	525
Cook Islands	2015 2016 2017 2018	  	*6 *6 *7 *7	  		*6 *6 *7 *7	*319 *331 *371 *371
Fiji	2015 2016 2017 2018	  	105 114 124 *134	25 26 24 *22	  	80 88 101 *112	92 101 115 *126
French Polynesia	2015 2016 2017 2018	  	51 54 54 55	  	*3 *7 *7 *1	47 47 46 53	174 170 168 193
Kiribati	2015 2016 2017 2018		5 5 7 *7			5 5 7 *7	45 46 61 *61

0 1	\ \ \	<b>.</b>		<b>-</b> .	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Marshall Islands	2015 2016 2017 2018		*12 *12 *12 *12			*12 *12 *12 *12	*200 *199 *202 *204
Micronesia (Fed. States of)	2015 2016 2017 2018	  	18 *18 *18 *18	  		18 *18 *18 *18	164 *162 *161 *162
Nauru	2015 2016 2017 2018	  	*3 3 3 *3	  		*3 3 3 *3	*270 306 284 *273
New Caledonia	2015 2016 2017 2018	  	76 76 75 71	  	-5 4 * 1	73 81 72 73	269 295 259 259
New Zealand	2015 2016 2017 2018	1,448 1,489 1,332 1,374	1,051 982 1,002 984	  42 22	. 8 77	2,501 2,463 2,369 2,340	542 529 504 493
Niue	2015 2016 2017 2018	  	1 *1 *1 *1	  		1 *1 *1 *1	447 *453 *440 *453
Palau	2015 2016 2017 2018	  	6 6 *7 *8	  		6 6 *7 *8	348 337 *393 *447
Papua New Guinea	2015 2016 2017 2018	0 0 0	57 53 64 *64	  	. 2 -16	56 51 80 *80	7 6 9 *9
Samoa	2015 2016 2017 2018	  	29 27 30 28	0 0 0 0	3 *3	25 24 27 28	128 126 138 144
Solomon Islands	2015 2016 2017 2018	  	22 *21 *21 *21	  		22 *21 *21 *21	36 *34 *33 *33
Tonga	2015 2016 2017 2018	  	12 15 17 17	  		12 15 17 17	117 148 165 166
Tuvalu	2015 2016 2017 2018	  	0 0 0 0	  		0 0 0 0	*32 *30 *30 *30
Vanuatu	2015 2016 2017 2018	  	7 8 6 8	  		7 8 6 8	25 28 20 26

0	Year Production	Imports	F. vo anta	Exports Changes in	Changes in	Supply		
Country or area	Teal	Production	imports	Exports	stocks	Total	Per capita	
Wallis and Futuna Is.	2015 2016 2017 2018		*1 *1 *1		 	*1 *1 *1	*99 *101 *103 *103	

#### Production, trade and supply of other kerosene

Thousand metric tons and kilograms per capita

#### **Table Notes**

**Production** includes output from refineries and plants.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

120 120 America, South 100 100 America, North Oceania Africa 80 80 Million metric tons Europe 60 60 40 40 Asia 20 20 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18

Figure 51: Production of other kerosene by region, 1990-2018

Figure 52: Major other kerosene producing countries, 2018

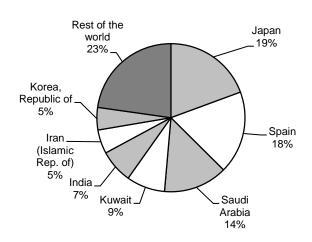
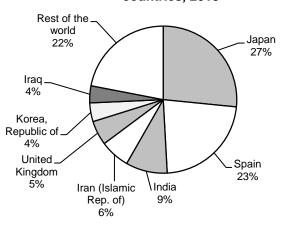


Figure 53: Major other kerosene consuming countries, 2018



					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
World	2015 2016 2017 2018	60,547 59,402 56,440 55,601	6,712	15,785 15,624	1,595 1,387	48,733 46,592	7 7 6 6
Africa	2015 2016 2017 2018	1,125 1,424 1,495 1,263	1,503 1,303	225 199	9 -3	2,693 2,602	3 2 2 2
Algeria	2015 2016 2017 2018	*22 *21 *17 *18		  		. *21 . *17 *19	*1 *1 0 0
Angola	2015 2016 2017 2018	78 85 52 36			  	. 85 . 52	3 3 2 1
Benin	2015 2016 2017 2018	  	21 19 19 49		-2	21 20	2 2 2 4
Botswana	2015 2016 2017 2018	  	10 5 4 4			. 5 . 4	5 2 2 2
Burkina Faso	2015 2016 2017 2018	  	4		*2	6 6	0 0 0 0
Cabo Verde	2015 2016 2017 2018		0 0 0 0		  	0	*1 *1 *1 *1
Cameroon	2015 2016 2017 2018	122 121 100 90	3	39 5	-6 	91	4 4 4 3
Central African Rep.	2015 2016 2017 2018		*2 *2 *3 *4		  	. *2 . *3	0 0 *1 *1
Chad	2015 2016 2017 2018	*4 *4 *4 *4		*2 *2 *2 2		. *2 . *2	0 0 0 0
Comoros	2015 2016 2017 2018		*10 *12 *17 *17		  	. *12 . *17	*13 *14 *21 *20
Congo	2015 2016 2017 2018	7 10 7 7		  	  	. 10	1 2 1 1

0 1		D 1 "			Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Côte d'Ivoire	2015 2016	9				9	0
	2017 2018	 		 	 		
Dem. Rep. of the Congo	2015 2016 2017 2018	  	2 1 1 1	  		2 1 1 1	0 0 0 0
Djibouti	2015 2016 2017 2018	  	5 6 6 *6	  		5 6 6 *6	6 7 7 *7
Egypt	2015 2016 2017 2018	62 63 65 33		56 *58 59 29		6 5 6 4	0 0 0 0
Equatorial Guinea	2015 2016 2017 2018	  	*17 *17 *18 *16	  		*17 *17 *18 *16	*15 *14 *14 *12
Eritrea	2015 2016 2017 2018	  	14 14 15 15	  	  	14 14 15 15	4 4 4 4
Eswatini	2015 2016 2017 2018	  	4 4 4 4	  		4 4 4 4	4 4 4 3
Ethiopia	2015 2016 2017 2018	  	267 160 74 79	  		261 164 74 79	3 2 1 1
Gabon	2015 2016 2017 2018	27 29 22 22	9 8 23 23	 18 18		36 37 27 27	18 18 13 13
Ghana	2015 2016 2017 2018	0 25 2 33		  	  	0 25 2 33	0 1 0 1
Guinea	2015 2016 2017 2018	  	11 17 24 21	  	  	11 17 24 21	1 1 2 2
Guinea-Bissau	2015 2016 2017 2018	  	*9 *9 *9	  	  	*9 *9 *9	*5 *5 *5 *5
Kenya	2015 2016 2017 2018	0 0 0	472 467 448 339	83 76 66 		389 390 382 339	8 8 8 7

		5			Changes in	Sup	ply
Country or area	Year	Production	Production Imports	Exports	stocks	Total	Per capita
Lesotho	2015 2016 2017 2018		23 25 27 28			23 25 27 28	11 12 13 13
Libya	2015 2016 2017 2018	26 25 24 24	93 97 105 85			119 122 129 109	19 19 20 16
Madagascar	2015 2016 2017 2018	  	23 24 21 20		2	25 14 23 23	1 1 1 1
Malawi	2015 2016 2017 2018	  	0 1 1 0		 	0 1 1 0	0 0 0 0
Mali	2015 2016 2017 2018	  	*28 *30 *31 *32		 	*28 *30 *31 *32	*2 *2 *2 *2
Mauritius	2015 2016 2017 2018	  	3 2 2 3		. 1	1 1 1 1	1 1 1
Namibia	2015 2016 2017 2018	  	2 2 2 2		 	2 2 2 2	1 1 1 1
Niger	2015 2016 2017 2018	  	1 1 *1 1		. 0	1 1 *1 1	0 0 0 0
Nigeria	2015 2016 2017 2018	204 401 502 327	1,504 302 265 159			1,708 703 767 486	9 4 4 2
Rwanda	2015 2016 2017 2018	  	*14 19 5 5		. *8 . *-3 . *-3	*14 11 8 8	*1 1 1
Sao Tome and Principe	2015 2016 2017 2018	  	*4 *4 *4 *4			*4 *4 *4 *4	*18 *19 *19 *20
Seychelles	2015 2016 2017 2018	  	*1 *1 *1 *1		 	*1 *1 *1 *1	*10 *10 *10 *9
Sierra Leone	2015 2016 2017 2018	   	*2 *3 *1 *1		  	*2 *3 *1 *1	0 0 0 0

					Changes in	Sup	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Somalia	2015 2016 2017 2018		*33 *31 *31 *31	  	  	*33 *31 *31 *31	*2 *2 *2 *2
South Africa	2015 2016 2017 2018	459 558 619 605	 4 2 2	0 42 40 39	  	459 520 581 568	8 9 10 10
South Sudan	2015 2016 2017 2018	  	3 2 1 2	  	  	3 2 1 2	0 0 0 0
Sudan	2015 2016 2017 2018	17 11 4 10		  	  	17 11 4 10	0 0 0 0
Togo	2015 2016 2017 2018	  	11 72 9 26	  	-6  1 -1	17 72 8 27	2 10 1 3
Tunisia	2015 2016 2017 2018	55 53 59 34	0 0 0	  	2 0 4	54 53 55 34	5 5 5 3
Uganda	2015 2016 2017 2018	  	49 48 46 47	 	  	49 48 46 47	1 1 1 1
United Rep. of Tanzania	2015 2016 2017 2018	  	23 32 21 9	  	  	23 32 21 9	0 1 0 0
Zambia	2015 2016 2017 2018	32 18 18 21	 	16 8 9 10	  	16 10 9 11	1 1 1 1
Zimbabwe	2015 2016 2017 2018	  	48 51 55 59		  	48 51 55 59	3 4 4 4
America, North	2015 2016 2017 2018	1,704 1,467 1,137 1,208	656 542 488 370	614 521 337 219	125 -73 -45 42	1,621 1,561 1,333 1,318	3 3 2 2
Bahamas	2015 2016 2017 2018	  	*3 *3 *3 *3	  	 	*3 *3 *3 *3	*9 *8 *8 *8
Barbados	2015 2016 2017 2018	  	*7 *8 *9 *1	  	0 0 0	*7 *8 *9 *1	*24 *29 *32 *3

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Bermuda	2015 2016 2017 2018		14 28 15 30		 	14 28 15 30	214 436 244 481
British Virgin Islands	2015 2016 2017 2018	  	*4 *4 *3 *3			*4 *4 *3 *3	*137 *136 *108 *101
Canada	2015 2016 2017 2018	832 773 756 728	179 102 72 67	4	. 7 -10	997 868 834 814	28 24 23 22
Cuba	2015 2016 2017 2018	28 2 3 7	*53 *77 *78 *74		 	*81 *78 *81 *80	*7 *7 *7 *7
Dominica	2015 2016 2017 2018	  	0 0 0 0		. 0	0 0 0 0	*3 *4 *6 *6
Dominican Republic	2015 2016 2017 2018	6 9 6 8	  		. 0	5 9 6 8	1 1 1 1
El Salvador	2015 2016 2017 2018	  	1 1 1 1		 	1 1 1	0 0 0 0
Grenada	2015 2016 2017 2018	  	0 0 0 0			0 0 0 0	1 1 1 1
Guatemala	2015 2016 2017 2018	0 0 0	111 114 41 17	94 41 17	l -1	25 27 1 1	2 2 0 0
Haiti	2015 2016 2017 2018	  	70 71 72 73			70 71 72 73	7 7 7 7
Honduras	2015 2016 2017 2018	  	0 14 0 12		9 10	35 23 10 19	4 2 1 2
Montserrat	2015 2016 2017 2018	  	*1 0 0 0			*1 0 0 0	*101 80 *80 *80
Nicaragua	2015 2016 2017 2018	7 6 8 8				7 6 8 8	1 1 1 1

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Panama	2015 2016 2017 2018		1 1 1 1		  	1 1 1 1	0 0 0 0
St. Kitts-Nevis	2015 2016 2017 2018	  	*5 *5 *5 *6	  		*5 *5 *5 *6	*102 *103 *104 *105
St. Lucia	2015 2016 2017 2018	  	1 1 1 2	  	  	1 1 1 2	7 8 8 8
Trinidad and Tobago	2015 2016 2017 2018	34 32 29 24	  	  		34 32 29 24	25 23 21 17
United States	2015 2016 2017 2018	797 646 335 434	207 112 185 80	614 427 292 202	-63 -23	331 394 251 244	1 1 1 1
America, South	2015 2016 2017 2018	342 328 291 255	15 18 33 19	 	2 0	356 345 324 273	1 1 1 1
Argentina	2015 2016 2017 2018	15 14 10 9	  	  	0	15 14 12 11	0 0 0 0
Bolivia (Plur. State of)	2015 2016 2017 2018	16 18 16 18	  	  	-3	16 18 19 18	1 2 2 2
Brazil	2015 2016 2017 2018	6 6 5 5	  	  		6 6 5 5	0 0 0 0
Chile	2015 2016 2017 2018	148 161 161 162	0 0 15	  	1 0 4 1	147 161 172 161	8 9 9
Colombia	2015 2016 2017 2018	72 66 39 4		  	  	72 66 39 4	2 1 1 0
Ecuador	2015 2016 2017 2018	3 2 4 3	  	  		3 2 4 3	0 0 0 0
Falkland Is. (Malvinas)	2015 2016 2017 2018	  	3 3 3 3		  	3 3 3 3	1,052 1,025 888 909

		5:			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Guyana	2015 2016 2017 2018		11 14 15 15		0 2 1 2	11 13 13 13	15 16 17 17
Suriname	2015 2016 2017 2018	  	0 0 0 0	  		0 0 0 0	1 1 1
Uruguay	2015 2016 2017 2018	6 7 5 5	  	  	0 0 0 0	6 7 5 5	2 2 1 2
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	76 54 51 49	  	  		76 54 51 49	3 2 2 2
Asia	2015 2016 2017 2018	44,314 43,723 40,673 39,197	1,457 1,868 2,621 2,435	13,694 13,020 13,079 13,491	603 1,704 1,472 1,868	31,474 30,867 28,743 26,274	7 7 6 6
Afghanistan	2015 2016 2017 2018	  	6 10 36 12	  	  	6 10 36 12	0 0 1 0
Azerbaijan	2015 2016 2017 2018	  	15 11 3 23	  	1 -4 	14 15 3 23	1 1 0 2
Bahrain	2015 2016 2017 2018	0 0 0 0	  	0 0 0 0	-28 -20 -18 -16	28 20 18 16	20 14 12 10
Bangladesh	2015 2016 2017 2018	245 194 237 127	0  	  	  	245 194 237 127	2 1 1 1
Bhutan	2015 2016 2017 2018	  	4 4 3 3	  	  	4 4 3 3	5 5 5 4
Brunei Darussalam	2015 2016 2017 2018	6 6 6 4	  	  	  	6 6 6 4	14 14 14 10
China	2015 2016 2017 2018	1,928 1,613 1,442 1,437	24 27 43 65	16 0 0 0	23 26 -22 -52	1,913 1,613 1,507 1,554	1 1 1
China, Macao SAR	2015 2016 2017 2018	: : :	*3 *2 *2 *2	  		*3 *2 *2 *2	*4 *4 *3 *3

		5			Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Cyprus	2015 2016 2017 2018		11 12 16 12	  	-1  2	12 12 14 12	10 10 12 10
India	2015 2016 2017 2018	7,504 6,041 4,408 4,072	41 0 	10 15 17 19	0  	7,535 6,026 4,391 4,053	6 5 3 3
Indonesia	2015 2016 2017 2018	656 843 788 779	0 4 0 0	74 0 0 0	  	582 847 788 779	2 3 3 3
Iran (Islamic Rep. of)	2015 2016 2017 2018	2,349 2,523 2,820 2,895	  	14 4 0	  	2,335 2,519 2,820 2,895	30 32 35 35
Iraq	2015 2016 2017 2018	1,222 1,148 1,396 1,447	219 206 217 213	  	  	1,441 1,354 1,613 1,660	41 37 43 43
Israel	2015 2016 2017 2018	264 283 	310 255 373 380	253 264 263 301	36 19 -68 -9	285 255 178 88	36 31 22 10
Japan	2015 2016 2017 2018	12,824 12,863 12,796 10,780	731 1,063 1,569 1,457	400 466 421 568	-138 -105 386 -111	13,293 13,565 13,558 11,780	104 106 106 93
Jordan	2015 2016 2017 2018	91 97 54 11	 68 40	  	 11 32 	91 86 90 51	10 9 9 5
Kazakhstan	2015 2016 2017 2018	33 2 0 5	0 0 0 1	0 0  0	-25 -12  4	58 14 0 2	3 1 0 0
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	37 37 37 37	1 1 1	  	  	38 38 38 38	2 2 1 1
Korea, Republic of	2015 2016 2017 2018	2,590 2,716 2,722 2,729	1 3 4 	487 265 685 846	-288 -10 -58 62	2,392 2,464 2,099 1,821	47 48 41 36
Kuwait	2015 2016 2017 2018	6,403 5,505 4,362 4,676	 	6,337 5,406 4,258 4,565	  	66 99 104 111	17 25 26 27
Lao People's Dem. Rep.	2015 2016 2017 2018		*6 *6 *6 *6	  	 	*6 *6 *6 *6	*1 *1 *1 *1

					Changes in	Sup	pply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Malaysia	2015 2016 2017 2018	6 4 10 18	0 0	41 74 58 50	-13 -3	-57 -45	-1 -2 -1 -1
Maldives	2015 2016 2017 2018	  	1 0 0 0	  		0	2 0 1 0
Mongolia	2015 2016 2017 2018	  	5 59 50 109	  		59 50	2 19 16 34
Nepal	2015 2016 2017 2018	  	11 15 17 19	  		15 17	0 1 1 1
Oman	2015 2016 2017 2018	0 6 4 4	  	  		6	0 1 1 1
Other Asia	2015 2016 2017 2018	2 7 2 5	  	  	1	4 5	0 0 0 0
Pakistan	2015 2016 2017 2018	142 125 115 113	0 0 0	  		125 115	1 1 1 1
Philippines	2015 2016 2017 2018	61 67 53 47	26 33 41 34	0 0 0	3 -3	97	1 1 1 1
Saudi Arabia	2015 2016 2017 2018	6,180 7,247 7,332 7,758	 86 105	5,736 *6,219 *7,145 6,871	145 -218	969 510	14 30 15 18
Singapore	2015 2016 2017 2018	312 266 205 250	2 20 18 15	313 286 223 266		0	0 0 0 0
Sri Lanka	2015 2016 2017 2018	75 104 60 35	0 0 	  	69	172 159	8 8
State of Palestine	2015 2016 2017 2018	  	2 2 1 1	  		2	0 0 0 0
Syrian Arab Republic	2015 2016 2017 2018	3 3 3 3	  	  		3	0

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Thailand	2015 2016 2017 2018	1,071 1,756 1,557 1,694	  	13 21 9 4	1,048 1,726 1,541 1,684	10 9 7 6	0 0 0 0
Turkey	2015 2016 2017 2018	58 18 19 23	  	  	14 3 4 15	44 15 15 8	1 0 0 0
Turkmenistan	2015 2016 2017 2018	150 150 150 150	  	  	  	150 150 150 150	27 26 26 26
Uzbekistan	2015 2016 2017 2018	15 12 9 9	  	  	  	15 12 9 9	0 0 0 0
Viet Nam	2015 2016 2017 2018	  2	41 50 49 43	0  1	9	32 50 49 44	0 1 1 0
Yemen	2015 2016 2017 2018	86 86 86 86	  	  		86 86 86 86	3 3 3 3
Europe	2015 2016 2017 2018	13,013 12,407 12,793 13,627	2,695 2,754 2,693 2,450	2,056 2,019 2,009 1,866	65 -46 -40 118	13,587 13,188 13,517 14,094	18 18 18 19
Austria	2015 2016 2017 2018	28 21 15 26	1 0 1 1	  	 	29 21 16 27	3 2 2 3
Belarus	2015 2016 2017 2018	3 5 7 7		0 0 3 0	1 2  6	2 3 4 1	0 0 0 0
Belgium	2015 2016 2017 2018	28 21 31 30	97 84 58 64	59 113 166 302	5	55 10 -82 -198	5 1 -7 -17
Croatia	2015 2016 2017 2018	  	3 4 3 3	  	  	3 4 3 3	1 1 1
Czechia	2015 2016 2017 2018	  	3 2 2 2	  	  	3 2 2 2	0 0 0 0
Finland	2015 2016 2017 2018	 	153 350 140 380	83 78 120 54	  	70 272 20 326	13 49 4 59

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
France	2015 2016 2017 2018	0 0	234 198 211 186	53 51 75 66	0 0	181 147 136 120	3 2 2 2
Germany	2015 2016 2017 2018	0 9 9 2	11 21 22 22	0  	0 2 5 -4	11 28 26 28	0 0 0 0
Greece	2015 2016 2017 2018	1 0 0	1 0 1 1	4 0 0	0 0 -1	-2 0 2 1	0 0 0
Ireland	2015 2016 2017 2018	141 175 159 215	422 493 364 350	18 12 0 21	11 -8 -10 -12	534 664 533 556	115 141 112 115
Italy	2015 2016 2017 2018	523 432 487 721	414 425 655 445	316 425 662 647	50 -10 1 85	571 442 479 434	9 7 8 7
Luxembourg	2015 2016 2017 2018		1 0 1 0	  	  	1 0 1 0	2 0 1 1
Netherlands	2015 2016 2017 2018	549 730 398 211	215 231 392 518	555 692 520 321	-11 18 28 5	220 251 242 403	13 15 14 24
Norway	2015 2016 2017 2018	27 18 87 8	122 52 48 68	416 208 93 62	0 0 19 0	-267 -138 23 14	-51 -26 4 3
Poland	2015 2016 2017 2018	0 0	0 0 1 1	  	 	0 0 1 1	0 0 0 0
Portugal	2015 2016 2017 2018	0 0 	1 1 1 1	  	0 0 	1 1 1 1	0 0 0 0
Romania	2015 2016 2017 2018	11 10 1 1	2 1 1 1	  		13 11 2 2	1 1 0 0
Russian Federation	2015 2016 2017 2018	*385 *298 *252 *315	  	385 298 252 315	  	0 0 0 0	0 0 0 0
Slovakia	2015 2016 2017 2018	1 0	0 0	 	0 0	1 0	0 0

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Spain	2015 2016 2017 2018	9,285 8,673 9,300 10,038			-34 14 -28 46	9,319 8,659 9,328 9,992	200 186 200 214
Switzerland	2015 2016 2017 2018	  	2 2 2 2	  	  	2 2 2 2	0 0 0
Ukraine	2015 2016 2017 2018	  	123 *123 *142 	16 *16 *16	-9 *-9 	116 *116 *126	3 *3 *3
United Kingdom	2015 2016 2017 2018	2,031 2,015 2,047 2,053	890 767 648 405	151 126 102 78	46 -37 -59 2	2,724 2,693 2,652 2,378	41 41 40 35
Oceania	2015 2016 2017 2018	50 52 52 51	26 27 25 26	0 0 0 0	1 -1 2 1	76 80 74 76	2 2 2 2
Australia	2015 2016 2017 2018	7 9 7 6	0 0 	  	-1 0 1 2	8 9 6 4	0 0 0 0
Fiji	2015 2016 2017 2018	  	0 1 0 *1	0 0 0	  	0 1 0 *1	0 2 0 *1
French Polynesia	2015 2016 2017 2018	  	1 1 1 1		  	1 1 1 1	5 4 3 3
Kiribati	2015 2016 2017 2018	  	2 2 2 *2	 	  	2 2 2 *2	17 14 19 *18
New Caledonia	2015 2016 2017 2018	  	7 8 5 8	  	  	7 8 5 8	24 30 19 27
Palau	2015 2016 2017 2018	  	*2 *2 *2 *2	  	   	*2 *2 *2 *2	*113 *113 *118 *117
Papua New Guinea	2015 2016 2017 2018	43 43 45 *45	  	  	0  	43 43 45 *45	5 5 5 *5
Samoa	2015 2016 2017 2018		14 12 14 12	0 0 0	*2 *-1 *1 *-1	12 13 13 13	64 67 66 66

#### Table 19

Country or area	Vaar	Production	lana anta	Exports	Changes in	Supply		
	Year	Production	Imports	Exports	stocks	Total	Per capita	
Tonga	2015 2016 2017 2018		0		 	0	1 1 1 1	
Tuvalu	2015 2016 2017 2018	  	000000000000000000000000000000000000000		 	0 0 0	*4 *3 *4 *3	

#### Production, trade and supply of jet fuels

Thousand metric tons and kilograms per capita

#### **Table Notes**

Data refer to aviation gasoline, gasoline-type jet fuel and kerosene-type jet fuel.

**Production** includes output from refineries and plants.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

Oceania 300 300 Africa 250 250 America, South Million metric tons 200 200 Asia 150 150 100 Europe 100 50 50 America, North 90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18

Figure 54: Production of jet fuels by region, 1990-2018



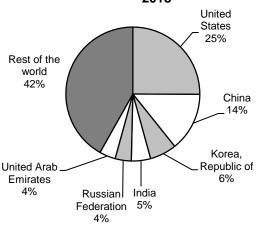
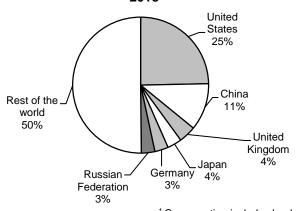


Figure 56: Major jet fuels consuming¹ countries, 2018



<sup>1</sup> Consumption includes bunkers

Country on one	Vasa	Duo divetto e	luan a uta	Funanta	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
World	2015 2016 2017 2018	293,612 301,501 315,194 333,136	76,548 86,795 90,762 91,776	87,612 91,468 95,192 101,842	176,452 184,590	2,115 -174	118,260 126,348	15 16 17 17
Africa	2015 2016 2017 2018	8,391 7,703 7,266 7,179	4,285 5,024 5,810 6,005	4,285 3,080 3,100 3,199	7,376 8,373	19 24	2,252 1,580	2 2 1 2
Algeria	2015 2016 2017 2018	*1,609 *1,635 *1,544 *1,497	  	1,061 1,100 1,102 953	*355	*30 *-35	*128	*3 *3 *3 *3
Angola	2015 2016 2017 2018	413 338 350 228	61 43 33 92	*183 *102 *89 *45	*238	*20 	138 56	5 5 2 1
Benin	2015 2016 2017 2018	  	34 23 26 30	  	36 32 29 30	-9 -4	0	0 0 0 0
Botswana	2015 2016 2017 2018	   	17 13 13 14	  	11		2 2	4 1 1 1
Burkina Faso	2015 2016 2017 2018	  	36 22 27 33	  	31 22 27 30	0 *-1	0 0	0 0 0 0
Burundi	2015 2016 2017 2018	  	3 2 4 *6	  	3 2 4 *6	0	0	0 0 0
Cabo Verde	2015 2016 2017 2018	  	*64 *58 *62 *64	  	*45 *48 *51		*14	*27 *24 *25 *26
Cameroon	2015 2016 2017 2018	107 106 87 79	1 1 2 3	84 83 68 62	21 17		-73 3 4 5	-3 0 0 0
Central African Rep.	2015 2016 2017 2018	  	*16 *15 *16 *17	  	16 15 16 17		0 0 0 0	0 0 0 0
Chad	2015 2016 2017 2018	*28 25 *25 *25	*3 *3 *3 *3	*6 *3 *3 *3	*18 *18		*7 7 *7 *7	0 0 0 0
Comoros	2015 2016 2017 2018		*4 *5 *5 *7	  	*1 *1 *1 *2		*3 *4 *4 *5	*4 *4 *4 *6

Country on area	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Duo di cotto a	luan a uta	Funcion	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Congo	2015 2016 2017 2018	38 45 37 37	50 35 9 9		1.1	0 0	38 39 15 15	8 8 3 3
Côte d'Ivoire	2015 2016 2017 2018	861 634 *327 359	  	742 468 *148 180	159 *166	0	32 6 *13 29	1 0 *1 1
Dem. Rep. of the Congo	2015 2016 2017 2018	  	122 115 117 134	  	115		0 0 0 0	0 0 0 0
Djibouti	2015 2016 2017 2018	  	90 81 *81 *81	  	90 81 *81 *81		0 0 0 0	0 0 0 0
Egypt	2015 2016 2017 2018	2,011 1,790 1,909 2,162	28 28 28 0	940 823 772 962	425 443		593 570 722 576	6 6 7 6
Equatorial Guinea	2015 2016 2017 2018	  	*45 *47 *49 *44	  	*47		0 0 0 0	0 0 0 0
Eritrea	2015 2016 2017 2018	  	7 12 10 10	  	5 10 8 9		2 2 2 1	1 1 1 0
Eswatini	2015 2016 2017 2018	  	*1 1 2 2	  	*1 1 2 2		0 0 0 0	0 0 0
Ethiopia	2015 2016 2017 2018	  	484 595 690 737	  	700		29 7 8 9	0 0 0 0
Gabon	2015 2016 2017 2018	61 65 36 37	27 28 42 42	21 22 23 23	47		3 3 8 2	2 1 4 1
Gambia	2015 2016 2017 2018	  	*15 *15 *15 *16	*1 *1 *1 *1	*14 *14 *14 *15		0 0 0 0	0 0 0 0
Ghana	2015 2016 2017 2018	18 38 0 22	117 121 191 194	  10	127 160	0	39 31 28 21	1 1 1 1
Guinea	2015 2016 2017 2018	  	*30 *31 *31 *31	  	*25 *26 *26 *26		*5 *5 *5 *5	0 0 0 0

Occupation on the control of the con	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Dan desation	lana a mta	Francosta.	Develope	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Guinea-Bissau	2015 2016 2017 2018		*12 *13 *13 *13		*12 *13 *13 *13		0 0 0 0	0 0 0 0
Kenya	2015 2016 2017 2018	0 0 0	314 709 763 675	82 77 218 	301 705 762 674		14 -73 -217 1	0 -1 -4 0
Liberia	2015 2016 2017 2018	  	14 *14 *14 *14	  	*7 *7 *7 *7		8 *8 *8 *8	2 *2 *2 *2
Libya	2015 2016 2017 2018	316 182 436 639		263 127 377 581	51 53 56 56		2 2 3 2	0 0 0
Madagascar	2015 2016 2017 2018	  	57 47 47 55	  	*38 34 39 *41	0	15 14 8 17	1 1 0 1
Malawi	2015 2016 2017 2018	  	7 7 8 9	  	*6 *6 *7 *8		1 1 1	0 0 0 0
Mali	2015 2016 2017 2018	 	*57 *58 *60 *62	  	*57 *58 *60 *62		0 0 0 0	0 0 0
Mauritania	2015 2016 2017 2018	 	*21 *21 15 57	  	*20 20 20 22	 *-7	*1 *1 1	0 0 0
Mauritius	2015 2016 2017 2018	  	269 285 310 304	  	142 142 154 156	2 2	120 142 154 157	95 112 122 124
Morocco	2015 2016 2017 2018	412 0 	371 640 717 743	180 9 	630 642 678 733	-36 14	25	1 1 1 1
Mozambique	2015 2016 2017 2018	  	108 138 129 74	  21	*45 *46 38 3		63 92 28 50	2 3 1 2
Namibia	2015 2016 2017 2018	  	44 44 43 42	  	38 38 37 37		6 6 6 5	3 3 2 2
Niger	2015 2016 2017 2018	  	41 45 57 45	 	41 45 *57 *45		0 0 0 0	0 0 0 0

Country or one	Vasa	Duo divetto a	lusus a uta	Funcion	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Nigeria	2015 2016 2017 2018	15 41 54 27	418 539 636 820		424		156	1 1 1 1
Rwanda	2015 2016 2017 2018	  	45 44 *52 51	  	*23 *22 *28 *30		22 22 *24 21	2 2 *2 2
Sao Tome and Principe	2015 2016 2017 2018	  	*11 *12 *12 *13	  	*10 *11 *11 *12		*1 *1 *1 *1	*5 *5 *5 *5
Senegal	2015 2016 2017 2018	18 0 0	270 224 227 212	  	214 222	9	4 1 5 4	0 0 0
Seychelles	2015 2016 2017 2018	   	40 46 60 32	  	*38 *40 *52 *28		2 6 8 4	24 61 79 41
Sierra Leone	2015 2016 2017 2018	  	*11 *10 *10 *9	  	*11 *10 *10 *9		0 0 0 0	0 0 0 0
Somalia	2015 2016 2017 2018	  	*43 *43 *43 *43	  	43		0	0 0 0 0
South Africa	2015 2016 2017 2018	2,341 2,640 2,379 2,019	247 93 372 333	722 265 299 359	1,661 2,152		389 807 299 680	7 14 5 12
South Sudan	2015 2016 2017 2018	  	75 80 78 62	  	68 68 74 59		2	1 1 0 0
Sudan	2015 2016 2017 2018	111 156 82 38	16 0 52 80	  	*128 *156 *134 *118	0	0	0 0 0
Togo	2015 2016 2017 2018	  	24 50 52 59	  	27 53 54 62	-3 -2	-1 0 0 0	0 0 0 0
Tunisia	2015 2016 2017 2018	  	203 225 250 284	  	202 215 251 284	7 -10	3 9	0 0 1 -1
Uganda	2015 2016 2017 2018	  	108 98 102 108	 	108 98 102 108		0 0 0 0	0 0 0 0

Country or orga	Voor	Draduction	Importo	Cynorto	Dunkara	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
United Rep. of Tanzania	2015 2016 2017 2018		168 185 154 152		104 115 133 131		64 70 21 21	1 1 0 0
Zambia	2015 2016 2017 2018	32 9 0 11	6 17 23 18	  	44 27 26 29	  	-6 0 -2 0	0 0 0
Zimbabwe	2015 2016 2017 2018	  	30 47 57 69	  	47 57	  	0 0 0 0	0 0 0 0
America, North	2015 2016 2017 2018	82,173 84,701 87,414 91,646	13,109 13,942 15,317 14,783	9,700 9,491 10,556 12,393	30,074 30,483		56,728 58,457 61,664 62,100	100 102 107 107
Antigua and Barbuda	2015 2016 2017 2018	  	*76 *77 *77 *78	  	*64 *65 *65 *66		*12 *12 *12 *12	*123 *124 *123 *123
Aruba	2015 2016 2017 2018	  	*85 *85 *88 *89	  	*85 *99		0 0 0 0	0 0 0 0
Bahamas	2015 2016 2017 2018	  	*51 27 30 42	  	*50 *26 *29 *39		*1 1 1 3	*3 3 3 7
Barbados	2015 2016 2017 2018	  	*126 *121 *133 *110	  	*126 *121 *133 *110		0 0 0 0	0 0 0 0
Belize	2015 2016 2017 2018	  	16 16 15 15	  	15		0 0 0 0	1 1 1 1
Bermuda	2015 2016 2017 2018	 	*16 *14 *15 *16	  	*16 *14 *15 *16		0 0 0 0	0 0 0 0
Bonaire, St Eustatius, Saba	2015 2016 2017 2018	  	*8 *8 *8 *8	  	*8 *8 *8		0 0 0 0	0 0 0 0
Canada	2015 2016 2017 2018	4,294 4,578 5,661 5,540	2,845 2,675 2,355 2,895	433 497 1,102 1,144	811 595 598 838	25	5,889 6,162 6,291 6,389	163 169 171 172
Cayman Islands	2015 2016 2017 2018	 	34 37 40 39	  	32 36 38 37		2 2 2 2	32 30 32 30

0	V	Dan de estica	lana a mta	Formanta	Developer	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Costa Rica	2015 2016 2017 2018		182 191 224 217		*165 *185 187 206	-9 13	15 14 24 19	3 3 5 4
Cuba	2015 2016 2017 2018	244 42 68 66	577 273 508 474	*574 *3 *299 *421	122 180 159 75		126 132 117 44	11 12 10 4
Curaçao	2015 2016 2017 2018	658 574 294 219	58 57 58 57	657 573 293 218	59 58 59 58		0 0 0 0	0 0 0 0
Dominica	2015 2016 2017 2018	  	*1 *1 *1	  	*1 *1 *1 *1	  	0 0 0 0	0 0 0 0
Dominican Republic	2015 2016 2017 2018	138 204 154 189	355 305 392 376	  	490 496 539 544	-1 -1	11 14 8 23	1 1 1 2
El Salvador	2015 2016 2017 2018	  	150 167 171 181	 1 6 7	149 166 165 174		1 0 0 0	0 0 0
Greenland	2015 2016 2017 2018	  	15 17 28 *19	  	  	0	16 17 19 *19	283 293 333 *336
Grenada	2015 2016 2017 2018	  	6 7 8 8	  	6 7 7 8		0 0 0 0	0 1 1 0
Guatemala	2015 2016 2017 2018	 	57 62 101 90	2 2 3 6	58 59 97 105		-3 1 1 2	0 0 0 0
Haiti	2015 2016 2017 2018	  	27 27 27 28	  	22 22 22 22	  	5 5 5 6	0 0 0 1
Honduras	2015 2016 2017 2018	  	79 58 70 60	  	67 49 59 51		12 9 11 9	1 1 1 1
Jamaica	2015 2016 2017 2018	99 74 50 61	108 125 172 148	  	198 202 172 210	-4 8	20 1 42 3	7 0 14 1
Mexico	2015 2016 2017 2018	2,182 1,958 1,884 1,589	1,088 1,547 1,987 2,537	0 0 0	3,239 3,487 3,733 4,105	33 12	69 -15 126 -238	1 0 1 -2

Occupation on a second	Va au	Don donation	lasa sata	Form and a	Devalence	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Nicaragua	2015 2016 2017 2018	25 28 29 29	1 2 2 		22 22 25 14	1 3	7	0 1 0 2
Panama	2015 2016 2017 2018	  	635 791 883 960	  	641 676 687 724	44 103	71 94	12 17 23 13
Sint Maarten (Dutch part)	2015 2016 2017 2018	  	*51 *51 *49 *48	  	*51		0	0 0 0 0
St. Lucia	2015 2016 2017 2018	  	*27 *28 *30 *30	  	26 26 29 29		*1 *2 *3	*8 *8 *8 *8
Trinidad and Tobago	2015 2016 2017 2018	553 669 509 397	0 0 2	196 253 183 148	309 224	0 7	107 97	83 78 70 59
United States	2015 2016 2017 2018	73,980 76,575 78,766 83,556	6,435 7,174 7,843 6,259	7,838 8,162 8,670 10,449	23,114 23,279	557 -150	51,916 54,810	157 161 169 170
America, South	2015 2016 2017 2018	11,393 10,698 10,726 11,069	2,276 2,042 1,974 2,121	2,793 2,002 1,682 1,201		-700 -546	4,822 5,138	12 12 12 13
Argentina	2015 2016 2017 2018	1,301 1,298 1,434 1,462	95 129 97 167	 2 5 3	925 982	-8 5	508 539	11 12 12 17
Bolivia (Plur. State of)	2015 2016 2017 2018	191 189 190 180	  	  	81 79	6 7	102 104	9 9 9 9
Brazil	2015 2016 2017 2018	4,635 4,729 5,041 5,200	1,113 775 467 730	85 96 97 366	2,158 2,110	-54 63	3,304 3,238	16 16 16 16
Chile	2015 2016 2017 2018	578 556 592 635	503 605 627 610	0 0 0	548 579	38 14	575 626	30 32 34 34
Colombia	2015 2016 2017 2018	857 1,091 1,221 1,370	88 122 152 54	 37 13	1,282 1,272		-69 64	-7 -1 1 -1
Ecuador	2015 2016 2017 2018	349 342 393 365	31 4 4 4	  	240	-2 -4	118 154	13 7 9 7

Occupation on annual	V	Des desetion	lasar a eta	Formanda	Developer	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Falkland Is. (Malvinas)	2015 2016 2017 2018		0 0 0 0	   			0 0 0 0	59 61 61 62
Guyana	2015 2016 2017 2018	  	14 17 18 18	  	13 16 18 17		1 1 1	1 1 1 1
Paraguay	2015 2016 2017 2018	  	36 49 64 74	  	33 45 60 72		3 3 3 3	0 0 1 0
Peru	2015 2016 2017 2018	620 639 620 633	344 295 442 417	603 630 662 0	840 950 678 686	-695 -617	61 49 338 371	2 2 11 12
Suriname	2015 2016 2017 2018	  	49 44 45 *45	  	*44 *39 *41 *41		5 4 5 *5	9 8 8 *8
Uruguay	2015 2016 2017 2018	94 114 31 105	3 1 59 2	  	93 96 98 105	15 -14	5 5 6 5	2 1 2 1
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	2,768 1,741 1,204 1,119	  	2,105 1,274 881 819	308 246 263 229	0	355 221 60 71	12 7 2 2
Asia	2015 2016 2017 2018	139,919 147,998 156,333 165,939	19,898 25,455 25,559 24,329	53,711 58,504 60,451 63,064	69,501 74,269 76,613 79,987	2,152 939	35,004 38,528 43,889 46,112	8 9 10 10
Afghanistan	2015 2016 2017 2018	  	66 *66 *67	  	*10 *10 *11 *11		57 *56 *57 *57	2 *2 *2 *2
Armenia	2015 2016 2017 2018	   	31 44 54 62	  	*31 44 54 62		0 0 0	0 0 0
Azerbaijan	2015 2016 2017 2018	689 627 588 708	 82 96	237 236 181 305	265 175 159 109	-15 -1	195 231 331 361	20 24 34 36
Bahrain	2015 2016 2017 2018	3,323 3,175 3,116 3,116	  	2,852 2,636 2,678 2,559	436 435 447 483	72 -36	33 32 27 36	24 22 18 23
Bangladesh	2015 2016 2017 2018	1 1 1 1	338 354 394 407	  	339 347 377 408		0 8 18 0	0 0 0 0

Country or one	\\\	Dra duction	lusars a reta	Funcion	Dunkara	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Bhutan	2015 2016 2017 2018		3 3 3 4	  	*3 *3 *3 *4		0 0 0 0	0 0 0 0
Brunei Darussalam	2015 2016 2017 2018	71 45 46 56	12 26 30 26	0 0 0	74 71		3	0 -2 7 2
Cambodia	2015 2016 2017 2018	  	97 105 153 168	  	91 86 108 118	7	19 38	0 1 2 3
China	2015 2016 2017 2018	35,443 39,081 41,797 47,216	3,461 3,494 3,714 4,062	12,357 13,099 13,132 14,670	9,285	156 -127	20,957 23,221	13 15 16 18
China, Hong Kong SAR	2015 2016 2017 2018	   	5,977 6,379 6,305 6,691	0 0 0 0	6,262 6,620	108 -326	10 11	2 1 1 1
Cyprus	2015 2016 2017 2018	  	265 290 290 306	23 16 0	263 299	11 -8	1 0 -1 -4	1 0 -1 -3
Georgia	2015 2016 2017 2018	  	65 71 101 102	  	70 71 95 103	-1 5	1 1 1 0	0 0 0 0
India	2015 2016 2017 2018	11,789 *13,828 14,594 *15,461	0 *338 291 *259	*5,686 *7,270 7,183 *7,389		*57 *10	*1,940	1 *1 3 *3
Indonesia	2015 2016 2017 2018	2,553 2,599 2,613 2,993	956 890 1,673 1,231	2 2 2 2	775 964		2,712 3,320	10 10 13 12
Iran (Islamic Rep. of)	2015 2016 2017 2018	1,390 1,505 1,592 1,633	1 *1 *1 *1	  	1,325 1,488 *1,591 *1,633		66 18 2 *1	1 0 0 0
Iraq	2015 2016 2017 2018	197 211 247 212	330 448 392 407	  	527 659 639 619		0 0 0 0	0 0 0 0
Israel	2015 2016 2017 2018	868 934 1,127 1,325	  	  	911 1,021	••	23 106	3 3 13 28
Japan	2015 2016 2017 2018	12,334 12,461 11,500 12,194	615 653 1,262 1,184	2,661 2,697 2,071 2,495	6,652	-3 61	4,067 3,978	33 32 31 33

Country on one	\/	Dra divetia a	lusa a suta	F.v.s.anta	Dumlana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Jordan	2015 2016 2017 2018	262 291 287 336	34 64 125 67		100 87 63 57	22 20	196 245 329 358	21 26 34 36
Kazakhstan	2015 2016 2017 2018	280 *264 302 387	87 *151 263 232	16 *15 17 21	*306 *330 *477 615	3 7	52 *67 64 -16	3 *4 4 -1
Korea, Republic of	2015 2016 2017 2018	19,135 20,277 21,944 21,571		13,521 14,042 15,160 14,560	4,146 4,632 4,742 4,996	248 178	1,509 1,355 1,864 1,936	30 27 36 38
Kuwait	2015 2016 2017 2018	2,540 2,184 1,731 1,855	  	1,802 1,459 821 941	738 725 909 914		0 0 1 0	0 0 0 0
Kyrgyzstan	2015 2016 2017 2018	  	182 181 80 75	71 55 57 67	103 103 19 4	-3 1	2 26 3 6	0 4 0 1
Lao People's Dem. Rep.	2015 2016 2017 2018	  	45 *45 *46 *48	  	*34 *34 *34 *36		*10	2 *2 *2 *2
Lebanon	2015 2016 2017 2018	  	205 244 270 264	  	*205 *244 *270 *264		0 0 0 0	0 0 0 0
Malaysia	2015 2016 2017 2018	2,751 2,469 3,152 3,342	536 1,404 1,167 517	532 1,035 1,288 801	2,428 2,339 2,494 2,418	-97 -3	420 596 540 639	14 19 17 20
Maldives	2015 2016 2017 2018	  	63 *31 42 39	  	*30 *15 *20 *20		33 *16 22 19	74 *33 44 37
Myanmar	2015 2016 2017 2018	17 16 15 8	114 103 191 174	  	  70	-2		3 2 4 2
Nepal	2015 2016 2017 2018	   	65 128 153 155	 	62 128 127 124		3 0 26 31	0 0 1 1
Oman	2015 2016 2017 2018	668 666 923 1,377	 	149 136 277 1,089	423 184 248 284		96 346 398 4	22 77 85 1
Other Asia	2015 2016 2017 2018	3,831 3,729 3,780 4,087	173 211 106 148	1,022 912 829 959	2,554 2,745 2,845 2,908	36 -11	247 223	19 10 9 15

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Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Pakistan	2015 2016 2017 2018	836 879 914 783	105 158 250 222	98 127 220 171	209 240 *250 *209	0	634 670 693 625	3 3 3 3
Philippines	2015 2016 2017 2018	926 1,020 913 1,040	736 880 1,149 1,201	  	1,313 1,601	8 -2	420 578 463 556	4 6 4 5
Qatar	2015 2016 2017 2018	3,052 3,447 4,683 4,385	  	415 154 1,249 1,248	1,209 1,719 2,747 2,859	1,574 687	0 0 0 0	0 0 0 0
Saudi Arabia	2015 2016 2017 2018	3,672 4,271 4,321 4,572	  	155 679 270 325	2,638 2,803 3,070 3,446		879 789 981 801	28 24 30 24
Singapore	2015 2016 2017 2018	9,692 10,175 11,864 11,862	1,906 2,974 3,086 1,370	4,703 5,843 7,413 5,286	*7,305 *7,537		-1 0 0 0	0 0 0 0
Sri Lanka	2015 2016 2017 2018	155 148 236 237	271 337 282 461	  	523 540		3 3 9 225	0 0 0 11
Syrian Arab Republic	2015 2016 2017 2018	196 211 234 219		125 138 147 139	8		64 66 79 72	4 4 5 4
Tajikistan	2015 2016 2017 2018	  	54 35 18 29	  	54 35 18 29		0 0 0	0 0 0
Thailand	2015 2016 2017 2018	5,587 5,262 5,573 6,097	3 66 37 42	1,138 417 568 756	3,714 3,971 4,149 4,484	62 -13	878 906	11 13 13 12
Timor-Leste	2015 2016 2017 2018	  	*3 *3 *3 *3	  	*3 *3 *3 *3		0 0 0	0 0 0
Turkey	2015 2016 2017 2018	5,027 4,504 4,837 4,787	180 337 194 482	281 196 314 110	3,454	-32 69	1,194	15 17 15 15
Turkmenistan	2015 2016 2017 2018	470 470 470 470	  	  	470 470		0 0 0 0	0 0 0 0
United Arab Emirates	2015 2016 2017 2018	11,734 12,664 12,398 12,931	1,520 3,017 1,521 1,684	5,455 6,765 5,992 8,476	8,269 7,391	 451	5 647 85 -689	1 69 9 -71

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Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Uzbekistan	2015 2016 2017 2018	186 183 146 193	  	   	*92 *91 *73 *90		93 92 74 103	3 3 2 3
Viet Nam	2015	196	1,399	372	938	2	283	3
	2016	377	1,925	554	1,397	3	348	4
	2017	357	1,765	557	860	0	705	7
	2018	444	2,046	658	1,094	1	737	8
Yemen	2015 2016 2017 2018	50 26 31 41	  	38 *20 *25 *37	12 6 6 5	  .1	0 0 0 0	0 0 0 0
Europe	2015	47,187	33,150	16,994	51,504	1,277	10,561	14
	2016	46,376	35,385	18,228	53,045	25	10,462	14
	2017	49,293	36,899	19,218	57,147	-597	10,424	14
	2018	52,838	39,096	21,765	59,460	258	10,452	14
Albania	2015 2016 2017 2018	  	2 10 17 16	  	2 6 *6 6	 3 10 9	0 1 1 1	0 0 0 0
Austria	2015	649	113	38	675	17	32	4
	2016	652	140	25	738	-2	31	4
	2017	614	148	30	713	-10	29	3
	2018	761	84	20	803	-8	30	3
Belarus	2015	388	12	266	111	2	21	2
	2016	329	21	199	119	10	22	2
	2017	401	15	260	126	8	22	2
	2018	370	18	210	144	16	17	2
Belgium	2015	1,686	798	868	1,408	157	51	5
	2016	1,666	490	770	1,401	-39	24	2
	2017	1,942	1,476	1,787	1,540	-11	102	9
	2018	1,842	1,627	1,591	1,642	144	92	8
Bosnia and Herzegovina	2015 2016 2017 2018	  	6 10 10 7	  	6 10 10 7	  	0 0 0 0	0 0 0 0
Bulgaria	2015	179	34	22	172	6	13	2
	2016	207	33	20	207	-3	16	2
	2017	265	14	25	232	2	20	3
	2018	259	24	18	249	-3	19	3
Croatia	2015	105	24	6	111	2	10	2
	2016	116	22	10	118		10	2
	2017	131	31	15	141	-5	11	3
	2018	192	26	10	176	22	10	2
Czechia	2015	186	143	0	285	7	37	3
	2016	60	276		306	-11	41	4
	2017	180	210	1	343	-10	56	5
	2018	181	257	4	396		38	4
Denmark	2015	144	900	65	850	82	47	8
	2016	130	1,063	84	914	114	81	14
	2017	122	928	179	943	-134	62	11
	2018	113	944	57	987	-33	46	8

Caustanaa	\/	Dan dunation	lusus auta	Funcion	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Estonia	2015 2016 2017 2018		73 64 78 71	23 19 19 2	49 45 58 68	0	1 0 1 1	1 0 1 1
Finland	2015 2016 2017 2018	546 572 755 794	315 308 160 166	6 6 7 2	619 621 658 753	-2 -4	237 255 254 189	43 46 46 34
France	2015 2016 2017 2018	3,874 3,790 4,257 4,186	4,733 4,600 4,413 5,761	1,148 1,031 1,216 1,944	5,516 5,434 5,475 5,650	41 137	1,875 1,884 1,842 2,215	28 28 27 33
Germany	2015 2016 2017 2018	5,178 5,317 5,347 5,101	5,002 5,014 5,935 6,548	1,218 864 1,296 1,354	7,836 8,429 9,319 9,611	36	1,043 1,002 748 754	13 12 9 9
Gibraltar	2015 2016 2017 2018	  	8 8 8 6	  	8 8 8 6		0 0 0 0	0 0 0 0
Greece	2015 2016 2017 2018	2,079 2,328 2,431 3,136	225 166 220 51	1,193 1,229 1,384 1,694	802 856 960 1,060	65 -32	422 344 339 348	40 32 32 33
Hungary	2015 2016 2017 2018	191 199 236 297	1 14 1 1	11 11 8 22	175 186 216 267	9 4	5 7 9 10	1 1 1 1
Iceland	2015 2016 2017 2018	  	218 321 360 442	  	214 291 364 408	12 -7	18	18 54 9 24
Ireland	2015 2016 2017 2018	  	1,159 1,066 1,230 1,465	80 0 0 148	796 822 966 1,041	1	289 243 257 354	62 52 54 73
Italy	2015 2016 2017 2018	2,115 2,047 2,218 2,770	1,835 2,088 2,273 2,336	21 66 226 337	3,083 3,209 3,329 3,734	14 34	846 902	13 14 15 16
Kosovo	2015 2016 2017 2018	  	4 4 6 3	  	4 4 6 3		0 0 0 0	0 0 0
Latvia	2015 2016 2017 2018	  	104 122 137 149	0 2 	104 119 136 149	0	0 1 1 0	0 1 1 0
Lithuania	2015 2016 2017 2018	1,029 1,082 1,059 955	52 68 52 39	141 200 213 253	79 93 103 122	-1 11	861 858 784 627	294 297 276 224

Country on one	Vasa	Dan dunkina	less a esta	Funanta	Dunkara	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Luxembourg	2015 2016 2017 2018		444 498 580 598	 4 22 	445 493 558 597		0 1 0 0	0 2 0 0
Malta	2015 2016 2017 2018	  	116 121 152 143	  	112 121 136 153	-2 16	2	5 5 0 0
Montenegro	2015 2016 2017 2018	  	24 25 46 47	5 6 26 21	18 19 20 26	0	0	0 0 0 0
Netherlands	2015 2016 2017 2018	7,503 7,556 7,654 8,928	3,074 4,469 3,626 3,342	6,630 8,256 7,549 8,202	3,659 3,754 3,863 3,909	-82 -210	97 78	1 6 5 8
North Macedonia	2015 2016 2017 2018	0 0 	28 28 33 38	14 13 13 15	  	0	15 20	6 7 10 11
Norway	2015 2016 2017 2018	840 533 763 778	399 381 206 230	38 20 5 1	583 502 524 547	-5 -31		118 76 89 78
Poland	2015 2016 2017 2018	1,096 1,183 1,119 1,339	46 22 2 31	487 535 265 343	632 665 828 980	-20 1	25 27	0 1 1 1
Portugal	2015 2016 2017 2018	1,160 1,237 1,361 1,432	12 17 68 133	2 1 3 22	1,019 1,119 1,247 1,328	1 16	133 163	15 13 16 17
Republic of Moldova	2015 2016 2017 2018	  	22 33 46 55	  	24 32 47 54	1 -1	0 0 0	0 0 0
Romania	2015 2016 2017 2018	400 398 381 418	16 22 87 78	275 255 269 326	204 248 292 119	-8 9	-75 -102	-3 -4 -5 2
Russian Federation	2015 2016 2017 2018	12,298 *12,030 12,577 12,982	27 30 68 15	2,338 2,432 2,272 2,670	*5,045 *4,857 5,399 5,578		4,974	34 *33 34 33
Serbia	2015 2016 2017 2018	108 123 155 190	1 5 1 3	45 15 27 52	62 115 128 135	-2 1	0	0 0 0 0
Slovakia	2015 2016 2017 2018	92 99 76 95	 3  2	46 60 33 52	42 48 39 46	-6 4	0 0 0 0	0 0 0 0

Country or one	Vasa	Dan dunation	lusus a uta	Funcion	Dumleana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Slovenia	2015 2016 2017 2018		318 231 239 233	290 180 216 203	25 21 25 34	29 -2	1 1 0 1	0 0 0 0
Spain	2015 2016 2017 2018	226 214 189 381	2,217 2,191 2,244 1,802	516 619 578 528	3,758 3,984 4,349 4,531	-156		-49 -44 -48 -62
Sweden	2015 2016 2017 2018	104 73 22 204	790 954 947 1,042	0 70 16 92	720 800 867 913	74 -57	83 143	18 8 14 23
Switzerland	2015 2016 2017 2018	38 43 7 5	1,606 1,668 1,725 1,859	  	1,580 1,653 1,710 1,795	-1 -7	49 59 29 75	6 7 3 9
Ukraine	2015 2016 2017 2018	  	  	  	121 *121 *121 	  	*-121 *-121	-3 *-3 *-3
United Kingdom	2015 2016 2017 2018	4,973 4,392 5,031 5,129	8,249 8,778 9,106 9,405	1,202 1,226 1,258 1,572	10,550 10,557 11,342 11,433	-45 16	1,269 1,432 1,521 1,735	19 22 23 26
Oceania	2015 2016 2017 2018	4,548 4,024 4,162 4,465	3,830 4,947 5,202 5,442	129 163 185 219	4,623 5,072 5,548 5,895	-3 -22	3,739 3,653	88 92 89 91
Australia	2015 2016 2017 2018	3,445 2,759 2,841 3,040	3,405 4,428 4,640 4,857	23 4 56 114	3,660 3,852 4,212 4,483	41 6	3,096 3,290 3,207 3,274	129 136 130 131
Cook Islands	2015 2016 2017 2018	  	*9 *9 *9	  	*9 *9 *9	  	0 0 0 0	0 0 0 0
Fiji	2015 2016 2017 2018	  	185 148 158 *161	106 159 129 *105	*27 *24 *30 *31		13 12 12 *13	15 14 14 *14
French Polynesia	2015 2016 2017 2018	  	12 14 15 12	  	*9 *9 *10 *9	*1	4 4 4 4	15 15 15 15
Kiribati	2015 2016 2017 2018		1 1 1 *1	  	*1 0 *1 *1	  	1 1 1 *1	6 5 7 *7
Marshall Islands	2015 2016 2017 2018	  	*2 *2 *2 *2	  	*2 *2 *2 *2		0 0 0 0	0 0 0 0

Occupation of the control	V	Dua divetta a	lasa sata	Formanta	Developer	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Micronesia (Fed. States of)	2015 2016 2017 2018	  	7 *7 *7 *7	  	*6 *6 *6		1 *1 *1 *1	6 *12 *10 *10
Nauru	2015 2016 2017 2018	  	*4 5 4 *4	  	*5 *4		0 0 0 0	0 0 0 0
New Caledonia	2015 2016 2017 2018	  	33 31 31 45	  	25	1 -1	5 5 6 8	19 17 22 29
New Zealand	2015 2016 2017 2018	1,069 1,159 1,221 1,325	68 211 275 279	0 0 	1,049 1,161	2 -15	340 319 350 390	74 68 74 82
Niue	2015 2016 2017 2018	  	1 *1 *1 *1	  	. *1		0 0 0 0	15 *20 *15 *27
Palau	2015 2016 2017 2018	  	*10 *11 *12 *13	  	*11 *12	 !	0 0 0	0 0 0
Papua New Guinea	2015 2016 2017 2018	34 106 100 *100	77 63 30 *30	0 0 	*63 . 58	0	48 106 71 *71	6 13 8 *8
Solomon Islands	2015 2016 2017 2018	  	5 *5 *5 *5	  	*4 *4	 	1 *1 *1 *1	1 *1 *1 *1
Tonga	2015 2016 2017 2018	  	5 3 5 4	  	*3 *5	0 0	0 0 0	1 1 1 2
Vanuatu	2015 2016 2017 2018	  	*7 *7 *7 *11	  	*7 *7 *7 *11	· ·	0 0 0	0 0 0 0
Wallis and Futuna Is.	2015 2016 2017 2018		*1 *1 *1 *1	  	1 1 1	  	0 0 0 0	0 0 0 0

#### Production, trade and supply of gas oil/diesel oil

Thousand metric tons and kilograms per capita

#### **Table Notes**

**Production** includes output from refineries and plants, together with quantities from other sources which include any blended biodiesel.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description/ classification, and xvi to xvii for the descriptions of relevant flows.

Figure 57: Production of gas oil/diesel oil by region, 1990-2018

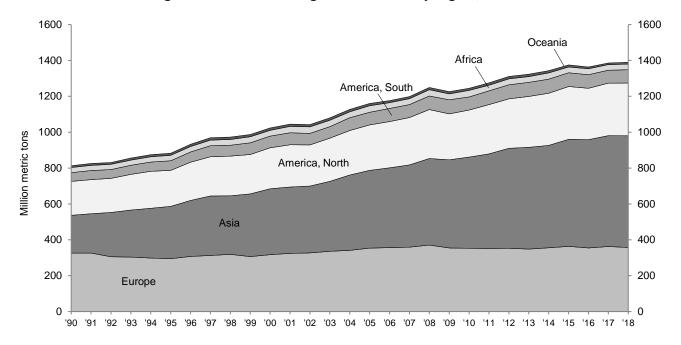


Figure 58: Major gas oil/diesel oil producing countries, 2018

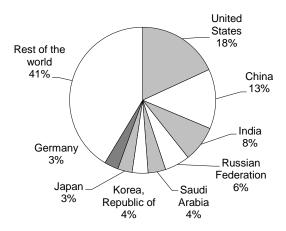
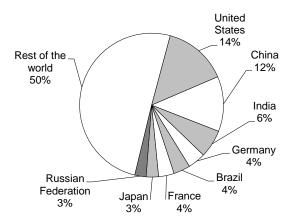


Figure 59: Major gas oil/diesel oil consuming countries, 2018



Occupation on the control	V <sub>2</sub> = 2	Dan decetion	lassa sarta	Es un a unta	Developer	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
World	2015 2016 2017 2018	1,375,432 1,363,507 1,386,257 1,389,831	374,346 393,082 395,051 398,731	377,124 406,069 417,071 414,400	41,984 43,629 46,162 41,593	3,296 -7,645	1,303,595 1,325,719	179 175 176 175
Africa	2015 2016 2017 2018	32,105 32,470 30,626 31,612	54,037 51,082 52,684 55,982	5,372 4,202 3,318 3,388	2,428 2,424 1,679 2,214	-646 -488	78,800	66 64 63 64
Algeria	2015 2016 2017 2018	8,826 8,892 8,537 10,189	1,737 1,459 1,413 247	  	60 57 64 58	100 -186	10,194	260 251 243 241
Angola	2015 2016 2017 2018	608 599 607 436	3,065 2,353 2,092 1,096	31 30 28 26	  	*-371 *-180	3,642 3,293 2,851 2,012	131 114 96 65
Benin	2015 2016 2017 2018	  	779 691 760 862	  	  	-34 -1	753 725 761 869	71 67 68 76
Botswana	2015 2016 2017 2018	  	478 459 444 464	  	  		459 444	225 212 201 206
Burkina Faso	2015 2016 2017 2018	  	527 418 522 664	  	  	-145 -68	534 564 590 629	29 30 31 32
Burundi	2015 2016 2017 2018	 	*49 *56 *66 *85	  	  	0	*50 *56 *66 *85	*5 *5 *6 *8
Cabo Verde	2015 2016 2017 2018	 	*97 *111 *119 *124	  	*31 *35 37 *39		*66 *76 *82 *85	*127 *143 *152 *157
Cameroon	2015 2016 2017 2018	578 572 471 427	292 300 483 528	134 138 165 145	  		736 734 789 810	32 31 32 32
Central African Rep.	2015 2016 2017 2018	  	*34 *40 *40 *40	  	  		*34 *40 *40 *40	*8 *9 *9 *9
Chad	2015 2016 2017 2018	*333 *291 *291 *296		*130 *84 *84 *86	  		*210	*14 *14 *14 *14
Comoros	2015 2016 2017 2018	: : :	*32 *40 *46 *50	 			*32 *40 *46 *50	*41 *50 *57 *60

0	V	Don don tion	lana a sta	E a sta	Develope	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Congo	2015 2016 2017 2018	219 168 214 214	204 176 76 76		  	  	423 344 290 290	87 69 57 55
Côte d'Ivoire	2015 2016 2017 2018	1,169 1,237 *1,222 1,241	  	204 226 180 184	66 72 69 74	0	938 939 *973 983	40 39 *40 39
Dem. Rep. of the Congo	2015 2016 2017 2018	  	538 362 419 394	  	  		538 362 419 394	7 5 5 5
Djibouti	2015 2016 2017 2018	  	79 85 80 *80	  	*10 *10 *10 *10	*9 *6	76 66 64 *60	84 71 67 *63
Egypt	2015 2016 2017 2018	7,885 7,183 7,403 7,640	6,859 7,591 7,468 6,533	  713	42 31 30 62		14,702 14,743 14,841 13,398	159 156 154 136
Equatorial Guinea	2015 2016 2017 2018	  	*171 *174 *181 *149	 	  		*171 *174 *181 *149	*146 *143 *143 *114
Eritrea	2015 2016 2017 2018	  	83 85 107 112	  	  	••	83 85 107 112	25 25 31 32
Eswatini	2015 2016 2017 2018	  	122 141 142 148	 	  		122 141 142 148	111 127 127 130
Ethiopia	2015 2016 2017 2018	  	1,931 2,235 2,513 2,684	 	 	-4 	1,913 2,239 2,513 2,684	19 22 24 25
Gabon	2015 2016 2017 2018	221 234 254 257	435 450 137 138	6 6 13 13	75 74 32 30		575 604 346 352	295 301 168 166
Gambia	2015 2016 2017 2018	  	*75 *76 *77 *78	*1 *1 *1 *1	  	  	*74 *75 *76 *77	*35 *35 *34 *34
Ghana	2015 2016 2017 2018	28 255 6 113	2,161 1,720 1,781 1,753	0 170 190 35	10 2 89 10	0 14	2,179 1,802 1,494 1,820	78 63 51 61
Guinea	2015 2016 2017 2018	  	430 404 507 522	  	  	  	430 404 507 522	38 34 42 42

Country on and	\/	Deadwatian	Imports	Europate .	Duralisana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Guinea-Bissau	2015 2016 2017 2018		*45 *51 *51 *53				*45 *51 *51 *53	*26 *29 *28 *28
Kenya	2015 2016 2017 2018	0 0 0	4,746 3,255 2,853 2,324	2,670 1,025 767	0 0  3		2,076 2,229 2,086 2,321	43 45 42 45
Lesotho	2015 2016 2017 2018	  	85 88 82 87	·· ·· ··	  	  	85 88 82 87	41 43 39 41
Liberia	2015 2016 2017 2018	  	203 *263 *230 *197	  	*7 *9 *5 *4		196 *254 *225 *193	44 *55 *48 *40
Libya	2015 2016 2017 2018	1,003 917 1,332 1,563	3,215 2,161 2,044 1,816		  	  	4,218 3,078 3,376 3,379	657 474 513 506
Madagascar	2015 2016 2017 2018	  	496 544 502 456	  	  	8 35 -46 -73	488 509 548 529	20 20 21 20
Malawi	2015 2016 2017 2018	  	145 166 197 238		  	  	145 166 197 238	9 10 11 13
Mali	2015 2016 2017 2018	  	*705 *780 *820 *850		  	*-34 *30 *10 *10	*739 *750 *810 *840	*42 *42 *44 *44
Mauritania	2015 2016 2017 2018	  	*606 553 784 1,033	 	  	 *52 *256	*606 553 732 777	*150 133 171 176
Mauritius	2015 2016 2017 2018	  	319 339 347 330	 	116 120 129 146	11 6	208 208 212 215	165 165 168 169
Morocco	2015 2016 2017 2018	1,139 0 	4,112 5,536 5,771 5,907	0 1 	23 23 23 23	-131 -118	5,336 5,643 5,866 6,085	152 158 162 166
Mozambique	2015 2016 2017 2018	 	750 1,282 1,467 1,004	  6	   8	18 18	770 1,264 1,449 990	28 45 51 34
Namibia	2015 2016 2017 2018	  	773 807 819 776	  		  	773 807 819 776	334 342 341 317

Country or area	Voor	Droduction	Importo	Exports	Bunkers	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exporto	Bunkers	stocks	Total	Per capita
Niger	2015 2016 2017 2018	348 352 *520 492	32 11 20 3	*153 202 *253 *221		*-92 *21 *36	209 252 *265 238	10 12 *12 11
Nigeria	2015 2016 2017 2018	294 685 900 374	3,781 3,833 3,651 9,916	  	116 97 98 103		3,959 4,421 4,453 10,187	22 24 23 52
Rwanda	2015 2016 2017 2018	  	142 139 139 158	  	  		142 139 139 158	13 12 12 13
Sao Tome and Principe	2015 2016 2017 2018	  	*26 *27 *28 *29	  	  	  	*26 *27 *28 *29	*129 *133 *136 *136
Senegal	2015 2016 2017 2018	553 629 679 576	1,175 1,056 *489 1,002	634 676 84 *356	118 134 113 *130	-63 0	982 938 971 968	67 63 63
Seychelles	2015 2016 2017 2018	  	205 237 223 202	  	*152 *153 161 *150	*20 *10	53 64 53 52	553 667 546 534
Sierra Leone	2015 2016 2017 2018	 	*178 *183 *185 *168	  	  		*178 *183 *185 *168	*25 *25 *25 *22
Somalia	2015 2016 2017 2018	  	*121 *126 *126 *126	  	*15 16 *16 *16		*106 *110 *110 *110	*8 *8 *7
South Africa	2015 2016 2017 2018	6,233 7,845 *5,861 5,417	5,612 3,851 5,253 5,311	1,409 1,642 1,553 1,603	1,554 1,563 751 1,310		8,882 8,491 8,811 7,815	160 151 155 135
South Sudan	2015 2016 2017 2018	  	479 417 350 316	  	  	  	479 417 350 316	45 38 32 29
St. Helena and Depend.	2015 2016 2017 2018	  	3 4 3 3	  	  	  	3 4 3 3	460 636 419 539
Sudan	2015 2016 2017 2018	1,839 1,960 1,797 1,696	1,310 1,199 1,612 1,609	  	25 26 27 *28		3,124 3,134 3,382 3,276	80 79 83 78
Togo	2015 2016 2017 2018	  	138 83 161 173	  	5  19 	-10		19 12 20 22

Country or orga	Voor	Production	Imports	Evporto	Bunkers	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Tunisia	2015 2016 2017 2018	492 439 314 407	1,454 1,505 1,731 1,675	  	3 2 7 10	-19 -11	1,961 2,049	169 173 179 182
Uganda	2015 2016 2017 2018	   	703 746 823 855	  	  		746 823	18 19 20 20
United Rep. of Tanzania	2015 2016 2017 2018	  	1,180 1,185 1,271 1,343	  	  		1,185 1,271	23 22 23 24
Zambia	2015 2016 2017 2018	337 213 217 274	384 611 540 421	  	  		824 756	45 50 45 40
Zimbabwe	2015 2016 2017 2018	  	736 619 642 777	  	  		619 642	53 44 45 54
America, North	2015 2016 2017 2018	293,937 286,021 292,630 294,255	30,917 30,905 33,683 38,272	67,509 68,337 77,539 71,178	9,096 8,187 10,059 8,891	72 -3,270	240,330 241,985	432 420 419 435
Anguilla	2015 2016 2017 2018	  	*34 *34 *31 *32	  	  		*34 *31 *32	*2,409 *2,383 *2,125 *2,171
Antigua and Barbuda	2015 2016 2017 2018	  	*66 *67 *67 *68	*1 *1 *1 *1	  		*66 *66 *67	*695 *698 *692 *696
Aruba	2015 2016 2017 2018	  	*23 *23 *24 *24	  	  		*23 *24	*218 *216 *223 *224
Bahamas	2015 2016 2017 2018	   	398 310 334 403	  	  	* 117	503 478	1,358 1,331 1,252 1,348
Barbados	2015 2016 2017 2018	  	67 68 73 68	  	  	0 0 -1 -6	68 74	233 237 257 260
Belize	2015 2016 2017 2018	  	87 84 78 69	  	  	  	84 78	241 229 207 180
Bermuda	2015 2016 2017 2018	  	23 24 70 37	  		*15	34 55	495 534 872 591

Country	V	Dun desat	luat	Forest	Bunkers	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Dulkers	stocks	Total	Per capita
Bonaire, St Eustatius, Saba	2015 2016 2017 2018	  	*67 *68 *69 *70		*27 *26 *27 *27		*41 *42 *43 *43	*1,660 *1,679 *1,673 *1,673
British Virgin Islands	2015 2016 2017 2018	  	*50 *50 *40 *38	  	  	  	*50 *50 *40 *38	*1,715 *1,703 *1,363 *1,275
Canada	2015 2016 2017 2018	30,535 30,140 32,909 30,704	1,905 2,086 1,079 2,164	6,774 6,728 8,027 6,397	79 88 87 85	-273 156	25,911 25,683 25,718 26,265	719 706 700 708
Cayman Islands	2015 2016 2017 2018	  	137 135 142 144	  	  	  	137 135 142 144	2,220 2,158 2,240 2,242
Costa Rica	2015 2016 2017 2018	  	986 1,006 1,045 1,014	  	  	-22 15	945 1,028 1,030 1,026	195 210 208 205
Cuba	2015 2016 2017 2018	1,030 558 714 703	1,031 1,277 1,378 1,178	140 *176 *356 *257	*32 *31 *29 *30		1,889 1,629 1,707 1,595	167 144 151 141
Curaçao	2015 2016 2017 2018	1,852 1,611 854 642	511 524 517 535	1,838 1,598 847 637	201 199 199 199	  	324 338 325 341	2,027 2,099 2,006 2,095
Dominica	2015 2016 2017 2018	  	*29 *30 *29 *29	  	  	*-1 *-1 *2 *2	*30 *31 *27 *27	*421 *431 *380 *374
Dominican Republic	2015 2016 2017 2018	214 316 274 356	1,215 1,193 1,072 1,094	  	  	-17 -22 28 0	1,446 1,532 1,318 1,450	141 147 125 136
El Salvador	2015 2016 2017 2018	  	657 678 687 702	14 24 19 8	  		643 654 668 694	102 103 105 108
Greenland	2015 2016 2017 2018	  	145 136 135 *140	  	6 16 18 *18	-2	122 118 120 *122	2,164 2,100 2,122 *2,157
Grenada	2015 2016 2017 2018	  	49 63 66 68	  	  	-6 4 4 0	55 59 61 68	500 535 552 610
Guatemala	2015 2016 2017 2018	39 43 47 50	1,715 1,750 1,685 1,642	110 67 18 6	371 393 412 423	-18	1,235 1,307 1,321 1,357	76 79 78 79

Country on ano	Vasa	Dan dunation	luono o uto	Europate .	Dumliana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Haiti	2015 2016 2017 2018		497 520 510 539				497 520 510 539	46 48 46 48
Honduras	2015 2016 2017 2018	  	836 938 928 946	1 3 1 42	  	7.1	925 897 853 891	102 97 90 93
Jamaica	2015 2016 2017 2018	145 130 108 102	294 263 250 316	  39	34 30 51 44	-17 12	394 380 295 338	136 131 101 115
Mexico	2015 2016 2017 2018	14,059 11,580 11,165 8,485	7,288 9,291 12,680 14,962	337 749 192 195	762 798 712 729	-301 -185	20,061 19,625 23,126 22,445	165 159 185 178
Montserrat	2015 2016 2017 2018	  	12 7 6 *6	  	*1 *1 *1 *1	  	11 6 5 *5	2,114 1,185 902 *941
Nicaragua	2015 2016 2017 2018	197 137 169 210	374 476 461 379	2 0 0	  	8	600 605 642 592	96 96 101 92
Panama	2015 2016 2017 2018	  	967 1,100 1,162 1,171		  	-59 -204	1,177 1,159 1,366 1,295	297 287 333 310
Sint Maarten (Dutch part)	2015 2016 2017 2018	  	*165 *166 *162 *158		*65 *66 *63 *61		*100 *101 *99 *96	*2,505 *2,465 *2,379 *2,294
St. Kitts-Nevis	2015 2016 2017 2018	 	*57 *58 *59 *59		  	  	*57 *58 *59 *59	*1,105 *1,125 *1,124 *1,129
St. Lucia	2015 2016 2017 2018	  	*108 *110 *114 *116	  	1 1 1 1		*107 *109 *113 *114	*596 *607 *625 *629
St. Pierre-Miquelon	2015 2016 2017 2018	  	*24 *24 *24 *21	  	*6 *6 *5		*17 *17 *17 *16	*2,875 *2,921 *2,957 *2,772
St. Vincent-Grenadines	2015 2016 2017 2018	  	36 48 25 46	  	  	*4 * 11	44 44 36 41	402 405 328 370
Trinidad and Tobago	2015 2016 2017 2018	1,550 2,113 1,468 1,178	  	772 1,279 771 470	201 334 201 166	7 -7	572 493 503 546	417 358 363 393

Country	Varia	Due divertiere	lana a este	From s =t =	Donales	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Turks and Caicos Islands	2015 2016 2017 2018	  	*67 *70 *75 *77	  	   		*67 *70 *75 *77	*1,862 *1,901 *2,021 *2,031
United States	2015 2016 2017 2018	244,317 239,393 244,921 251,825	10,998 8,229 8,607 9,958	57,520 57,712 67,307 63,127	7,309 6,198 8,252 7,102	883 -2,993	186,982 182,829 180,962 192,246	583 566 557 588
America, South	2015 2016 2017 2018	76,579 76,468 72,412 74,052	26,798 30,145 31,949 31,048	1,042 1,616 1,996 3,005	974 639 527 831	1,935 973	102,601 102,423 100,865 101,408	249 246 240 240
Argentina	2015 2016 2017 2018	11,047 10,749 11,024 10,424	3,292 3,555 3,029 2,685	2 5 4 33	97 69 115 134	65 -9	14,163 14,165 13,943 12,931	329 326 317 291
Bolivia (Plur. State of)	2015 2016 2017 2018	884 814 745 724	712 804 943 1,059		  	-38 -61	1,642 1,656 1,749 1,807	151 150 156 159
Brazil	2015 2016 2017 2018	43,297 42,840 39,056 41,052	6,031 7,360 11,259 10,124	82 420 439 830	585 303 158 412	217 97	48,982 49,260 49,621 50,089	240 239 239 239
Chile	2015 2016 2017 2018	3,031 2,907 3,073 3,052	5,229 5,573 5,245 5,497	79 57 23 7	0 0 0	67 45	8,291 8,356 8,250 8,542	461 459 447 456
Colombia	2015 2016 2017 2018	2,230 4,574 5,702 7,116	2,589 3,356 1,412 614	0 699 873 1,582	110 112 86 90	562 601	6,479 6,557 5,554 6,024	136 136 114 121
Ecuador	2015 2016 2017 2018	1,461 1,907 1,902 1,820	3,205 2,443 2,417 2,703	 	14 16 41 56	-13 -11	4,666 4,346 4,289 4,460	288 264 255 261
Falkland Is. (Malvinas)	2015 2016 2017 2018	 	7 7 7 8	  	  	  	7 7 7 8	2,615 2,540 2,393 2,407
Guyana	2015 2016 2017 2018	  	268 323 323 348	  	  	-1 0 -6 -1	269 323 329 349	351 419 424 448
Paraguay	2015 2016 2017 2018	  	1,279 1,519 1,551 1,689		  	27 61 -59 31	1,252 1,458 1,610 1,658	187 215 234 238
Peru	2015 2016 2017 2018	4,091 3,786 3,569 3,324	2,681 3,596 3,793 3,695	156 370 536 459	  12	935 1,054 354 -44	5,681 5,958 6,472 6,592	186 193 206 206

Country on one	Vasa	Duo divetto a	Imports	Francourte.	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Suriname	2015 2016 2017 2018	20 200 284 291	245 220 225 220	4 65 121 94	1 16 7 6		261 338 380 411	466 599 667 714
Uruguay	2015 2016 2017 2018	795 814 237 923	249 76 698 14	  	93 62 69 80	-40 21	967 867 846 861	284 253 246 250
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	9,724 7,878 6,821 5,325	1,010 1,313 1,047 2,392	719 0 0	74 61 51 41	0 0 0	9,941 9,130 7,817 7,676	330 306 266 266
Asia	2015 2016 2017 2018	597,143 603,892 617,657 622,545	103,177 109,343 106,861 109,465	155,394 179,676 180,017 195,600	7,262 7,916 8,582 9,140	-280 439	535,438 525,923 535,479 527,082	121 117 118 116
Afghanistan	2015 2016 2017 2018	   	609 485 *338 373	  	  	  	609 485 *338 373	18 14 *9 10
Armenia	2015 2016 2017 2018	  	122 119 135 115	0 0 0	  		121 119 135 115	42 41 46 39
Azerbaijan	2015 2016 2017 2018	2,804 2,315 1,849 2,148	12 4 1 37	1,655 1,228 603 661	50 48 44 43	6 -29	1,163 1,037 1,232 1,440	121 107 125 145
Bahrain	2015 2016 2017 2018	4,210 3,997 4,184 4,083	  	3,885 3,484 3,945 3,599	  	157	333 356 380 361	243 250 254 230
Bangladesh	2015 2016 2017 2018	462 380 452 546	2,975 3,130 3,716 3,458	  	  	024	3,396 3,606 4,168 4,836	22 23 26 30
Bhutan	2015 2016 2017 2018	  	110 117 126 139	  	  		110 117 126 139	151 158 169 184
Brunei Darussalam	2015 2016 2017 2018	141 114 104 110	168 156 189 182	0 0 	9 0	-5 2	294 275 291 293	709 655 686 683
Cambodia	2015 2016 2017 2018	  	1,073 1,239 1,248 1,366	  	  		1,073 1,239 1,248 1,366	69 79 78 84
China	2015 2016 2017 2018	180,079 179,177 186,679 183,601	428 916 747 711	7,163 15,403 17,193 18,532	437 412 504 375	-2,883 442	172,963 167,161 169,288 165,316	123 118 119 116

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Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
China, Hong Kong SAR	2015 2016 2017 2018	  	5,105 5,540 5,970 6,420	293 95 110 115	2,000 2,593 2,916 3,529	411	2,236 2,441 2,766 2,597	311 337 379 352
China, Macao SAR	2015 2016 2017 2018	  	189 177 167 155	  	68 73 66 64		97	188 165 156 147
Cyprus	2015 2016 2017 2018	  	562 616 786 769	  	75 95 101 118	-10 9	676	387 454 573 559
Georgia	2015 2016 2017 2018	5 9 10 10	597 658 575 563	1 0 11 4	   2	16 -14	651	150 162 147 137
India	2015 2016 2017 2018	98,643 103,147 108,466 111,236	180 996 1,353 555	24,035 27,452 29,676 27,931	  	  	76,691 80,143	57 58 60 62
Indonesia	2015 2016 2017 2018	16,159 16,186 16,723 17,614	6,893 4,807 5,681 5,735	0 94 127 88	139 192 186 199		22,913 20,707 22,091 22,937	89 79 83 86
Iran (Islamic Rep. of)	2015 2016 2017 2018	28,411 28,509 26,937 28,608	0 0 0	1,752 3,514 2,019 2,033	260 234 251 251	  	24,761	336 311 306 322
Iraq	2015 2016 2017 2018	3,539 3,287 4,012 5,291	9,926 13,328 13,189 10,625	  	  	  	16,615 17,201	379 454 458 414
Israel	2015 2016 2017 2018	5,187 4,411 4,628 4,789	206 279 321 248	2,693 1,943 2,014 2,161	34 28 42 43	105	2,682 2,740 2,788 2,807	336 338 338 335
Japan	2015 2016 2017 2018	45,838 45,595 45,632 44,587	507 399 516 634	8,670 8,138 8,502 7,901	155 188 169 144	197	37,471 37,613	295 293 295 291
Jordan	2015 2016 2017 2018	1,058 909 845 738	1,121 967 1,029 1,145	  	4 2 4 4	15 6  -31	2,160 1,868 1,870 1,910	233 196 191 192
Kazakhstan	2015 2016 2017 2018	4,487 4,652 4,352 4,664	165 434 474 472	168 55 112 237	0 1 0 2	-46 -183	4,897	275 285 271 267
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	191 191 191 191	61 71 59 58	  	  	  	252 262 250 249	10 10 10 10

Country on one	\/	Dan dunation	luono o uto	Figure a water	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Korea, Republic of	2015 2016 2017 2018	45,512 46,320 47,108 49,006	285 267 271 241	23,090 23,482 23,561 25,585	1,282 1,204 1,288 1,104	-287 -111	22,188 22,641	409 435 443 437
Kuwait	2015 2016 2017 2018	10,294 9,425 8,476 8,397	·· ·· ··	8,101 7,025 5,924 5,787	101 92 83 82		2,308 2,469	545 583 609 611
Kyrgyzstan	2015 2016 2017 2018	56 106 89 79	515 347 541 706	0 0 2 1	  	- <u>2</u> 8 9	481 619	91 79 100 119
Lao People's Dem. Rep.	2015 2016 2017 2018	  	739 *750 *776 *792	  	  		*750 *776 *702	110 *110 *112 *112
Lebanon	2015 2016 2017 2018	  	3,671 3,701 3,738 3,426	  	  		3,701 3,738	562 551 548 499
Malaysia	2015 2016 2017 2018	9,737 9,833 9,725 9,515	4,488 3,836 5,087 6,751	5,301 4,731 5,054 7,128	2 1 91 99	-100 -64	9,037 9,731	311 295 313 312
Maldives	2015 2016 2017 2018	  	390 445 448 522	  	*42 *47 *41 *50		398 407	765 837 819 914
Mongolia	2015 2016 2017 2018	  	655 548 805 849	  	  		548 805	218 179 259 268
Myanmar	2015 2016 2017 2018	161 150 151 103	2,227 2,869 2,095 4,055	  	2   1	178 82	2,841 2,164	36 54 41 77
Nepal	2015 2016 2017 2018	 	649 1,091 1,313 1,421	  	  	  	1,091 1,313	24 40 48 51
Oman	2015 2016 2017 2018	2,963 2,922 3,331 2,779	0 10 228 236	436 603 696 1,579	  	  	2,329 2,863	592 520 614 297
Other Asia	2015 2016 2017 2018	13,874 13,650 13,340 14,376	73 0 39	8,997 8,895 8,252 9,403	91 92 98 123	-78 141	4,741 4,888	201 201 206 200
Pakistan	2015 2016 2017 2018	4,587 4,783 5,501 5,232	3,495 4,739 4,486 3,097	   0	5 9 6 6	207 72	9,306 9,909	39 46 48 39

Caustanaa	\\\\	Duo divetto e	lusus a uta	Curanta.	Dumlana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Philippines	2015 2016 2017 2018	4,008 4,030 3,840 4,589	3,925 4,889 5,547 5,364	0 0 0 123	10 6 11 20	58 152 105 183	7,864 8,760 9,271 9,628	77 85 88 90
Qatar	2015 2016 2017 2018	2,091 2,081 1,973 1,975	602 540 115 75	4,119 3,720 3,271 2,435	  	570 1,185 -949 -39	-1,996 -2,284 -234 -346	-778 -860 -86 -124
Saudi Arabia	2015 2016 2017 2018	48,613 53,198 54,486 54,156	12,603 11,101 4,510 9,894	20,231 29,046 30,545 41,760	  	385 208 -189	40,599 35,044 28,640 22,290	1,280 1,080 865 661
Singapore	2015 2016 2017 2018	12,829 12,199 10,967 9,185	14,419 15,478 14,321 13,054	22,812 24,855 25,422 23,972	1,722 1,991 2,021 2,286	18 233 141 	2,697 597 -2,296 -4,019	482 106 -402 -698
Sri Lanka	2015 2016 2017 2018	517 583 506 568	1,289 1,574 1,763 1,483	  	0 0  13	-256 -243 -95 -5	2,061 2,401 2,364 2,043	99 114 112 96
State of Palestine	2015 2016 2017 2018	  	590 639 636 563	  	  	0 0  0	590 639 636 563	130 138 134 116
Syrian Arab Republic	2015 2016 2017 2018	2,046 2,207 2,451 2,295	325 249 216 215	  	445 384 361 351	  	1,926 2,072 2,306 2,159	107 119 135 127
Tajikistan	2015 2016 2017 2018	3 5 10 17	227 205 183 203	  	  	  	229 210 193 220	27 24 22 24
Thailand	2015 2016 2017 2018	23,351 22,110 23,150 23,165	103 713 700 501	5,308 4,138 4,513 4,760	  	336 236 515 551	17,810 18,449 18,822 18,355	259 267 272 264
Timor-Leste	2015 2016 2017 2018	  	*141 *139 *141 *143	  	  	  	*141 *139 *141 *143	*118 *114 *113 *113
Turkey	2015 2016 2017 2018	8,721 9,725 10,545 9,530	12,516 12,861 14,373 14,719	73 72 233 120	112 81 72 90	60 227 176 -99	20,992 22,206 24,437 24,138	267 278 301 293
Turkmenistan	2015 2016 2017 2018	2,770 2,770 2,770 2,770	  	690 690 690	  	  	2,080 2,080 2,080 2,080	374 367 361 356
United Arab Emirates	2015 2016 2017 2018	9,194 10,865 10,427 10,929	2,350 684 204 603	5,455 9,561 7,015 8,421	155 89 177 93	  451 	5,934 1,899 2,988 3,017	641 203 315 313

Table 21

O construction and a second	V	Desidentia	lassa sata	Form out o	Develope	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Uzbekistan	2015 2016 2017 2018	1,286 1,008 1,017 1,081	  	  		-32 -25	1,041 1,042	40 33 33 33
Viet Nam	2015 2016 2017 2018	3,068 2,855 2,481 4,286	5,213 6,716 7,223 6,325	466 1,451 527 573	  	127 -56		84 85 98 103
Yemen	2015 2016 2017 2018	250 189 250 297	680 514 483 470	  	62 54 51 49		868 649 682 718	33 24 25 25
Europe	2015 2016 2017 2018	363,606 354,579 363,168 357,324	144,419 154,179 151,886 144,019	147,583 152,055 153,962 141,014	22,037 24,289 25,143 20,336	1,995 -5,087	332,296 330,419 341,037 342,562	446 443 456 458
Albania	2015 2016 2017 2018	56 18 158 104	785 743 723 665	56 4 19 40	20 34 36 31	16 16	707 810	258 245 281 237
Andorra	2015 2016 2017 2018	  	131 132 131 138	  	 		131 132 131 138	1,678 1,711 1,707 1,797
Austria	2015 2016 2017 2018	4,096 3,802 3,981 4,053	4,541 5,057 5,107 5,065	892 841 964 1,008	20 21 21 13	115 -61	7,882 8,164	888 901 926 913
Belarus	2015 2016 2017 2018	8,554 6,768 6,563 6,594	176 693 790 226	6,217 4,850 4,303 3,375	  	202	2,630 2,848	272 278 301 346
Belgium	2015 2016 2017 2018	13,669 12,751 13,267 13,931	10,737 11,119 10,629 9,844	10,783 11,659 12,310 11,575	1,510 1,438 1,053 1,296	-313 -827	11,267 11,086 11,360 11,022	998 976 995 960
Bosnia and Herzegovina	2015 2016 2017 2018	410 381 366 300	597 795 807 839	3 1 11 23	  	12	1,157	288 342 343 342
Bulgaria	2015 2016 2017 2018	2,202 2,745 3,032 2,545	995 961 1,035 807	927 1,382 1,769 959	66 59 57 57	105 -17	2,160 2,258	294 302 318 341
Croatia	2015 2016 2017 2018	1,250 1,434 1,492 1,556	1,104 1,008 1,414 1,336	597 675 939 976	2 3 4 16	3 34	1,761 1,929	404 418 461 448
Czechia	2015 2016 2017 2018	3,451 2,757 3,679 3,505	2,212 2,861 2,087 2,410	1,093 857 898 842	  	-12	4,914	431 449 462 465

					5 .	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Denmark	2015 2016 2017 2018	4,490 4,897 4,538 4,687	3,716 3,784 2,767 2,431	2,573 2,816 2,354 1,719	411 390	-20 -331	5,474 4,892	837 958 853 908
Estonia	2015 2016 2017 2018	  	748 802 789 902	7 4  74	92 111 112 157	33 32	654 645	500 497 489 542
Faeroe Islands	2015 2016 2017 2018	  	*136 *149 *168 *176	  	6 16 16 18		*133 *152	*2,715 *2,761 *3,142 *3,243
Finland	2015 2016 2017 2018	5,708 6,395 6,605 6,254	1,791 1,923 1,782 1,556	2,910 3,813 3,739 3,587	44 41 70 57	-43 -261	4,507 4,839	814 820 878 784
France	2015 2016 2017 2018	28,457 27,901 27,905 26,199	24,763 22,423 21,965 22,455	2,792 2,064 2,592 2,195	106	246 -150	47,908 47,318	748 716 706 696
Germany	2015 2016 2017 2018	45,746 46,100 45,709 43,143	18,442 19,238 19,456 18,549	8,438 9,511 9,022 8,219		449 -255	54,379 55,536	665 662 672 639
Gibraltar	2015 2016 2017 2018	  	516 531 588 587	  	471		108 117	2,964 3,201 3,469 3,767
Greece	2015 2016 2017 2018	10,554 10,892 10,992 11,172	998 1,133 1,151 999	6,563 7,363 7,127 7,571	305 309 340 323	-135 138	4,488 4,538	423 423 429 404
Hungary	2015 2016 2017 2018	3,162 3,114 3,173 3,303	1,487 1,543 1,671 2,279	1,150 1,231 1,414 1,939		-20	3,289 3,450	341 337 355 383
Iceland	2015 2016 2017 2018	12 11 13 12	342 341 347 369	  	34 34 30 42	0 2	318 328	945 957 981 921
Ireland	2015 2016 2017 2018	1,360 1,263 1,301 1,146	2,281 2,669 2,844 2,931	60 114 187 99	144 138	-36 61	3,710 3,759	734 790 791 798
Italy	2015 2016 2017 2018	33,288 31,806 30,685 30,373	3,010 4,412 5,037 5,347	8,923 9,324 10,188 8,982	268 282	-91 -232	26,717 25,484	448 440 420 439
Kosovo	2015 2016 2017 2018	  	385 424 462 494	  	  	  	424	215 239 258 275

Table 21

Country or one	Vasa	Dan dunation	lusus a uta	Funcion	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Latvia	2015 2016 2017 2018	19 5 3 33	1,884 1,874 1,712 1,735	741 591 528 679	123 164 136 36	167 21	957 1,030	484 485 528 556
Lithuania	2015 2016 2017 2018	2,975 3,172 3,392 3,481	1,621 1,162 665 521	3,957 3,578 3,172 2,726	40 67 73 83	5 -55	684 867	197 237 305 409
Luxembourg	2015 2016 2017 2018	  	1,890 1,851 1,917 2,014	1 1 1 2	  	-4 -8	1,854 1,924	3,347 3,201 3,250 3,339
Malta	2015 2016 2017 2018	  	731 677 630 643	317 249 69 194	259 262 314 360	14 88	152 159	381 349 363 378
Montenegro	2015 2016 2017 2018	  	186 223 252 259	0 0 	  	9 14	214 238	293 341 379 411
Netherlands	2015 2016 2017 2018	22,318 19,278 19,439 18,939	16,351 18,861 16,818 12,056	26,756 30,158 29,299 23,285	1,994 2,026 2,083 2,001	-469 -1,461	6,424 6,336	460 378 372 377
North Macedonia	2015 2016 2017 2018	0 0 0 	619 654 661 667	89 39 39 53	  	12 -3	603 625	252 290 300 298
Norway	2015 2016 2017 2018	6,790 5,337 7,287 8,058	1,699 1,794 1,717 1,580	3,344 2,672 4,241 4,115	91 50 122 133	-196 -110	4,605 4,751	970 877 897 1,002
Poland	2015 2016 2017 2018	12,299 11,863 12,337 13,282	2,061 3,740 5,209 4,810	1,790 1,086 187 36	144 129 211 189	126 259	14,262 16,889	331 375 445 468
Portugal	2015 2016 2017 2018	6,446 5,976 6,218 5,521	782 962 893 857	2,284 2,076 2,079 1,134	109 127 130 137	-102 -7	4,837 4,909	460 468 477 489
Republic of Moldova	2015 2016 2017 2018	0 2 1 2	522 555 594 610	9 7 21 24	  	6 -4	544 578	122 134 142 145
Romania	2015 2016 2017 2018	5,116 5,437 5,655 5,656	1,216 1,232 1,366 1,457	1,609 1,690 1,547 1,586	44 31 28 18	53 28	4,895 5,418	235 247 276 289
Russian Federation	2015 2016 2017 2018	76,004 76,249 80,090 77,464	107 82 143 57	*33,547 *34,115 *33,684 *33,468	10,630 12,977 14,375 *9,645	348 45	28,891 32,129	222 199 221 235

Country or	Va	Dro desalt	lman ant-		Dumlen	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Serbia	2015 2016 2017 2018	1,279 1,322 1,401 1,572	430 448 527 459	122 128 220 233	24 20 14 17	8 14 0 33	1,555 1,608 1,695 1,748	219 227 241 250
Slovakia	2015 2016 2017 2018	3,120 2,997 3,006 2,857	798 834 1,048 988	2,361 2,198 2,064 1,803	  	63 -32 -9 11	1,494 1,665 1,999 2,031	275 306 367 372
Slovenia	2015 2016 2017 2018	26 16 24 74	2,639 2,997 3,135 3,151	1,090 1,349 1,364 1,449	  19	-14 -37 69 -6	1,589 1,701 1,726 1,763	767 820 831 849
Spain	2015 2016 2017 2018	28,358 27,749 28,426 28,846	4,644 4,790 5,085 4,748	5,403 5,381 6,578 6,140	1,660 1,560 1,271 1,249	993 -278 -503 -61	24,946 25,876 26,165 26,266	534 555 561 563
Sweden	2015 2016 2017 2018	8,741 8,310 9,032 9,646	2,578 3,089 2,910 2,262	5,556 5,314 6,938 6,361	774 684 723 523	473 1,003 -1,320 -102	4,516 4,398 5,601 5,126	462 447 565 514
Switzerland	2015 2016 2017 2018	1,581 1,766 1,786 1,939	4,066 3,803 3,814 2,902	24 30 28 29	6 5 4 3	-184 152 -89 -363	5,801 5,382 5,657 5,172	696 639 666 604
Ukraine	2015 2016 2017 2018	786 929 680 0	4,835 5,125 5,422 5,594	0 0 193 214	  	11 612 -359 -137	5,610 5,442 6,268 5,517	125 122 141 125
United Kingdom	2015 2016 2017 2018	21,283 21,136 20,932 21,078	14,867 16,685 15,619 16,245	4,599 4,884 3,875 4,299	1,674 1,770 1,667 1,630	183 139 21 -6	29,694 31,028 30,988 31,400	451 468 464 468
Oceania	2015 2016 2017 2018	12,061 10,076 9,764 10,043	14,998 17,428 17,988 19,945	224 184 238 215	188 173 172 181	234 220 -212 293	26,413 26,927 27,553 29,298	663 666 672 705
Australia	2015 2016 2017 2018	9,654 7,579 7,279 7,707	12,444 14,896 15,418 16,993	64 44 89 73	55 46 47 54	225 217 -173 306	21,754 22,168 22,734 24,267	909 914 925 975
Cook Islands	2015 2016 2017 2018	  	*14 *14 *16 *16	  	  	  	*14 *14 *16 *16	*785 *822 *885 *885
Fiji	2015 2016 2017 2018	  	421 375 385 *402	139 140 118 *142	*45 *50 *55 *60		237 186 212 *201	273 213 242 *227
French Polynesia	2015 2016 2017 2018	  	138 134 139 141	  	15 16 16 16	 	123 118 123 125	450 430 445 449

Country on and	\/a==	Dan dunation	lusus a uta	Europeto.	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Kiribati	2015 2016 2017 2018		11 10 13 *13				11 10 13 *13	103 92 113 *113
Marshall Islands	2015 2016 2017 2018	  	*35 *35 *36 *36	  	   		*35 *35 *36 *36	*609 *606 *615 *616
Micronesia (Fed. States of)	2015 2016 2017 2018	  	30 *30 *30 *30	  	3 *3 *3		27 *27 *27 *27	243 *240 *238 *236
Nauru	2015 2016 2017 2018	  	*9 *10 *10 *10	  	  	0	*9 *10 *10 *10	*912 *923 *962 *928
New Caledonia	2015 2016 2017 2018	  	319 286 294 369	  	8 4 7 *9	-7 5	304 289 282 339	1,120 1,054 1,019 1,211
New Zealand	2015 2016 2017 2018	2,150 1,949 1,942 1,790	735 1,033 979 1,259	21 0 31 0	57 48 38 34	38 -56	2,795 2,896 2,908 3,061	606 622 618 645
Niue	2015 2016 2017 2018	 	1 *1 *1 *1	  	  		1 *1 *1 *1	745 *683 *664 *714
Palau	2015 2016 2017 2018	  	27 30 *29 *28	  	  		27 30 *29 *28	1,507 1,668 *1,628 *1,569
Papua New Guinea	2015 2016 2017 2018	257 548 543 *546	643 403 465 *467	  	  	-25 11	916 977 997 *1,002	113 118 118 *116
Samoa	2015 2016 2017 2018	  	50 45 49 45	0 1 *1 *1	  	*-3 *2	43 47 47 43	223 242 239 221
Solomon Islands	2015 2016 2017 2018	 	80 *78 *77 *79	  	*6 *5 *5		74 *73 *72 *73	123 *117 *113 *112
Tuvalu	2015 2016 2017 2018	  	*2 *2 *2 *2	  	  		*2 *2 *2 *2	*175 *171 *201 *212
Vanuatu	2015 2016 2017 2018	  	35 39 38 48				35 39 38 48	128 140 133 163

Country or area	Year Production	Imports	Exports	Bunkers	Changes in	Supply		
Country of area	real	Production	imports	Exports	Dulkers	stocks	Total	Per capita
Wallis and Futuna Is.	2015 2016 2017 2018		7 7 7			 	. 7 . 7	515 554 550 577

#### Production, trade and supply of fuel oil

Thousand metric tons and kilograms per capita

#### **Table Notes**

**Production** includes output from refineries and plants.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Figure 60: Production of fuel oil by region, 1990-2018

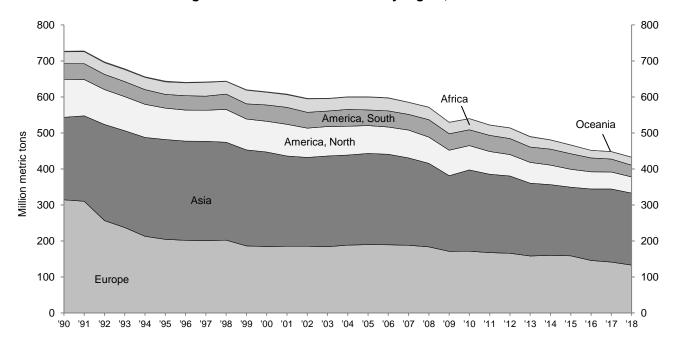


Figure 61: Major fuel oil producing countries, 2018

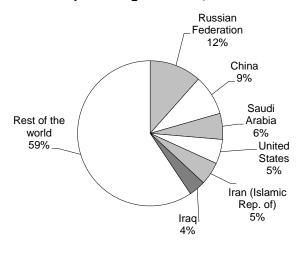
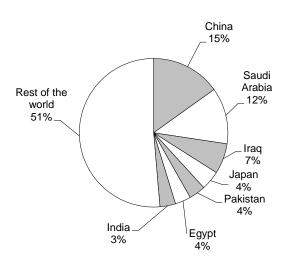


Figure 62: Major fuel oil consuming countries, 2018



Country or one	Vaan	Dan desation	lusus a uta	Five siste	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
World	2015 2016 2017 2018	467,467 452,423 449,266 433,516	254,786 243,191 232,415 230,746	309,090 300,721 286,722 271,152	167,429 174,393	-4,227 -4,322	231,691 224,888	33 31 30 29
Africa	2015 2016 2017 2018	24,242 20,726 20,419 21,713	9,381 7,923 8,149 6,844	9,964 9,599 9,623 9,276	1,417 1,801	-95 -72	17,729 17,215	17 15 14 13
Algeria	2015 2016 2017 2018	6,617 6,870 6,402 5,822	196 146 186 141	6,631 6,940 6,379 5,810	172	-106 25	0 12	0 0 0 0
Angola	2015 2016 2017 2018	913 971 947 614	0 0 	610 541 582 377	360	*51 *50	19 -72	-3 1 -2 -1
Benin	2015 2016 2017 2018	  	27 5 14 25	0  	1	-18 -9	22 22	3 2 2 2
Botswana	2015 2016 2017 2018	  	11 12 12 13	  	  		12 12	5 6 5 6
Burkina Faso	2015 2016 2017 2018	  	213 165 224 225	  	  	*21 *20	144 204	11 8 11 11
Burundi	2015 2016 2017 2018	  	*10 *9 *24 *31	  	  		*9 *24 *31	*1 *1 *2 *3
Cabo Verde	2015 2016 2017 2018	 	*99 *105 *114 *118	  	*39 *40 *43 *44	···	*65 *71	*115 *123 *133 *136
Cameroon	2015 2016 2017 2018	273 270 222 201	 	3 149 98 74	0		121 124	12 5 5 5
Central African Rep.	2015 2016 2017 2018	  	2 1 *2 *2	  	  	  	. 1 . *2 . *3	0 0 0 0
Chad	2015 2016 2017 2018	*27 *24 *24 *24	  	*24 *24 *24 *24		 0 	0	0 0 0 0
Congo	2015 2016 2017 2018	329 325 358 358	7 26 16 16	325 325 343 348			26	2 5 6 5

0	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Dua du atia a	lance and a	Formanta	Davidson	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Côte d'Ivoire	2015 2016 2017 2018	311 317 *313 652		124 271 *254 623	7 6	0	191 39 *53 22	8 2 *2 1
Dem. Rep. of the Congo	2015 2016 2017 2018	  	16 22 16 14	  			16 22 16 14	0 0 0 0
Djibouti	2015 2016 2017 2018	  	33 15 9 *9	  	*9 *9	6 0	0 0 0 0	0 0 0 0
Egypt	2015 2016 2017 2018	7,899 7,567 7,354 7,444	3,798 2,302 1,422 498	  234	21 158		11,558 9,848 8,618 7,681	125 104 89 78
Eritrea	2015 2016 2017 2018	  	67 68 63 82	  			67 68 63 82	20 20 18 24
Eswatini	2015 2016 2017 2018	  	*2 *1 0 0	  	  		*2 *1 0 0	*1 *1 0 0
Ethiopia	2015 2016 2017 2018	  	71 38 43 46	  			71 38 43 46	1 0 0 0
Gabon	2015 2016 2017 2018	395 418 396 397	 	219 241 189 190	107 84		67 70 123 123	34 35 60 58
Gambia	2015 2016 2017 2018	  	*68 *69 *70 *70	  			*68 *69 *70 *70	*33 *32 *31 *31
Ghana	2015 2016 2017 2018	9 64 1 32	0 390 249 112	0 70 53 42		0 0 0	9 384 197 102	0 13 7 3
Guinea	2015 2016 2017 2018	  	72 162 158 374	  	  		72 162 158 374	6 14 13 30
Guinea-Bissau	2015 2016 2017 2018	  	*32 *34 *34 *34	  	  	  	*32 *34 *34 *34	*18 *19 *18 *18
Kenya	2015 2016 2017 2018	0 0 0	380 349 599 512	18 19 38	0	0	358 329 553 466	7 7 11 <u>9</u>

Occupation on the control of the con	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Des desetion	lanca a sta	Francista	Devalence	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Libya	2015 2016 2017 2018	1,767 1,827 1,673 1,847	0 0 0	318 427 336 215	85 220		1,366 1,315 1,117 1,351	213 203 170 202
Madagascar	2015 2016 2017 2018	  	55 80 160 131	  	*3 *9 5 *5	*6 12	55 66 143 146	2 3 6 6
Malawi	2015 2016 2017 2018	  	*2 *2 *2 *2	  	  		*2 *2 *2 *2	0 0 0
Mali	2015 2016 2017 2018	  	*88 *89 *90 *92	  	  	  	*88 *89 *90 *92	*5 *5 *5 *5
Mauritania	2015 2016 2017 2018	  	*255 171 330 402	  	  		*255 171 330 313	*63 41 77 71
Mauritius	2015 2016 2017 2018	  	445 490 649 663	  	217 341	7 27	270 265 281 290	214 210 222 229
Morocco	2015 2016 2017 2018	553 0 	1,595 1,518 1,795 1,217	0 0 	114 114	129 6	1,418 1,275 1,675 1,031	40 36 46 28
Namibia	2015 2016 2017 2018	  	18 18 18 18	  	  		18 18 18 18	8 8 7 7
Niger	2015 2016 2017 2018	  	2 6 *24 *10	  	 	••	2 6 *24 *10	0 0 *1 0
Nigeria	2015 2016 2017 2018	406 577 994 779	64 297 297 500	92 169 511 88	216 218	-187 -190	579 676 752 858	4
Rwanda	2015 2016 2017 2018	  	*5 5 *6 *8	  	  	  	*5 5 *6 *8	0 0 0 *1
Senegal	2015 2016 2017 2018	233 266 285 220	577 624 672 615	52 56 56	3 3	-1 0	763 832 898 835	58
Seychelles	2015 2016 2017 2018	 	85 87 95 86	  	*7 *7 *7 *6		78 80 88 80	820 837 914 820

Occupation on the con-	V	Dan dan dina	lassa sata	E a sta	Develope	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Sierra Leone	2015 2016 2017 2018	  	*32 *33 *35 *32	  	  	  	*32 *33 *35 *32	*5 *5 *5 *4
Somalia	2015 2016 2017 2018	  	*39 *39 *39 *39	·· ·· ··	*12 *12 *12 *12		*27 *27 *27 *27	*2 *2 *2 *2
South Africa	2015 2016 2017 2018	3,791 584 895 2,753	111  34 97	1,163  437 955	1,863   1,352		876 584 492 543	16 10 9 9
Sudan	2015 2016 2017 2018	208 135 51 114	 140 188	  	  	  	208 135 191 302	5 3 5 7
Togo	2015 2016 2017 2018	  	49 *185 *149 55	  	  	-4   -2	53 *185 *149 57	7 *25 *19 7
Tunisia	2015 2016 2017 2018	430 409 327 338	568 230 222 276	386 367 323 296	0  	-4 -13	561 276 239 326	50 24 21 28
Uganda	2015 2016 2017 2018	  	46 *40 *95 75		  	  	46 *40 *95 75	1 *1 *2 2
United Rep. of Tanzania	2015 2016 2017 2018	 	194 92 43 17		56 27 13 5		138 65 30 12	3 1 1 0
Zambia	2015 2016 2017 2018	81 102 176 119	48 0 	0 0 	  	••	129 102 176 119	8 6 10 7
America, North	2015 2016 2017 2018	50,001 47,767 47,137 44,910	25,979 27,088 27,609 28,465	33,750 31,508 29,995 30,500	16,045 20,767 22,940 22,404	-105 -1,462	25,278 22,684 23,273 22,675	45 40 40 39
Antigua and Barbuda	2015 2016 2017 2018	 	*40 *41 *41 *42		*4 *4 *4 *4		*36 *37 *37 *38	*385 *391 *388 *395
Aruba	2015 2016 2017 2018	  	*207 *202 *201 195		*11 *11 *11 *12		*196 *191 *190 183	*1,878 *1,821 *1,803 1,729
Bahamas	2015 2016 2017 2018	  	105 35 84 72	 	*90 *25 *71 *60		15 10 13 12	40 26 34 31

Country on one	V	Duo divetto a	lusus a uta	F.v.s.anta	Duralisana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Barbados	2015 2016 2017 2018		224 228 180 195			17 17 15 2	207 210 165 193	725 736 577 675
Belize	2015 2016 2017 2018	  	*4 4 6 9	  	  	  	*4 4 6 9	*12 11 17 23
Bermuda	2015 2016 2017 2018	  	102 101 122 135	  	*7 *10 *11 *11		95 91 112 124	1,499 1,433 1,770 1,969
Bonaire, St Eustatius, Saba	2015 2016 2017 2018	  	*238 *242 *248 *248	 	*190 *192 *196 *196		*48 *50 *52 *52	*1,933 *1,999 *2,063 *2,003
Canada	2015 2016 2017 2018	4,738 4,115 4,739 5,196	647 780 843 598	3,162 3,023 2,952 3,701	142 245 298 378	-180 44	1,807	57 50 62 47
Costa Rica	2015 2016 2017 2018	  	130 139 123 130	1  	  	-18 -1	134 156 123 157	28 32 25 31
Cuba	2015 2016 2017 2018	2,233 1,032 1,255 1,313	1,253 1,213 1,166 912	  	633 609 *440 *404		1,636	252 144 175 161
Curaçao	2015 2016 2017 2018	3,275 2,996 1,447 1,088	1,699 1,685 1,669 1,621	3,189 2,917 1,409 1,059	1,416 1,402 1,404 1,400		369 362 303 250	2,308 2,248 1,871 1,536
Dominica	2015 2016 2017 2018	  	*16 *16 *14 *14	  	*1 *1 *1 *1	  	*15 *14 *13 *13	*212 *203 *183 *185
Dominican Republic	2015 2016 2017 2018	234 310 254 372	1,407 1,564 1,401 1,424	 	  	9 6 4 -1	1,632 1,868 1,650 1,797	159 180 157 169
El Salvador	2015 2016 2017 2018	0 0 	571 592 343 283	  	  	  	571 592 343 283	90 93 54 44
Greenland	2015 2016 2017 2018	  	13 12 14 *14	  	1 1 2 *2		11 11 12 *13	195 195 217 *221
Guatemala	2015 2016 2017 2018	: :	533 486 283 242	2 5 5 9		-13 29 -5 -21		33 27 17 15

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Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Haiti	2015 2016 2017 2018		59 109 123 116			0	59 109 123 116	6 10 11 10
Honduras	2015 2016 2017 2018	  	1,073 964 772 999	4 17 5 1	6 35 71 73		1,143 974 697 837	125 105 74 87
Jamaica	2015 2016 2017 2018	752 677 677 729	760 873 867 966	261 260 302 250	  	-15	1,256 1,305 1,224 1,460	434 449 419 497
Mexico	2015 2016 2017 2018	13,500 13,007 12,360 10,550	965 1,508 2,242 2,330	7,049 6,458 5,887 5,557	77 86 72 89	162	7,482 7,882 8,481 7,205	61 64 68 57
Nicaragua	2015 2016 2017 2018	336 330 318 240	193 195 142 *242	0 0 10 10	  	-9 8 -2 22	538 517 452 450	86 82 71 70
Panama	2015 2016 2017 2018	  	3,332 3,789 4,697 4,308	  	3,073 3,538 4,274 4,130	-244 -167 -114 -119	503 419 537 296	127 104 131 71
Sint Maarten (Dutch part)	2015 2016 2017 2018	  	*263 *266 *258 *245	 	*133 *133 *128 *123		*130 *133 *130 *122	*3,258 *3,261 *3,142 *2,919
St. Lucia	2015 2016 2017 2018	  	*6 *6 *7 *7	  	*6 *6 *7 *7		0 0 0 0	0 0 0
Trinidad and Tobago	2015 2016 2017 2018	2,183 2,236 2,345 1,810	  	1,835 1,821 1,956 1,560	299 296 318 254	49 120 53 -4	0 -1 18 0	0 -1 13 0
United States	2015 2016 2017 2018	22,751 23,064 23,742 23,612	12,139 12,039 11,764 13,120	18,248 17,007 17,470 18,353	9,956 14,173 15,634 15,261	68	5,372 3,855 4,037 5,246	17 12 12 16
America, South	2015 2016 2017 2018	42,886 38,590 36,027 32,623	937 894 1,067 1,498	20,606 20,213 19,688 20,890	5,455 4,733 4,834 4,687	-459 -233	17,473 14,997 12,804 9,105	42 36 31 22
Argentina	2015 2016 2017 2018	4,606 3,923 2,993 1,878	0 0 0 *236	24 25 370 584	818 628 687 591	-55	3,801 3,325 1,832 952	88 76 42 21
Bolivia (Plur. State of)	2015 2016 2017 2018	517 121 81 38	  	613 367 326 180	  	-9 -116 -149 -39	-87 -130 -96 -103	-8 -12 -9 -9

Country or area	Voor	Production	Imports	Evporto	Dunkoro	Changes in	Sup	ply
Country or area	Year	Production	imports	Exports	Bunkers	stocks	Total	Per capita
Brazil	2015 2016 2017 2018	14,087 11,424 11,646 10,761	337 62 71 303	4,189 3,436 3,623 5,136	3,687 3,216 3,310 2,556	2 64	4,832 4,720	32 23 23 17
Chile	2015 2016 2017 2018	1,252 1,220 1,170 1,149	32 42 26 27	302 326 290 391	133 135 142 136	-15 54	816 710	47 45 38 35
Colombia	2015 2016 2017 2018	3,459 3,934 3,283 3,048	8 0 9 2	2,454 2,748 2,396 1,919	186 217 177 43		969 719	17 20 15 22
Ecuador	2015 2016 2017 2018	2,439 2,873 2,968 3,572	282 472 634 624	547 1,714 2,288 2,389	345 290 332 669	-1 -9	1,343 992	112 81 59 66
Guyana	2015 2016 2017 2018	  	200 208 204 216	  	  	2	209 202	254 271 261 276
Paraguay	2015 2016 2017 2018	  	36 46 5 4	  	  	-1 1	47 5	7 7 1 1
Peru	2015 2016 2017 2018	1,972 2,432 3,258 3,019	0 23 23 0	773 1,884 2,615 2,239	  502	-281 -233	852	28 28 29 18
Suriname	2015 2016 2017 2018	405 296 321 298	33 30 31 30	410 383 257 270	37 37 36 32		58	-15 -165 102 45
Uruguay	2015 2016 2017 2018	313 334 105 242	8 11 63 56	  	83 73 34 64	9 -66	263 200	81 77 58 68
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	13,836 12,032 10,201 8,618	0 0 0	11,293 9,330 7,523 7,782	166 138 116 94		2,564 2,562	79 86 87 26
Asia	2015 2016 2017 2018	190,631 198,385 203,417 200,021	146,759 137,697 143,276 142,231	91,563 100,939 111,140 104,050	100,342 99,184 102,712 102,003	-2,348 -166	138,307 133,008	33 31 29 30
Afghanistan	2015 2016 2017 2018	  	*1 *1 *1 *1	  	  		*1 *1 *1	0 0 0
Azerbaijan	2015 2016 2017 2018	324 399 236 107	135 187 198	113 23 12 19		-118	681 339	43 70 34 4

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Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Bahrain	2015 2016 2017 2018	2,181 2,484 2,750 2,599		2,207 2,443 2,777 2,564	  	41 -27	0 0 0 0	0 0 0 0
Bangladesh	2015 2016 2017 2018	299 363 443 304	692 335 521 678	  	107 115 122 121		884 583 842 860	6 4 5 5
Bhutan	2015 2016 2017 2018	  	1 1 2 3	  	  	••	1 1 2 3	2 2 2 4
Brunei Darussalam	2015 2016 2017 2018	80 39 	  	  	83 39 		-3 0 	-7 0 
Cambodia	2015 2016 2017 2018	  	71 139 78 85	  	  		71 139 78 85	5 9 5 5
China	2015 2016 2017 2018	39,630 42,369 45,635 38,997	15,404 11,744 13,568 16,656	10,517 9,856 11,089 12,300	8,782 9,251 9,663 10,489	-64 662	35,773 35,070 37,789 33,739	25 25 27 24
China, Hong Kong SAR	2015 2016 2017 2018	  	7,776 7,251 7,958 7,303	401 264 168 90	6,771 6,529 8,042 7,502	458 -251	0 0 -1 59	0 0 0 8
China, Macao SAR	2015 2016 2017 2018	  	159 148 128 37	  	  	-3 8	144 151 120 37	239 246 193 58
Cyprus	2015 2016 2017 2018	  	1,053 1,095 980 1,016	  	169 193 154 154	-4 18	870 906 808 843	749 774 685 709
Georgia	2015 2016 2017 2018	5 8 9 9	107 44 87 89	109 19 32 95	  	-23 1	1 57 63 3	0 14 16 1
India	2015 2016 2017 2018	9,727 9,962 9,486 10,032	1,194 956 1,273 1,419	2,806 2,248 2,492 2,197	1,406 1,506 1,578 *1,685		6,709 7,164 6,689 7,569	5 5 5 6
Indonesia	2015 2016 2017 2018	1,224 1,305 1,027 1,258	463 719 643 493	329 342 262 176	138 137 144 0	0	1,220 1,545 1,264 1,573	5 6 5 6
Iran (Islamic Rep. of)	2015 2016 2017 2018	22,311 21,964 19,707 22,136	  	9,557 15,817 15,843 15,955	4,603 1,826 1,179 1,179		8,151 4,321 2,685 5,002	104 54 33 61

Country on one	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Dra divetion	lusus a uta	Europeto.	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Iraq	2015 2016 2017 2018	11,964 12,774 14,573 16,182		454 330 3,658 1,098	224 284 286 291		11,286 12,160 10,629 14,793	317 332 283 385
Israel	2015 2016 2017 2018	2,680 2,715 2,667 2,576	0 0 	2,137 2,369 2,453 2,067	227 128 200 250	-68 66	319 286 -52 263	40 35 -6 31
Japan	2015 2016 2017 2018	17,047 17,777 15,340 14,714	3,183 2,265 2,164 1,730	2,188 3,065 2,411 2,715	4,022 4,150 3,983 4,237	-31 -90	14,009 12,858 11,200 9,386	109 101 88 74
Jordan	2015 2016 2017 2018	885 599 564 458	848 0 0 0	  	1 85 73 	8 29	1,727 506 462 460	186 53 47 46
Kazakhstan	2015 2016 2017 2018	3,900 3,100 3,365 2,948	4 0  66	1,950 *1,856 *1,733 3,002	  	-26 -1	2,073 1,270 1,633 -3	118 71 90 0
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	109 109 109 109	364 422 350 343	  	  		473 531 459 452	19 21 18 18
Korea, Republic of	2015 2016 2017 2018	8,433 10,383 9,874 10,200	7,082 7,052 5,952 6,589	1,576 1,956 2,463 4,036	7,986 9,172 8,743 8,275	-352 240	5,712 6,659 4,380 4,429	112 131 86 87
Kuwait	2015 2016 2017 2018	11,197 10,002 8,723 8,642	·· ·· ··	5,097 4,540 3,816 3,699	1,141 1,019 889 880	-1,341	5,533 5,371 5,359 5,524	1,443 1,357 1,321 1,335
Kyrgyzstan	2015 2016 2017 2018	136 75 63 156	206 33 76 14	0 0 7 34	  	26	283 147 116 172	47 24 19 27
Lao People's Dem. Rep.	2015 2016 2017 2018	  	11 *11 *11	  	  	  	11 *11 *11 *11	2 *2 *2 *2
Lebanon	2015 2016 2017 2018	 	1,619 1,732 2,095 2,048	  	*30 *30 *30		1,589 1,702 2,065 2,018	243 253 303 294
Malaysia	2015 2016 2017 2018	1,706 1,492 1,739 2,452	966 51 228 103	1,420 610 622 1,375	347 299 300 321	-39 11	823 673 1,034 333	27 22 33 11
Mongolia	2015 2016 2017 2018	 	3 3 2 3				3 3 2 3	1 1 1 1

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Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Myanmar	2015 2016 2017 2018	61 67 78 35		  	  	11 18 34 	50 49 44 35	1 1 1 1
Oman	2015 2016 2017 2018	2,906 3,173 2,563 3,820	  	382 285 375 274	1,290 1,677 1,023 2,485		1,211	289 270 250 220
Other Asia	2015 2016 2017 2018	5,970 5,125 4,953 4,183	1,015 1,687 2,464 2,136	954 1,267 1,543 1,866	998 1,193 1,103 1,040	-102 -27	4,798	226 189 203 152
Pakistan	2015 2016 2017 2018	2,925 3,054 3,303 3,398	6,661 6,533 4,247 4,646	4 1 	146 91 39 35	-153 *-153	9,399 9,648 7,664 8,009	47 47 37 38
Philippines	2015 2016 2017 2018	957 781 977 737	1,530 1,082 1,046 792	446 239 433 259	18 46 90 67	-37 26	1,615	20 16 14 11
Qatar	2015 2016 2017 2018	513 225 234 146	  	380 211 249 144	  	1.1		0 0 0 1
Saudi Arabia	2015 2016 2017 2018	24,646 25,425 25,699 25,106	5,479 7,542 10,547 16,772	8,063 8,785 14,015 10,791	3,179 3,453 3,325 3,518	-290 -19	18,899 21,019 18,925 27,410	596 648 572 813
Singapore	2015 2016 2017 2018	2,077 4,279 5,383 5,461	72,443 71,052 76,356 66,396	29,979 31,812 32,529 25,560	43,433 46,624 48,615 47,513	-408 451	316 -2,697 144 -467	57 -477 25 -81
Sri Lanka	2015 2016 2017 2018	553 479 494 424	203 350 581 553	185 56 0 26	361 594 564 603	-121	918 703 632 390	44 33 30 18
State of Palestine	2015 2016 2017 2018	  	4 5 5 7	 	  		4 5 5 7	1 1 1 1
Syrian Arab Republic	2015 2016 2017 2018	2,676 2,886 3,205 3,001	0 0 	  	8 4 2 2		2,668 2,882 3,203 2,999	148 165 187 177
Tajikistan	2015 2016 2017 2018	5 7 9 26	14 16 25 24	  	  	  	19 23 34 50	2 3 4 6
Thailand	2015 2016 2017 2018	5,374 5,326 5,526 5,580	156 113 55 8	3,440 3,059 3,309 3,242	1,153 1,219 1,165 1,391	238 311	796	11 13 12 10

Country on area	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Dan dunation	lusus a uta	Funcion	Dumlana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Turkey	2015 2016 2017 2018	3,460 2,835 2,987 2,189	1,670 1,707 2,105 2,404	2,548 1,652 1,495 1,112	756 812 794 845	90 -138	1,988 2,941	24 25 36 31
Turkmenistan	2015 2016 2017 2018	1,690 1,690 1,690 1,690	 	759 759 759 759	  	  	931	167 164 162 159
United Arab Emirates	2015 2016 2017 2018	2,604 4,732 9,608 9,854	14,597 12,098 *8,530 *8,601	3,080 6,912 6,321 8,201	*12,732 *8,442 10,338 8,751		1,476 1,422	150 158 150 156
Uzbekistan	2015 2016 2017 2018	90 93 112 143	  74	  	  	1	102 110	2 3 3 7
Viet Nam	2015 2016 2017 2018	138 138 136 200	711 866 597 699	128 163 274 394	163 207 214 286	4	630 245	6 7 3 2
Yemen	2015 2016 2017 2018	151 151 151 151	935 458 403 434	355 0 	68 59 55 54		550 499	25 20 18 19
Europe	2015 2016 2017 2018	158,549 145,842 141,046 132,877	70,312 68,128 51,001 49,931	152,955 138,115 115,803 106,012	41,691 40,570 41,339 42,164	-1,163 -2,450	36,448 37,353	46 49 50 47
Albania	2015 2016 2017 2018	0 1 0 	1 0 0 1	  	  	  	1 1 0 1	0 0 0 1
Austria	2015 2016 2017 2018	1,154 898 839 710	11 16 68 65	525 576 437 467	  	-67 -119 -71 -17	457 541	81 52 61 37
Belarus	2015 2016 2017 2018	7,431 5,569 5,112 5,352	116 38 0	7,001 4,970 4,685 4,652	  	074	628 429	55 66 45 45
Belgium	2015 2016 2017 2018	5,306 5,349 7,488 7,507	3,892 4,079 4,988 6,127	4,727 4,183 6,284 5,794	4,485 5,443 6,715 8,327	83 -33	-281 -490	-13 -25 -43 -47
Bosnia and Herzegovina	2015 2016 2017 2018	105 69 81 57	72 40 56 52	1 1 2 3	  	40	121 135	40 36 40 32
Bulgaria	2015 2016 2017 2018	1,654 1,297 974 948	79 73 58 27	1,625 1,262 900 847	21 19 24 25	-28	96 136	14 13 19 11

					5 .	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Croatia	2015 2016 2017 2018	489 601 577 669	56 46 48 57	375 451 520 595	2	29 -69	165 171	51 39 41 29
Czechia	2015 2016 2017 2018	169 104 169 137	2 0  2	132 84 149 137		-22 -26	42 46	3 4 4 3
Denmark	2015 2016 2017 2018	1,702 1,771 1,626 1,870	3,873 3,412 980 1,796	4,552 4,527 2,445 2,843	258 139	-194 -483	592 505	71 104 88 134
Estonia	2015 2016 2017 2018	  	351 371 441 474	141 176 216 329	167 207	3 20	25 -2	10 19 -2 1
Faeroe Islands	2015 2016 2017 2018	  	*82 *77 *88 *89	  	16 21		*60 *67	*1,194 *1,249 *1,385 *1,398
Finland	2015 2016 2017 2018	1,441 1,554 1,614 1,543	1,101 1,221 902 449	784 1,324 1,190 1,165	253 288	-104 21	1,302 1,017	236 237 185 88
France	2015 2016 2017 2018	7,509 7,686 6,403 5,853	3,728 4,203 3,584 3,422	6,582 5,827 4,774 4,895	1,410 1,596	-165 -82	4,817 3,699	48 72 55 40
Germany	2015 2016 2017 2018	7,953 7,374 7,376 7,296	1,923 2,531 2,276 2,143	3,034 2,154 1,862 2,657	1,855 1,457	199 -8	5,697 6,341	68 69 77 70
Gibraltar	2015 2016 2017 2018	  	3,412 3,463 3,842 3,762	  	3,799		43	1,600 1,512 1,275 1,513
Greece	2015 2016 2017 2018	5,676 6,150 7,028 6,551	1,657 1,617 1,745 1,725	3,065 3,739 4,300 3,852	1,462 1,864	-98 105	2,664 2,504	238 251 237 251
Hungary	2015 2016 2017 2018	69 39 78 43	22 9 20 24	31 27 50 14		-20 -2	41 50	5 4 5 4
Iceland	2015 2016 2017 2018	  	105 101 102 119	  	24 31	-1 2	78 69	254 235 206 244
Ireland	2015 2016 2017 2018	1,167 1,070 1,049 976	121 60 62 60	1,173 1,060 1,058 1,002	11 14	-34 -14	93 53	21 20 11 9

Country or area	Voor	Draduction	Importo	Cynorto	Dunkara	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Italy	2015 2016 2017 2018	7,706 8,074 8,511 6,858	339 827 847 1,692	4,071 4,663 5,258 4,449	1,707 1,995 2,075 2,302	-344 -144 -88 39	2,387 2,113	43 39 35 29
Kosovo	2015 2016 2017 2018	  	33 22 26 21	  	  	  	22 26	18 12 15 12
Latvia	2015 2016 2017 2018	  	135 157 127 4	15 2 1 	134 153 126 2	-1	0	0 0 1 2
Lithuania	2015 2016 2017 2018	1,561 1,840 1,688 1,681	49 107 113 129	1,484 1,749 1,658 1,640	37 99 106 122		82 66	40 28 23 21
Luxembourg	2015 2016 2017 2018	  	1 1 2 3	  	  	  	1	2 2 3 5
Malta	2015 2016 2017 2018	  	1,765 1,793 1,985 2,109	215 24 83 161	1,330 1,552 1,852 1,923	34	183 53	604 420 121 11
Montenegro	2015 2016 2017 2018	  	4 4 4 4	0 0 	  	-1 1 2 2	2	8 5 3 3
Netherlands	2015 2016 2017 2018	8,401 11,961 11,684 11,077	38,631 31,645 16,060 13,047	36,702 31,729 15,064 11,314	10,020 9,901 9,585 9,213		2,232 4,152	19 131 244 211
North Macedonia	2015 2016 2017 2018	0 0 0	113 97 79 67	7 5 3 3	  	-1 2 -1 -3	91 77	52 44 37 32
Norway	2015 2016 2017 2018	1,790 1,290 1,545 1,474	1,635 1,350 1,888 1,440	1,455 1,058 1,432 1,419	16 22 26 30	-1 -60	1,561 2,035	373 297 384 270
Poland	2015 2016 2017 2018	3,869 3,609 3,436 3,630	2 47 38 48	2,743 2,514 2,471 2,774	47 53 53 78	2 18	1,087 932	28 29 25 22
Portugal	2015 2016 2017 2018	2,498 2,675 2,645 2,358	273 223 158 443	1,684 1,710 1,607 1,307	553 661 672 699	-61 -16	588 540	59 57 52 55
Republic of Moldova	2015 2016 2017 2018	11 13 11 6	6 29 10 7	5 9 9 3	  	-1 16 -3 	17	3 4 4 2

Occupation on the control of the con	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Dan desation	lassa sata	E	Develope	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Romania	2015 2016 2017 2018	308 218 182 196	  	162 168 158 124		-30 -34 -17 10	176 84 41 62	9 4 2 3
Russian Federation	2015 2016 2017 2018	75,957 61,426 56,018 50,147	1 2 12 0	*61,147 *52,109 *47,448 *42,068	6,664 3,305 2,747 2,035	-159	8,728 6,138 5,994 6,224	60 42 41 43
Serbia	2015 2016 2017 2018	355 389 380 361	28 25 9 7	60 50 55 28	  	-7	330 371 324 338	47 52 46 48
Slovakia	2015 2016 2017 2018	471 470 363 482	66 142 133 77	365 339 307 319	  	-33 35 -26 14	205 238 215 226	38 44 39 41
Slovenia	2015 2016 2017 2018	  	260 436 409 442	192 311 252 232	65 124 157 210		3 1 0 0	1 0 0 0
Spain	2015 2016 2017 2018	3,984 5,109 5,532 6,000	4,484 6,144 7,020 7,371	2,298 3,023 3,642 3,761	5,989 6,136 5,571 5,926	94 117 99 -199	87 1,977 3,240 3,883	2 42 69 83
Sweden	2015 2016 2017 2018	3,867 4,003 4,010 5,150	689 2,057 1,577 1,799	2,851 4,547 4,148 4,362	1,069 1,348 1,641 1,316	-104 -459	-6 269 257 1,509	-1 27 26 151
Switzerland	2015 2016 2017 2018	314 319 290 316	0 1 	325 350 274 304	  	-31 -39 9 11	20 9 7 1	2 1 1 0
Ukraine	2015 2016 2017 2018	535 590 444 429	172 380 273 42	45 3 	  	-13 -62 -24 3	675 1,029 741 468	15 23 17 11
United Kingdom	2015 2016 2017 2018	5,097 4,324 3,893 3,200	1,022 1,282 970 784	3,381 3,391 3,062 2,492	834 889 570 808	25	1,836 1,429 1,206 736	28 22 18 11
Oceania	2015 2016 2017 2018	1,157 1,114 1,220 1,372	1,418 1,460 1,314 1,777	252 347 472 424	776 758 767 801	-58	1,621 1,526 1,234 1,774	41 38 30 43
Australia	2015 2016 2017 2018	602 516 644 765	245 312 214 686	103 171 301 224	483 490 502 504	-23 16	290 190 39 580	12 8 2 23
Cook Islands	2015 2016 2017 2018	  	*4 *4 *4 *4	  	*1 *1 *2 *2		*2 *2 *2 *2	*123 *127 *134 *134

						Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Fiji	2015 2016 2017 2018		72 78 *92 *100	21 15 *20 *29		-3 	51 66 *71 *66	58 76 *81 *75
French Polynesia	2015 2016 2017 2018	  	69 67 65 67	  			69 67 65 67	252 245 236 242
Nauru	2015 2016 2017 2018	  	*10 *9 *9 *9	  	5 *4 *4		*6 *4 *5 *5	*530 *401 *473 *440
New Caledonia	2015 2016 2017 2018	  	479 501 466 450	  		-6 31	496 507 434 450	1,830 1,849 1,567 1,609
New Zealand	2015 2016 2017 2018	485 463 435 465	0	128 161 151 171	273 248 245 271	-1 4	84 55 35 26	18 12 7 5
Palau	2015 2016 2017 2018	  	*32 *31 *32 *31	  			*24	*1,783 *1,744 *1,797 *1,753
Papua New Guinea	2015 2016 2017 2018	70 135 141 *142	429 396	  	0	-25 9	569 579 519 *521	70 70 61 *61
Tonga	2015 2016 2017 2018	  	00	  	0		24 24 31 25	234 241 307 244
Vanuatu	2015 2016 2017 2018	  	*4 *4 *5 *6	  	*4 *4 *5 *6		0 0 0 0	0 0 0 0

#### Production of minor oil products from refineries - by type

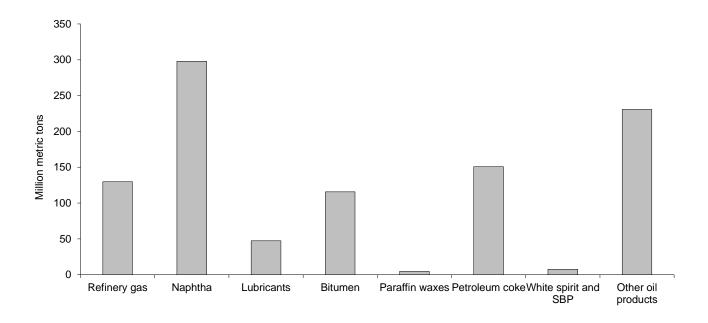
Thousand metric tons

#### **Table Notes**

Data refer to production from refineries of refinery gas, ethane, naphtha, lubricants, bitumen, paraffin waxes, petroleum coke, white spirit, and other oil products (which for this table includes refinery output of feedstocks).

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Figure 63: Production of minor oil products from refineries, 2018\*



\*Ethane is included with other oil products

Table 23

Country or area	Year	Refinery gas	Ethane	Naphtha	Lubricants	Bitumen	Paraffin waxes	Petroleum coke	White spirit and SBP	Other oil products
World	2015 2016 2017 2018	130,535 129,797 125,496 129,798	3,082 2,119 1,650 2,055	272,167 281,399 293,240 297,868	37,163 42,093	114,419 115,792	3,092 3,487 4,618 4,684	144,234 145,937	8,783 9,294	176,516 184,234 204,190 228,611
Africa	2015 2016 2017 2018	1,832 679 1,255 1,267	  	11,125 10,529	482 550	1,488 1,437	7 10 10 10	581 563	116 115	1,497 1,507 1,639 2,379
Algeria	2015 2016 2017 2018	350  	  	7,929 8,143	*55 *73	*144 *127	  			*180 *236 *184 *134
Angola	2015 2016 2017 2018	*106 *79 74 53	  	305 278		3 16	  	· · · · · · · · · · · · · · · · · · ·		184 200 162 207
Cameroon	2015 2016 2017 2018	68 67 55 50	  	  			  			157 155 127 105
Chad	2015 2016 2017 2018	  	  	  	. *1 . *1	*1 *1 *1 *1	  	*36 *36	 	*16 *14 *14 *14
Congo	2015 2016 2017 2018		  	8	 !		  			12 30 19 19
Côte d'Ivoire	2015 2016 2017 2018	25 25 19 20	  	  	. 29	236 249	  			
Egypt	2015 2016 2017 2018	130 *125 136 130	  	450	*273 297			*237 257	, ,	359 *343 373 1,352
Gabon	2015 2016 2017 2018	  	  	 	. 11	2			•••	
Libya	2015 2016 2017 2018	87 81 97 113	  	539 518 667 948		21 25	 		 	4 4 5 6
Morocco	2015 2016 2017 2018	90 0 	  	0	0	0	1 0 		•••	221 0 
Nigeria	2015 2016 2017 2018	52 77 102 98		82		7		. 9	· · · · · · · · · · · · · · · · · · ·	310 475 720 492

Country or area	Year	Refinery gas	Ethane	Naphtha	Lubricants	Bitumen	Paraffin waxes	Petroleum coke	White spirit and SBP	Other oil products
Senegal	2015 2016 2017 2018	21 23 15 13		87 123	 					
South Africa	2015 2016 2017 2018	869 166 723 758	  	166 420	113 133	468 359	6 10 10 10		. 106 . 104	39 25
Sudan	2015 2016 2017 2018	21 24 20 *20	  	11 4			 	299 258	) }	
Tunisia	2015 2016 2017 2018	 2 4 	 	230 93		  	  		. 10 . 11	
Zambia	2015 2016 2017 2018	13 10 10 12	 			  	  		·	10
America, North	2015 2016 2017 2018	22,186 22,224 20,568 20,524	107 72 116 128	15,760 13,009	9,839 10,451	25,706 26,079	249 246 245 237	64,526 62,754	1,568 1,742	15,349 15,779
Canada	2015 2016 2017 2018	3,526 3,259 2,645 2,948	  	3,892 1,749	954 1,038	4,763 5,176		1,378 1,266	74 129	2,441 2,681
Cuba	2015 2016 2017 2018	19 5 3 4	  	232 289	50 51			. 8	 !	
Curaçao	2015 2016 2017 2018	221 169 99 48	  	353 98	103 60	121 71	  	. 152 . 89	! !	178
Dominican Republic	2015 2016 2017 2018	9 13 10 14	  	  		  	  			
Guatemala	2015 2016 2017 2018		  	  		27 14 38 97			• •	  
Jamaica	2015 2016 2017 2018	  	  	51 40		20 18	  	•••		
Mexico	2015 2016 2017 2018	3,193 3,190 2,445 1,816	  	3,008	155 99	982 959	26 20	2,530 1,657	) 	400

Table 23

Country or area	Year	Refinery gas	Ethane	Naphtha	Lubricants	Bitumen	Paraffin waxes	Petroleum coke	White spirit and SBP	Other oil products
Nicaragua	2015 2016 2017 2018	12 14 9 18		  		19 12	  	· · ·	. 12	
Trinidad and Tobago	2015 2016 2017 2018	59 59 52 88	  	0 0 0		9 12	  			71 309
United States	2015 2016 2017 2018	15,147 15,516 15,305 15,588	107 72 116 128	8,133 8,225 8,391 9,296	8,577 9,203	19,721 19,736	223 220 225 213	60,458 59,740	1,482 1,605	12,439 12,503
America, South	2015 2016 2017 2018	8,179 7,651 7,653 7,443	  	0.44	1,116 1,181	3,490 3,121	63 60 56 53	9,893 9,881	621 514	8,676 7,557
Argentina	2015 2016 2017 2018	1,066 1,051 1,017 1,072	  	764 727	238 219	242	11 9 8 7	1,406 1,478	301 301	
Bolivia (Plur. State of)	2015 2016 2017 2018	  	  	1	25 24	2 2	  		. 80 . 52	
Brazil	2015 2016 2017 2018	4,870 4,445 4,549 4,264	  	2,308 2,248	546 656	2,152 1,955	  	5,786 5,618	238 232	2,446 2,370
Chile	2015 2016 2017 2018	201 203 211 215	  	48			  	365 446	 	579
Colombia	2015 2016 2017 2018	189 263 275 290		137 814 1,070 1,164	141 142	345	37 37 37 37	583 681	 	1,035
Ecuador	2015 2016 2017 2018	2 2 2 1		  		  	  		 	920 923
Peru	2015 2016 2017 2018	149 137 151 168		  		  	  		 	262 239 274 264
Suriname	2015 2016 2017 2018			  		5 5 5 4	  			
Uruguay	2015 2016 2017 2018	54 62 18 58		 		26	 	38	0 0	

	1	1 1				Ī		1	1	
Country or area	Year	Refinery gas	Ethane	Naphtha	Lubricants	Bitumen	Paraffin waxes	Petroleum coke	White spirit and SBP	Other oil products
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	1,648 1,488 1,430 1,374		1,988 1,897	166 140	612 612		1,715 1,648	5 3	2,965 2,376
Asia	2015 2016 2017 2018	57,735 59,979 56,812 61,653	0 0 0	180,672 189,490	14,781 15,266	56,224 58,562	1,889 2,440 3,375 3,288	52,960 56,059	3,535 4,059	132,620 151,016
Azerbaijan	2015 2016 2017 2018	216 231 214 214	  	174 169	10 39	179 237	  	207	, ,	384 594
Bahrain	2015 2016 2017 2018	  	  	1,565 1,494		450 298	  		 	441 568
Bangladesh	2015 2016 2017 2018	13 13 16 14	  	132 161	17 19	65 79	  		. 3 . 4	21
Brunei Darussalam	2015 2016 2017 2018	14 10 3 18						•		
China	2015 2016 2017 2018	18,537 18,923 19,825 20,132	  	50,324 54,639	1,474 1,998	21,716 25,828	1,614 2,122 2,982 2,795	19,509 20,494	2,325 2,122	91,622 104,284
Georgia	2015 2016 2017 2018		  	3			  		 	
India	2015 2016 2017 2018	*11,643 *12,268 *9,825 *14,117	  	17,861 17,607 18,786 *18,536	1,029 1,036	5,185 5,277	65 85 104 *117	*13,936 14,754	 I	26,210
Indonesia	2015 2016 2017 2018	632 655 673 690	  	1,371 1,565	282 344	192 112		436 497	6 26 7 26	2,689 4,195
Iran (Islamic Rep. of)	2015 2016 2017 2018	1,898 1,951 1,581 1,545	0 0 0	3,505 3,000	1,738 1,761	6,046 4,837			. 396 . 541	826 753
Iraq	2015 2016 2017 2018	133 137 164 192	  	480 571	45 52	88 140	1 1 110 112		·	
Israel	2015 2016 2017 2018	586 616 569 567	 	1,095		280				541

Table 23

Country or area	Year	Refinery gas	Ethane	Naphtha	Lubricants	Bitumen	Paraffin waxes	Petroleum coke	White spirit and SBP	Other oil products
Japan	2015 2016 2017 2018	7,220 7,157 7,111 7,030	  	14,656 13,175	2,201 1,958	3,264 3,249 3,051 2,854	60 58 64 70	1,267 1,320	74 72	2,327
Jordan	2015 2016 2017 2018	*40 *36 *33 42	  		24 23	226	  		  	*3 *4 *4 *3
Kazakhstan	2015 2016 2017 2018	111 111 161 177	  			605 809	  	311 474		  
Korea, Republic of	2015 2016 2017 2018	4,499 4,566 3,831 4,365	  	31,503 35,356	2,569 2,747	5,064 5,185	14 16 18 15	372 404	388 506	2,834 2,856
Kuwait	2015 2016 2017 2018	399 383 310 322	  	7,120 5,675		99 118	  			583 560 454 471
Kyrgyzstan	2015 2016 2017 2018		  				  			
Malaysia	2015 2016 2017 2018	169 198 172 128	 	2,744 2,356	972 368	197	83 93 23 32	265 166		  
Myanmar	2015 2016 2017 2018	24  	  			  	1 1 0	13 12		5 5 5 *5
Oman	2015 2016 2017 2018	115 93 124 149	  	482 939	46 62		  			245 192 357 1,068
Other Asia	2015 2016 2017 2018	1,958 2,107 1,897 2,196	  	7,074 7,667	610 672	619 510	  	1,266 1,272	68 63	678
Pakistan	2015 2016 2017 2018	176 190 	  	767 781	192 180	223 *291	*12 *12 2 0			*35 60
Philippines	2015 2016 2017 2018	  	  	256 200			  			4 400
Qatar	2015 2016 2017 2018	60 61 58 58	 	3,997		  	 	••	••	507 740 1,019 2,338

Country or area	Year	Refinery gas	Ethane	Naphtha	Lubricants	Bitumen	Paraffin waxes	Petroleum coke	White spirit and SBP	Other oil products
Saudi Arabia	2015 2016 2017 2018	3,975 4,291 4,300 4,248	  	8,669 8,499		3,016 2,778	  	14,477 15,231	, 	*610
Singapore	2015 2016 2017 2018	2,633 3,155 3,251 3,107	  	3,667 4,494	3,162 3,230	3,432 2,945	12 20 28 76	137 245	7 232 5 705	699
Sri Lanka	2015 2016 2017 2018	14 14 13 13	  	144 142		0	  	-	. 1	
Syrian Arab Republic	2015 2016 2017 2018	87 94 104 98	  	577 641	26 29	321 356	  		 	19
Tajikistan	2015 2016 2017 2018	  	  	*9 		3	  		 	  
Thailand	2015 2016 2017 2018	563 550 569 570	  	10,478 10,430		1,364 1,361	  			4 4 4 0
Turkey	2015 2016 2017 2018	1,391 1,541 1,354 1,004	  	320 343	128 187	3,436 3,496	   32	733 934	3 12 4 7	342 917
Turkmenistan	2015 2016 2017 2018	130 120 112 106	  				  		·	270
United Arab Emirates	2015 2016 2017 2018	411 *422 447 437	  	11,407	181 477		  	-		1,241 1,620 779 1,332
Uzbekistan	2015 2016 2017 2018	88 86 94 114	  		76 84	152 138	9 12 27 21	31 29	11 ) 12	
Viet Nam	2015 2016 2017 2018	  	  			 	  		·	18 144
Yemen	2015 2016 2017 2018		  	174 205		6 7	  		 	  
Europe	2015 2016 2017 2018	39,420 38,255 38,188 37,854	2,975 2,047 1,534 1,927	67,069 73,357	10,945 14,644	27,195 26,391	884 731 932 1,096	15,850 16,306	2,867 2,798	25,853 28,033

Table 23

Country or area	Year	Refinery gas	Ethane	Naphtha	Lubricants	Bitumen	Paraffin waxes	Petroleum coke	White spirit and SBP	Other oil products
Albania	2015 2016 2017 2018	*12 *6 19		40		84 77		. 14 . 105	·	103
Austria	2015 2016 2017 2018	282 218 262 281	  	961 804	0	333 306		. 71 . 59	 )	27
Belarus	2015 2016 2017 2018	757 632 617 709	  			852			 	806 1,028
Belgium	2015 2016 2017 2018	816 860 916 824	  	2,443 2,319		1,271 395		. 315	; ;	3,903 3,698
Bosnia and Herzegovina	2015 2016 2017 2018	  	  	7	37 51	152 171		,		20
Bulgaria	2015 2016 2017 2018	263 310 331 294	  	366 448		23 16	• • •	. 93 . 98	3 4 3 4	9 9
Croatia	2015 2016 2017 2018	208 155 185 187	  	64 52	11 11	0 1  1		. 53 . 74	} ├	208 115
Czechia	2015 2016 2017 2018	156 101 145 140	  	394	84 85	363 551	10 10 12 11	) 62 2 102	? ?	047
Denmark	2015 2016 2017 2018	319 287 306 301	  		••					  
Finland	2015 2016 2017 2018	508 592 573 586	  	133 103	308 296	231 139		. 128	3 116 7 130	 5
France	2015 2016 2017 2018	1,348 1,322 1,282 1,167	2 9 20 7	4,974 5,301	603 719	1,706	90 73 97 71	542 485	2 38 5 58	917 963
Germany	2015 2016 2017 2018	3,839 3,937 4,051 3,742	  	7,860 7,635	2,367 2,508	4,065 4,289	142 122 94 219	2 1,887 1,911	' 1 259	1,190 1,393
Greece	2015 2016 2017 2018	615 662 664 839	  	1,657	225 249	748 907		. 597	, }	1,156

Country or area	Year	Refinery gas	Ethane	Naphtha	Lubricants	Bitumen	Paraffin waxes	Petroleum coke	White spirit and SBP	Other oil products
Hungary	2015 2016 2017 2018	180 173 174 207		1,008 862	134 133	487 518 440 404		380 309	) 20 ) 24	610 640
Ireland	2015 2016 2017 2018	85 72 75 76		77 94	••	  	  	•••		
Italy	2015 2016 2017 2018	2,975 2,559 2,718 2,790		2,436 6,391	1,554	3,182 2,557 2,772 2,554	98 108 145 100	834 1,033	3 3 4	3,936 2,563
Lithuania	2015 2016 2017 2018	330 346 352 332	  		56 66	137 166 209 242		127	, )	95 94
Netherlands	2015 2016 2017 2018	2,277 2,243 2,099 1,942	  	10,159 10,993	16 0	483 225 216 330	3	403 388	322 3 121	1,831 2,378
Norway	2015 2016 2017 2018	466 420 482 478	  	1,111 1,236		  	  	473 217	 	
Poland	2015 2016 2017 2018	594 663 542 623		1,810 1,935		1,480 1,427 1,452 1,494	77 86 76 87		. 130 . 89	1,362 1,246
Portugal	2015 2016 2017 2018	13 8 9 11		1,146 1,321	131 121 136 116	167 164 196 132			. 24	976 886
Republic of Moldova	2015 2016 2017 2018	  	  			  0	  			3
Romania	2015 2016 2017 2018	734 787 783 788	  	184 230		81 91 96 102		909	3 128 9 126	96 196
Russian Federation	2015 2016 2017 2018	16,323 15,590 15,318 *15,350	*2,938 *2,038 *1,514 1,920	25,946 26,485	3,720 7,041	6,246 7,633 6,693 6,912	178 251	3,229 3,727	) 1,721 7 1,705	*1,623 4,245
Serbia	2015 2016 2017 2018	57 65 53 59	  	359 441	12 11	360		. 13	3 3	171 197
Slovakia	2015 2016 2017 2018	541 549 572 528	35 0 	384		0		53	3 )	146

Table 23

Country or area	Year	Refinery gas	Ethane	Naphtha	Lubricants	Bitumen	Paraffin waxes	Petroleum coke	White spirit and SBP	Other oil products
Spain	2015 2016 2017 2018	2,364 2,366 2,346 2,236		1,194 1,368	409 399	2,471 2,483		3,782 3,823	265 3 255	2,575 2,338
Sweden	2015 2016 2017 2018	768 739 733 822		86	383 378	961 870		. 69	) )	2,082 1,800
Switzerland	2015 2016 2017 2018	124 123 121 131		. 0	 		••	. 0	) 	33 37
Ukraine	2015 2016 2017 2018	123 26 36 35			90	27 37				430 599
United Kingdom	2015 2016 2017 2018	2,343 2,444 2,424 2,368		2,306 2,280	350 443	968 817	11 39	1,882 1,910	95 7	1,100 1,018
Oceania	2015 2016 2017 2018	1,184 1,009 1,021 1,058		850 838	0	316 202		. 424	76 66	230 167
Australia	2015 2016 2017 2018	898 762 757 808		341	0	172 124		. 424	76 66	141 79
New Zealand	2015 2016 2017 2018	286 247 264 250				144 78			 	75 75
Papua New Guinea	2015 2016 2017 2018	  		509 520						14

#### Production of oil products from refineries - by type

Thousand metric tons

#### **Table Notes**

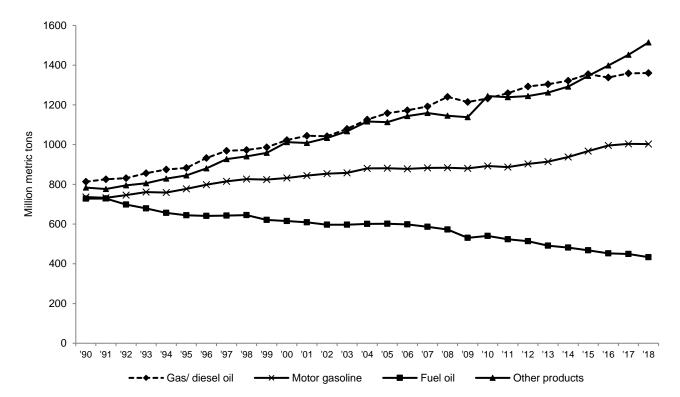
**Production** comprises all refinery output of all oil products.

The **Jet fuels** column comprises aviation gasoline, gasoline-type jet fuel and kerosene-type jet fuel.

The **Other products** column includes bitumen, ethane, feedstocks, lubricants, petroleum coke, paraffin waxes, white spirit, and other oil products.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Figure 64: Production of selected oil products from refineries, 1990-2018



Country or area	Year	Total	Gas/ diesel oil	Motor gasoline	Fuel oil	Naphtha	Jet fuels	Refinery gas	LPG	Other kerosene	Other products
World	2015 2016 2017 2018	4,134,955 4,184,043 4,264,089 4,311,094	1,337,851 1,358,969	995,818 1,003,877	467,467 452,423 449,266 433,516	281,399 293,240	301,501 315,194	130,535 129,797 125,496 129,798	120,395 131,415 138,033 141,050	59,402 56,440	494,438 523,574
Africa	2015 2016 2017 2018	101,927 100,221 95,477 98,586	32,470 30,626	19,410 17,215	24,242 20,726 20,419 21,713	11,125 10,529	7,703 7,266	1,832 679 1,255 1,267	2,240 2,500 2,359 2,093	1,424 1,495	4,183 4,314
Algeria	2015 2016 2017 2018	29,713 29,160 28,317 29,914	8,892 8,537	2,613 2,547	6,617 6,870 6,402 5,822	7,929 8,143	*1,635 *1,544		743	*21 *17	*435 *384
Angola	2015 2016 2017 2018	2,598 2,641 2,547 1,853	599 607	33 35	913 971 947 614	305 278	338 350	*79	26 27 27 17	85 52	204 178
Cameroon	2015 2016 2017 2018	1,613 1,596 1,313 1,180	572 471	292 240	273 270 222 201		106 87		13 13 11 10	121 100	155 127
Chad	2015 2016 2017 2018	*774 *677 *677 *689	*291 *291	*231 *231	*27 *24 *24 *24		25 *25 *25	  	*59 *52 *52 *52	*4 *4	*52 *52
Congo	2015 2016 2017 2018	688 649 716 716	168 214	56 64	329 325 358 358	8 9	45 37	  	7	10 7	30 19
Côte d'Ivoire	2015 2016 2017 2018	3,172 3,186 *3,064 3,366	1,237 *1,222	693 *888	311 317 *313 652		634 *327	25 25 19 20	9 16 *10 18		265 285
Egypt	2015 2016 2017 2018	25,595 25,052 23,888 26,083	7,183 7,403	4,536	7,899 7,567 7,354 7,444	1,790 450	1,790 1,909	130 *125 136 130	573 540 533 591	63	*1,458 1,585
Gabon	2015 2016 2017 2018	801 849 793 799	234 254	76 32	395 418 396 397		65 36		13 14 41 41	29 22	13 12
Ghana	2015 2016 2017 2018	89 739 16 309	255 6	244 7	9 64 1 32		38 0	  	2 114 0 8	25 2	
Libya	2015 2016 2017 2018	4,306 4,004 4,772 5,595	917 1,332	399 470	1,767 1,827 1,673 1,847	518 667	182 436	81 97	44 30 43 35	25 24	25 30
Morocco	2015 2016 2017 2018	3,127 0 	0	0	553 0 	0	0	0			0

	1										
Country or area	Year	Total	Gas/ diesel oil	Motor gasoline	Fuel oil	Naphtha	Jet fuels	Refinery gas	LPG	Other kerosene	Other products
Niger	2015 2016 2017 2018	565 572 *795 742	352 *520	184 228					44 35 47 53		
Nigeria	2015 2016 2017 2018	1,618 3,351 4,380 2,692	685 900	931 675		82 342	41 54	77 102	39 66 79 48	401 502	491 732
Senegal	2015 2016 2017 2018	1,012 1,124 1,202 981	629 679	116 97	266 285	87 123	0	23 15	5 3 3 3		
South Africa	2015 2016 2017 2018	20,493 20,809 17,918 18,700	7,845 *5,861	7,693 5,983	584 895	166 420	2,640 2,379	723	299 420 405 246	558 619	736 631
Sudan	2015 2016 2017 2018	3,853 4,165 3,609 3,320	1,960 1,797	1,196 1,063	135 51	11 4	156 82	24 20	304 373 329 277	11	299 258
Tunisia	2015 2016 2017 2018	1,305 1,185 906 1,054	439 314	22 79	409 327	230 93		4	24 20 19 18	53 59	10 11
Zambia	2015 2016 2017 2018	605 463 564 593	213 217	95 124	102 176		. 9	10 10	10 5 9	18 18	10 10
America, North	2015 2016 2017 2018	984,932 987,258 991,031 995,738	278,097 284,667	407,609 407,464	47,767 47,137	15,760 13,009	84,701 87,414	22,224 20,568	12,500 12,326 12,470 11,764	1,467 1,137	117,306 117,166
Canada	2015 2016 2017 2018	87,753 88,966 92,861 90,454	29,802 32,268	31,772 33,229	4,115 4,739	3,892 1,749	4,578 5,661	3,259 2,645	1,272 1,165 1,524 1,362	773 756	9,610 10,290
Cuba	2015 2016 2017 2018	4,526 2,205 2,632 2,751	558 714	185 139	1,032 1,255	232 289	42 68	5		3	115 110
Curaçao	2015 2016 2017 2018	9,060 8,216 4,321 3,089	1,611 854	1,788 1,107	2,996 1,447	353 98	574 294	169 99	59 45 24 18		680 398
Dominican Republic	2015 2016 2017 2018	764 1,097 899 1,208	316 274	229 189	310 254		204 154	13 10	11	9 6	
Guatemala	2015 2016 2017 2018	66 56 85 147	43 47						  	^	14

Table 24

Country or area	Year	Total	Gas/ diesel oil	Motor gasoline	Fuel oil	Naphtha	Jet fuels	Refinery gas	LPG	Other kerosene	Other products
Jamaica	2015 2016 2017 2018	1,221 1,094 1,048 1,047	130 108	133 143	677	51 40	74 50		7 9 13 11		20 18
Mexico	2015 2016 2017 2018	56,815 50,634 44,357 35,504	11,580 11,165	13,563 10,715	13,007 12,360	3,008 2,441	1,958 1,884	3,190 2,445	670 541 504 317		3,787 2,843
Nicaragua	2015 2016 2017 2018	729 656 673 653	137 169	91 101	330 318		28 29	14	18 20	6 8	31 20
Trinidad and Tobago	2015 2016 2017 2018	6,182 7,303 6,388 5,032	2,113 1,468	2,052 1,601	2,236 2,345	0	669 509	59 52	68 62 63 39	32	80 321
United States	2015 2016 2017 2018	817,816 827,031 837,767 855,853	231,807 237,599	357,795 360,241	23,064 23,742	8,225 8,391	76,575 78,766	15,516 15,305	10,353 10,434 10,260 9,956	646	102,969 103,128
America, South	2015 2016 2017 2018	219,867 210,744 201,172 195,664	71,406 66,840	45,816 44,866	38,590 36,027	5,923 6,017	10,698 10,726	7,651 7,653	6,328 6,478 6,444 6,363	328 291	23,855 22,310
Argentina	2015 2016 2017 2018	27,247 26,363 25,741 24,054	9,716 9,803	6,242 6,576	3,923 2,993	764 727	1,298 1,434	1,051 1,017	878 1,067 1,004 921	14 10	2,288 2,177
Bolivia (Plur. State of)	2015 2016 2017 2018	2,641 2,417 2,250 2,126	814 745	1,055 1,035	121 81	1	189 190		104 112 105 100	18 16	107 78
Brazil	2015 2016 2017 2018	104,248 97,217 93,083 91,463	39,532 35,321	19,638 19,406	11,424 11,646	2,308 2,248	4,729 5,041	4,445 4,549	4,046 3,967 4,036 4,016	6 5	11,168 10,831
Chile	2015 2016 2017 2018	9,685 9,429 9,648 9,726	2,907 3,073	2,974 3,055	1,220 1,170	48 75	556 592	203 211	305 251 286 434	161 161	1,109 1,025
Colombia	2015 2016 2017 2018	11,518 16,786 17,596 19,175	4,574 5,702	3,038 3,281	3,934 3,283	814 1,070	1,091 1,221	263 275	482 538 551 248	66 39	2,468 2,174
Ecuador	2015 2016 2017 2018	6,217 7,695 7,759 8,259	1,907 1,902	1,495 1,410	2,968		342 393	2 2	155 157	4	920 923
Peru	2015 2016 2017 2018	8,252 8,561 9,373 9,036	3,112 2,998	1,796 1,872	2,432 3,258		639	137 151	195 206 200 213	 	239

	,										
Country or area	Year	Total	Gas/ diesel oil	Motor gasoline	Fuel oil	Naphtha	Jet fuels	Refinery gas	LPG	Other kerosene	Other products
Suriname	2015 2016 2017 2018	433 536 674 660	200 284	35	296 321						5 5
Uruguay	2015 2016 2017 2018	1,847 1,994 557 2,073	767 191	535 149	334 105		114 31	62 18	96 22	5 7 2 5	79 36
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	47,779 39,747 34,492 29,092	7,878 6,821	9,008 8,018	12,032 10,201	1,988 1,897	1,741 1,204	1,488 1,430	86 83	54 51	5,472 4,787
Asia	2015 2016 2017 2018	1,831,907 1,911,078 1,979,868 2,028,864	603,245 617,007	344,816 357,542	198,385 203,417	180,672 189,490	147,998 156,333	59,979 56,812	69,701 70,258	43,723 40,673	262,560 288,338
Azerbaijan	2015 2016 2017 2018	6,410 5,865 5,568 5,972	2,315 1,849	1,153 1,215	399 236	174 169	627 588	231 214	186 200		780 1,097
Bahrain	2015 2016 2017 2018	13,512 13,058 13,303 13,227	3,997 4,184	784 744	2,181 2,484 2,750 2,599	1,565 1,494	3,175 3,116		162 149	0 0	891 866
Bangladesh	2015 2016 2017 2018	1,247 1,174 1,432 1,249	333 407	26 32	363 443	132 161	1	13 16	10 12	194 237	102 123
Brunei Darussalam	2015 2016 2017 2018	468 306 232 321	114 104	92 73	39	·	45 46	10		6	
China	2015 2016 2017 2018	603,236 633,757 678,284 711,792	179,177	128,465 133,934	45,635	50,324 54,639	39,081 41,797	18,923	35,039 36,625	1,613 1,442	
Georgia	2015 2016 2017 2018	12 25 24 22	9 10	7 2	8 9	3				. 0	
India	2015 2016 2017 2018	243,139 253,122 260,900 273,711	103,113 108,466	36,593 37,784	9,962 9,486	17,607 18,786	*13,828 14,594	*12,268 *9,825	10,968 10,170	6,041 4,408	42,742 47,381
Indonesia	2015 2016 2017 2018	36,947 37,793 38,923 38,887	16,186 16,723	10,297 9,473	1,305 1,027	1,371 1,565	2,599 2,613	655 673	892 871	843 788	3,645 5,190
Iran (Islamic Rep. of)	2015 2016 2017 2018	86,802 89,102 87,782 87,381	28,509 26,937	16,798 22,130	21,964 19,707	3,505 3,000	1,505 1,592	1,951 1,581	3,342 2,123	2,523 2,820	9,006 7,892

Table 24

Country or area	Year	Total	Gas/ diesel oil	Motor gasoline	Fuel oil	Naphtha	Jet fuels	Refinery gas	LPG	Other kerosene	Other products
Iraq	2015 2016 2017 2018	19,694 20,404 23,921 27,148	3,287 4,012	2,117 2,483	12,774 14,573	480 571	211 247	137 164	25 116 173 242	1,148 1,396	134 302
Israel	2015 2016 2017 2018	14,765 14,174 14,088 14,783	4,411 4,628	2,945 2,766	2,715 2,667	1,095 1,201	934 1,127	616 569	381 354 362 422	283	821 768
Japan	2015 2016 2017 2018	162,719 163,395 157,801 151,609	45,582 45,619	39,513 39,157	17,047 17,777 15,340 14,714	14,656 13,175	12,461 11,500	7,157 7,111	4,320 4,210 4,416 3,755	12,863 12,796	9,176 8,687
Jordan	2015 2016 2017 2018	3,286 2,861 2,671 2,281	909 845	583 557	599 564		291 287	*36 *33		97 54	266 253
Kazakhstan	2015 2016 2017 2018	13,358 12,827 13,595 14,586	4,652 4,352	2,938 3,055	3,365		*264 302	111 161	827 *844 1,077 995	, 2 , 0	916 1,283
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	515 515 515 515	191 191	178 178	109 109				  	. 37 . 37	· · · · · · · · · · · · · · · · · · ·
Korea, Republic of	2015 2016 2017 2018	139,689 146,029 153,142 158,099	45,831 46,583	17,266 18,343		31,503 35,356	20,277 21,944	4,566 3,831	2,187 2,244 2,773 2,922	2,716 2,722	11,243 11,716
Kuwait	2015 2016 2017 2018	42,165 37,847 32,151 32,449	9,425 8,476	2,405 2,113		7,120 5,675	2,184 1,731	383 310	147 164 189 193	5,505 4,362	659 572
Kyrgyzstan	2015 2016 2017 2018	320 379 431 544	106 89	171 235	75 63				13 27 44 55	, ,	
Malaysia	2015 2016 2017 2018	23,684 24,249 26,501 24,093	9,833 9,725	4,801 7,855	1,492 1,739	2,744 2,356	2,469 3,152	198 172		4 10	1,527 728
Myanmar	2015 2016 2017 2018	515 394 406 220	150 151	143 145	67 78		16 15		   6	. 0 . 0	19 17
Oman	2015 2016 2017 2018	10,812 10,876 11,712 13,477	2,922 3,331	3,018 2,990	2,563	482 939	666 923	93 124	278	6 ) 4	238 419
Other Asia	2015 2016 2017 2018	44,778 45,114 44,315 46,317	13,650 13,340	9,247 8,463	5,125	7,074 7,667	3,729 3,780	2,107 1,897	936 1,108 1,018 1,131	3 7 3 2	3,067 3,195

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Country or area	Year	Total	Gas/ diesel oil	Motor gasoline	Fuel oil	Naphtha	Jet fuels	Refinery gas	LPG	Other kerosene	Other products
Pakistan	2015 2016 2017 2018	11,831 12,276 13,751 13,439	4,783 5,501	1,839 2,212	3,054 3,303	767 781	879 914	190	178 392	125 115	462 *534
Philippines	2015 2016 2017 2018	9,811 10,089 9,847 11,110	4,030 3,840	2,197 2,153	781 977	256 200	1,020 913		460 446	67 5 53	1,278 1,266
Qatar	2015 2016 2017 2018	11,914 12,853 15,828 15,687	2,081 1,973	1,963 1,937	225 234	3,997 5,592	3,447 4,683	61 58	339 332	·	740 1,019
Saudi Arabia	2015 2016 2017 2018	126,377 146,396 148,540 146,532	53,198 54,486	24,065 23,949	25,425 25,699	8,669 8,499	4,271 4,321	4,291 4,300	1,340 1,335	7,247 7,332	17,890 18,619
Singapore	2015 2016 2017 2018	46,212 50,852 53,684 49,463	12,199 10,967	9,096 9,108	4,279	3,667 4,494	10,175 11,864	3,155 3,251	333	266 205	7,682 8,188
Sri Lanka	2015 2016 2017 2018	1,615 1,647 1,636 1,607	583 506	166 165	479 494	144 142	148 236	14 13	9 19	104 60	1
Syrian Arab Republic	2015 2016 2017 2018	6,488 6,996 7,768 7,275	2,207 2,451	7 581 645	2,886 3,205	577 641	211 234	94 104	73 81	3 3	364 404
Tajikistan	2015 2016 2017 2018	*22 24 23 46	5 10	5 1 ) 1		*9				· · · · · · · · · · · · · · · · · · ·	3
Thailand	2015 2016 2017 2018	58,895 58,277 59,620 60,694	22,110 23,150	7,805 8,099	5,326 5,526	10,478 10,430	5,262 5,573	550 569	1,975 2,216	1,756 1,557	3,015 2,500
Turkey	2015 2016 2017 2018	29,234 29,605 31,940 28,227	9,661 10,478	5,103 5,366	2,835 2,987	320 343	4,504 4,837	1,541 1,354	972 1,015	18 19	4,651 5,541
Turkmenistan	2015 2016 2017 2018	8,550 8,540 8,532 8,526	2,770 2,770	2,610 2,610	1,690 1,690		470 470	120 112	360 360	150 150	370 370
United Arab Emirates	2015 2016 2017 2018	41,612 49,179 50,401 52,431	10,865 10,427	5,863 3,819	4,732 9,608	11,782 11,407	12,664 12,398	*422 447	1,050 1,039	 	1,801 1,256
Uzbekistan	2015 2016 2017 2018	3,654 3,653 3,609 3,847	1,008 1,017	3 1,134 7 1,112	93 112		183 146	86 94	856 830	12	281 289

Table 24

Country or area	Year	Total	Gas/ diesel oil	Motor gasoline	Fuel oil	Naphtha	Jet fuels	Refinery gas	LPG	Other kerosene	Other products
Viet Nam	2015 2016 2017 2018	6,721 6,656 6,127 10,303	2,481	2,747 2,777 2,565 4,109	138 138 136 200		377 357		491 444		18 144
Yemen	2015 2016 2017 2018	899 769 867 994	250 189 250	76 76 76 76	151 151 151	218 174 205	50 26 31	 	61 61 61	86 86 86	7 6 7
Europe	2015 2016 2017 2018	964,361 945,978 968,685 963,462	342,610 350,070	168,054 168,103 167,332 167,005	145,842 141,046	67,069 73,357	46,376 49,293	38,255 38,188	39,828 45,968	12,407 12,793	85,488 90,638
Albania	2015 2016 2017 2018	288 183 503 291	18 158			4 40	·	*6 19			154 285
Austria	2015 2016 2017 2018	9,138 8,554 8,496 9,166	3,581 3,776	1,721 1,671 1,692 1,928		961 804	652 614	218 262	122	21 15	430 392
Belarus	2015 2016 2017 2018	23,196 18,717 18,471 18,878	6,768 6,563	3,925 3,573 3,481 3,356	5,569 5,112		329 401	632 617	358 410	5	1,483 1,880
Belgium	2015 2016 2017 2018	35,204 33,631 35,283 34,069	12,309 12,843	4,906 4,797 4,608 4,013		2,443 2,319	1,666 1,942	860 916	697 738	21 31	5,489 4,398
Bosnia and Herzegovina	2015 2016 2017 2018	919 826 862 704	381 366	130 140 142 116	69 81	7 7	· ·		19 24		210 242
Bulgaria	2015 2016 2017 2018	6,681 6,942 7,145 6,189	3,032	1,788 1,785 1,848 1,508	1,654 1,297 974 948	366 448	207 265	310 331	103 120		129 127
Croatia	2015 2016 2017 2018	3,342 3,715 3,884 3,930	1,434 1,492	1,005	601 577	64 52	116 131	155 185	208 242		273
Czechia	2015 2016 2017 2018	7,508 5,604 8,183 7,848	2,498 3,403		169	394 840	60	101 145	255 358		1,013 1,567
Denmark	2015 2016 2017 2018	8,923 9,091 8,759 9,095	4,703 4,346	2,241	1,771 1,626		130	287 306	102		
Finland	2015 2016 2017 2018	12,565 14,308 14,726 14,468	6,290 6,306	4,109 4,403	1,554 1,614	133 103	572 755	592 573	275 285		783

Country or area	Year	Total	Gas/ diesel oil	Motor gasoline	Fuel oil	Naphtha	Jet fuels	Refinery gas	LPG	Other kerosene	Other products
France	2015 2016 2017 2018	60,242 59,365 59,348 55,639	24,963 24,794	11,304	7,509 7,686 6,403 5,853	4,974 5,301	3,790 4,257	1,322 1,282	1,581 1,528 1,618 1,421	0	3,888 4,389
Germany	2015 2016 2017 2018	99,200 100,381 101,529 97,088	43,834 43,432	18,945 19,674 19,806	7,953 7,374 7,376	7,978 7,860 7,635	5,317 5,347	3,839 3,937 4,051	2,656 2,744 3,419 3,224	9	9,131 9,632 10,454
Greece	2015 2016 2017 2018	28,427 30,217 31,765 32,771	10,701 10,797	5,169 5,291	5,676 6,150 7,028 6,551	1,657	2,328 2,431	662 664	703 824 837 847	0	2,726 3,101
Hungary	2015 2016 2017 2018	7,473 7,334 7,153 7,658	3,009 3,093	1,108 1,023	39 78	1,008 862	199 236	173 174	164 101 99 110		1,697 1,588
Ireland	2015 2016 2017 2018	3,365 3,180 3,189 3,058	1,198 1,214	547 549	1,070	77 94	·	72 75	46 41 49 58	175 159	
Italy	2015 2016 2017 2018	73,935 71,361 74,944 71,742	30,665 29,521	15,106 15,679	7,706 8,074 8,511 6,858	2,436 6,391	2,047 2,218	2,559 2,718	1,299 1,236 1,348 1,228	432 487	8,806 8,071
Lithuania	2015 2016 2017 2018	8,920 9,790 10,020 9,783	3,118 3,332	2,615 2,738	1,840 1,688		1,082 1,059	346 352	307 345 363 342		444 488
Netherlands	2015 2016 2017 2018	59,091 60,097 59,665 60,917	19,096 19,148	3,902 2,951		10,993	7,556 7,654	2,243 2,099	1,745 1,650 1,557 1,481	730 398	2,800 3,181
Norway	2015 2016 2017 2018	16,151 13,014 16,178 17,036	4,984 6,761	3,766 4,609	1,790 1,290 1,545 1,474	1,111 1,236	533 763	420 482	462 419 478 428	18 87	473 217
Poland	2015 2016 2017 2018	27,502 27,027 26,692 28,226	11,558 11,884	3,947 3,916	3,609 3,436	1,810 1,935	1,183 1,119	663 542	575 601 545 605	0	3,656 3,315
Portugal	2015 2016 2017 2018	15,092 14,915 15,478 13,797	5,695 5,935	2,619 2,749		1,146 1,321	1,237 1,361	8	175 240 214 205	0	1,295 1,244
Republic of Moldova	2015 2016 2017 2018	11 16 15 10	1		13 11			  	  		1 3
Romania	2015 2016 2017 2018	11,530 12,194 12,461 12,583	5,437 5,655	3,405 3,285	218	184 230	398 381	787 783	567 597 617 624	10 1	1,158 1,327

Table 24

Country or area	Year	Total	Gas/ diesel oil	Motor gasoline	Fuel oil	Naphtha	Jet fuels	Refinery gas	LPG	Other kerosene	Other products
Russian Federation	2015 2016 2017 2018	282,886 273,944 281,548 285,776	76,249 80,090	40,004 38,027	61,426 56,018	25,946 26,485	*12,030 12,577	15,590 15,318	22,259	*298 *252	20,142 25,176
Serbia	2015 2016 2017 2018	3,382 3,435 3,638 3,859	1,322 1,401	482 499	389 380	359 441	123 155	65 53	166 127	 	. 529 . 582
Slovakia	2015 2016 2017 2018	6,437 6,214 6,119 5,930	2,852 2,852	1,485 1,395	470 363	384 472	99 76	549 572		0	199 212
Spain	2015 2016 2017 2018	64,967 64,893 65,766 67,599	26,644 27,143	9,555 9,101	5,109 5,532	1,194 1,368	214 189	2,366 2,346	1,541 1,401	8,673 9,300	9,597 9,386
Sweden	2015 2016 2017 2018	21,367 21,211 21,132 21,649	7,428 8,082	4,906 4,674	4,003 4,010	86 83	73 22	739 733	481 421		3,495 3,107
Switzerland	2015 2016 2017 2018	2,837 3,005 2,877 3,070	1,693 1,666	690 648	319 290	0	43 7	123 121		·	33
Ukraine	2015 2016 2017 2018	2,849 2,851 3,050 2,460	929 680	*350 731	590 444			26 36	409 411	·	547 748
United Kingdom	2015 2016 2017 2018	60,933 59,963 59,806 58,173	20,506 20,303	17,343 17,416	4,324 3,893	2,306 2,280	4,392 5,031	2,444 2,424	2,227 2,178	2,015 2,047	4,406 4,234
Oceania	2015 2016 2017 2018	31,961 28,763 27,855 28,782	10,022 9,760	10,064 9,459	1,114 1,220	850 838	4,024 4,162	1,009 1,021		52 52	1,046 809
Australia	2015 2016 2017 2018	25,718 21,873 21,134 22,067	7,525 7,275	8,579 8,131	516 644	341 318	2,759 2,841	762 757	569 518	9	813 643
New Zealand	2015 2016 2017 2018	5,612 5,522 5,343 5,330	1,949 1,942	1,485 1,328	463 435		1,159 1,221	247 264			. 219 . 153
Papua New Guinea	2015 2016 2017 2018	631 1,368 1,378 *1,385	548 543	0	135	509 520	106 100		13	43 45	14 13

#### Production, trade and supply of oil products

Thousand metric tons

#### **Table Notes**

**Production** refers to the production from refineries and plants of all oil products, together with quantities from other sources which include any blended biofuels.

Imports, Exports, Bunkers and Changes in stocks refer to all oil products.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

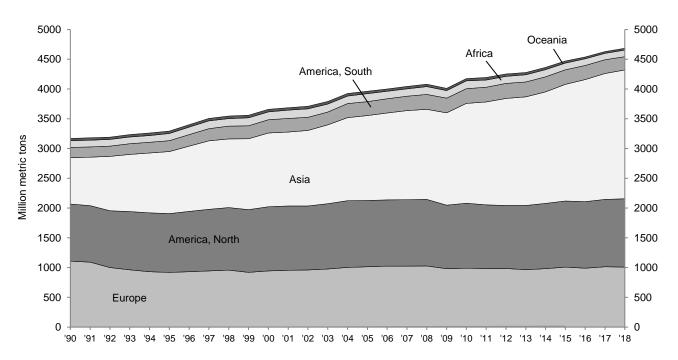


Figure 65: Production of oil products by region, 1990-2018

0	Value	Desdessias	Lacar a sta	Francista	Devalence	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
World	2015 2016 2017 2018	4,469,982 4,538,614 4,629,160 4,684,639	1,338,985 1,379,769 1,430,053 1,447,063	1,385,433 1,449,611 1,493,780 1,504,461	378,477 387,813 405,372 408,469	3,515 -4,134	4,030,661 4,077,443 4,164,194 4,215,382	546 546 552 552
Africa	2015 2016 2017 2018	113,377 111,845 107,818 110,841	117,463 114,815 120,921 117,314	44,341 38,186 38,358 37,627	11,853	-63 22	174,338 177,320 178,505 179,406	148 146 144 141
Algeria	2015 2016 2017 2018	38,444 37,854 36,842 38,309	3,922 3,573 3,452 840	23,891 23,346 22,637 21,052	*591	51 -135	17,863 17,414 17,201 16,945	450 429 416 401
Angola	2015 2016 2017 2018	2,598 2,866 3,488 2,675	4,631 3,546 3,476 3,351	1,418 1,303 1,944 1,747	542 481 626 486	*-467 *-26	5,606 5,094 4,421 4,381	201 177 148 142
Benin	2015 2016 2017 2018	  	1,684 1,945 2,053 2,302	0  	33 30	-66 -35	1,611 1,978 2,058 2,284	152 182 184 199
Botswana	2015 2016 2017 2018	  	850 930 946 990	  	11 11		840 919 935 978	396 425 424 434
Burkina Faso	2015 2016 2017 2018	  	1,161 944 1,183 1,495	  	31 22 27 30	-142 *-89	1,042 1,064 1,245 1,364	58 57 65 69
Burundi	2015 2016 2017 2018	  	132 145 *171 *221	  	3 2 4 *6	0	129 144 *167 *215	13 14 *15 *19
Cabo Verde	2015 2016 2017 2018	  	*282 *297 *319 *332	  	*120 *128 *122		*163 *177 *191 *198	*310 *334 *355 *365
Cameroon	2015 2016 2017 2018	1,613 1,596 1,313 1,180	666 693 828 849	380 531 442 376	21 17	-6 	1,817 1,743 1,682 1,638	78 73 68 65
Central African Rep.	2015 2016 2017 2018	  	*75 *81 *87 *90	  	16 15 16 17		*59 *66 *71 *73	*13 *15 *15 *16
Chad	2015 2016 2017 2018	*774 *677 *677 *689	*3 *3 *3 *3	*481 *382 *381 *386	*18	0	*278 *280 *281 *287	*20 *19 *19 *19
Comoros	2015 2016 2017 2018	 	*59 *70 *89 *97	  	*1 *1 *1 *2		*58 *69 *88 *95	*75 *86 *108 *114

Country on one	\/a==	Duo di cotto a	l sous outo	Europeto.	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Congo	2015 2016 2017 2018	688 649 716 716	373 381 199 199	325 325 343 348	41 31	0	686 664 541 536	141 133 106 102
Côte d'Ivoire	2015 2016 2017 2018	3,177 3,192 *3,070 3,371	267 1,232 1,332 1,244	1,475 1,392 *1,097 1,491	238	0 -17	1,922 2,793 *3,081 2,893	83 117 *126 115
Dem. Rep. of the Congo	2015 2016 2017 2018	  	985 743 814 811	  	115 117		863 628 697 677	11 8 9 8
Djibouti	2015 2016 2017 2018	  	254 231 220 *219	  	100 *100	*15 *6	128 116 115 *109	140 125 122 *113
Egypt	2015 2016 2017 2018	26,961 26,364 25,118 27,382	15,709 15,475 14,297 12,572	2,293 1,529 1,428 3,277	477 631	-25 35	39,718 39,858 37,321 35,964	430 422 387 365
Equatorial Guinea	2015 2016 2017 2018	542 605 660 587	*297 *306 *319 *282	553 604 656 574	*47 49	*-23 -17	277 283 292 261	237 233 231 199
Eritrea	2015 2016 2017 2018	  	190 199 215 240	  	10		185 189 207 231	55 56 61 67
Eswatini	2015 2016 2017 2018	  	240 264 272 286	  	2		239 263 271 284	217 236 241 250
Ethiopia	2015 2016 2017 2018	  	3,410 3,848 4,108 4,377	  	588 682	-8 	2,930 3,268 3,426 3,649	29 32 32 33
Gabon	2015 2016 2017 2018	801 849 793 799	502 515 282 274	246 269 243 244	249 163	 9	809 846 660 661	415 421 320 312
Gambia	2015 2016 2017 2018	  	*184 *186 *189 *192	*2 *2 *2 *2	*14 *14		*169 *170 *173 *175	*81 *79 *78 *77
Ghana	2015 2016 2017 2018	89 739 130 389	3,726 3,712 3,809 3,792	10 537 468 159	129 249	0 59	3,699 3,785 3,162 3,826	133 133 109 129
Guinea	2015 2016 2017 2018	  	873 954 1,139 1,287	  	*26		847 929 1,114 1,261	74 79 92 102

Country on and	\/	Dan dunation	lusus a uta	Es un a vota	Dumleana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Guinea-Bissau	2015 2016 2017 2018		*127 *136 *137 *140	   	*12 *13 *13 *13		*115 *124 *125 *127	*66 *70 *68 *68
Kenya	2015 2016 2017 2018	0 0 0	9,677 6,830 6,638 5,378	5,323 1,759 1,669 26	305 705 770 723	0	4,131 4,367 4,199 4,629	86 89 84 90
Lesotho	2015 2016 2017 2018	2 3 3 *3	202 215 217 227	  	0 0 0 0		204 217 220 230	99 105 105 109
Liberia	2015 2016 2017 2018	  	376 *435 *384 *331	  	*14 *16 *12 *11		363 *419 *372 *321	81 *91 *79 *67
Libya	2015 2016 2017 2018	4,950 4,643 5,510 6,542	6,580 5,851 5,670 5,468	1,133 1,077 1,375 1,723	134 138 276 337		10,263 9,279 9,529 9,950	1,599 1,429 1,448 1,490
Madagascar	2015 2016 2017 2018	  	786 886 920 848	  	*41 42 44 *45	-34	731 779 909 910	30 31 36 35
Malawi	2015 2016 2017 2018	  	271 317 363 423	  	*6 *6 *7 *8		265 311 356 415	16 18 20 23
Mali	2015 2016 2017 2018	  	*1,019 *1,104 *1,156 *1,192	*12 10 *10 *10	*57 *58 *60 *62	*30 *14	*986 *1,005 *1,072 *1,110	*57 *56 *58 *58
Mauritania	2015 2016 2017 2018	  	*986 862 1,249 1,652	  	*20 20 20 22	 *48	*966 841 1,181 1,245	*239 202 276 283
Mauritius	2015 2016 2017 2018	 	1,281 1,468 1,649 1,663	 *91 	425 479 624 738	26 108	841 873 917 940	668 691 725 741
Morocco	2015 2016 2017 2018	3,155 0  	10,773 12,524 13,392 13,012	438 12 	767 779 815 870	66	12,195 11,818 12,511 12,157	347 331 346 332
Mozambique	2015 2016 2017 2018	  	1,388 2,152 2,335 1,599	  35	*45 *46 38 11	*63	1,363 2,043 2,118 1,554	50 73 74 53
Namibia	2015 2016 2017 2018	 	1,217 1,284 1,284 1,257	4 4 4 4	38 38 37 37		1,175 1,242 1,243 1,216	508 527 517 497

Country or one	\/a==	Duo di cotto a	lusa a suta	Europeto.	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Niger	2015 2016 2017 2018	565 572 *795 742	109 71 106 64	*239 296 *362 *337	45	*-92 *21	376 393 *459 389	19 19 *21 17
Nigeria	2015 2016 2017 2018	1,618 3,351 4,380 2,692	16,345 18,786 17,451 19,630	121 251 853 246		664 -117	20,485	98 110 106 120
Rwanda	2015 2016 2017 2018	  	308 318 317 345	  	*22	*8 *-3	285 288 292 318	25 25 24 26
Sao Tome and Principe	2015 2016 2017 2018	  	*49 *52 *54 *55	  	*10 *11 *11 *12		*41	*196 *200 *205 *206
Senegal	2015 2016 2017 2018	1,012 1,124 1,202 981	2,230 2,119 1,633 2,101	780 857 263 *433	351 338	-66 -15	2,089 2,101 2,249 2,197	143 140 146 139
Seychelles	2015 2016 2017 2018	  	355 395 412 366	  	*200 220 *404	*20 *10	158 175 182 182	1,666 1,833 1,892 1,875
Sierra Leone	2015 2016 2017 2018	  	*302 *310 *313 *325	  	*10		*292 *300 *302 *316	*41 *41 *40 *41
Somalia	2015 2016 2017 2018	  	*276 *279 *279 *279	  	70 71 71 71	  	*206 *208 *208 *208	*15 *15 *14 *14
South Africa	2015 2016 2017 2018	20,493 20,809 17,918 18,700	9,508 5,585 11,436 10,510	4,425 2,853 3,619 4,512			20,682 20,317 22,832 20,723	373 361 400 359
South Sudan	2015 2016 2017 2018	   	623 553 477 421	  	68 68 74 59		555 485 403 362	52 45 37 33
St. Helena and Depend.	2015 2016 2017 2018	  	3 4 3 4	  	  	  	3 4 3 4	562 753 536 655
Sudan	2015 2016 2017 2018	3,853 4,165 3,609 3,320	1,704 1,516 2,447 2,649	96 147 122 103	*182 *161	0	E 704	136 134 141 137
Togo	2015 2016 2017 2018	  	333 522 508 480	  	32 53 73 62	-18 -20	487 455	44 65 59 55

Country or area	Vaar	Draduation	Importo	Evporto	Dunkoro	Changes in	Sup	pply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Tunisia	2015 2016 2017 2018	1,437 1,325 1,029 1,172	4,168 3,922 4,186 4,247	680 600 430 531	205 217 258 294	-7 -25	4,552	410 393 398 402
Uganda	2015 2016 2017 2018	  	1,489 1,551 1,741 1,792	  	108 98 102 108		1,454 1,639	36 37 40 39
United Rep. of Tanzania	2015 2016 2017 2018	  	2,511 2,465 2,417 2,461	  	160 142 146 136		2,323 2,271	46 44 42 41
Zambia	2015 2016 2017 2018	605 463 564 593	766 940 811 637	17 9 10 11	44 27 26 29		4 200	82 83 79 69
Zimbabwe	2015 2016 2017 2018	  	1,227 1,091 1,135 1,414	  	30 47 57 69		1,044 1,078	87 74 76 93
America, North	2015 2016 2017 2018	1,111,406 1,119,742 1,130,415 1,146,958	181,980 195,777 203,335 213,469	232,684 243,381 262,540 268,561	54,159 59,036 63,489 62,710	-546 -4,034	1,013,648 1,011,756	1,764 1,770 1,752 1,769
Anguilla	2015 2016 2017 2018	  	*50 *50 *46 *47	  	  		* = 0	*3,509 *3,471 *3,146 *3,196
Antigua and Barbuda	2015 2016 2017 2018	  	*233 *237 *237 *242	*4 *4 *4 *4	*68 *69 *69 *70		*161	*1,721 *1,738 *1,722 *1,740
Aruba	2015 2016 2017 2018	  	*389 *384 *390 385	  	*96 *96 *99 *100		*293 *288 *291 284	*2,810 *2,747 *2,757 2,687
Bahamas	2015 2016 2017 2018	  	734 510 647 867	1 0 *1 	*140 *51 *100 *99	-193 *-144	690	1,880 1,725 1,809 2,297
Barbados	2015 2016 2017 2018	  	525 527 492 468	  	*126 *121 *133 *110	22 13	384 346	1,320 1,344 1,209 1,266
Belize	2015 2016 2017 2018	1 1 1 1	214 206 202 200	  	15 15 15 14		192	553 520 501 487
Bermuda	2015 2016 2017 2018	  	185 216 248 256	  	*23 *24 *26 *27	-10 *15	202 207	

Country	V	Dec du ettere	lana a sta	France etc.	Donales	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Bonaire, St Eustatius, Saba	2015 2016 2017 2018	  	*346 *352 *359 *361	  	*224 *226 *230 *231		*122 *126 *129 *130	*4,957 *5,037 *5,095 *5,053
British Virgin Islands	2015 2016 2017 2018	  	*69 *69 *55 *52	  	  	  	*69 *69 *55 *52	*2,350 *2,334 *1,864 *1,745
Canada	2015 2016 2017 2018	90,378 91,515 95,972 93,657	12,104 13,578 11,700 13,613	22,260 21,044 23,589 21,777	1,032 928 983 1,301		79,958 83,795 82,766 83,889	2,219 2,303 2,253 2,263
Cayman Islands	2015 2016 2017 2018	  	216 217 229 238	  	32 36 38 37		184 181 191 202	2,988 2,898 3,015 3,140
Costa Rica	2015 2016 2017 2018	  	2,460 2,618 2,820 2,701	1  0	*165 *185 187 206	-24 42	2,283 2,457 2,591 2,564	471 501 523 513
Cuba	2015 2016 2017 2018	4,526 2,205 2,632 2,751	3,318 3,221 3,423 3,030	*1,090 *424 *701 *890	787 820 *628 *509	*-28 	5,967 4,210 4,726 4,382	527 371 417 387
Curaçao	2015 2016 2017 2018	9,060 8,216 4,321 3,089	2,685 2,882 2,653 2,560	8,028 7,464 3,886 2,865	1,676 1,659 1,662 1,657		2,041 1,975 1,426 1,127	12,768 12,263 8,803 6,925
Dominica	2015 2016 2017 2018	  	*58 *59 *56 *56		*2 *2 *2 *2	*-1 *2	*58 *58 *53 *53	*814 *820 *743 *742
Dominican Republic	2015 2016 2017 2018	764 1,097 899 1,208	5,266 5,462 5,175 5,387		490 496 539 544	-13 30	5,563 6,076 5,505 6,072	541 584 524 571
El Salvador	2015 2016 2017 2018	0 0 	2,243 2,360 2,184 2,297	20 136 167 158	149 166 165 174		2,074 2,058 1,852 1,965	328 324 290 306
Greenland	2015 2016 2017 2018	  	188 183 196 *192	  	7 17 19 *20	1 7	166 165 170 *173	2,938 2,924 3,010 *3,060
Grenada	2015 2016 2017 2018	  	86 99 102 107	  	6 7 7 8		85 87 90 101	779 790 815 905
Guatemala	2015 2016 2017 2018	66 56 85 147	4,252 4,367 4,644 4,727	365 402 301 255	430 452 509 528	37 0	3,434 3,533 3,919 4,177	211 213 232 242

Country on ano	Vasa	Deadwatian	luon auta	Europeto.	Dumleana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Haiti	2015 2016 2017 2018	  	881 982 1,016 1,113		22 22 22 22 22		960 994	80 89 91 98
Honduras	2015 2016 2017 2018	  	2,660 2,814 3,099 3,563	393 232 245 279	73 84 130 124	-250 69	2,748 2,655	313 296 282 318
Jamaica	2015 2016 2017 2018	1,221 1,094 1,048 1,047	1,551 1,725 1,755 1,893	265 264 304 289	232 232 223 254	-40 49	2,363 2,227	786 813 763 824
Mexico	2015 2016 2017 2018	63,692 57,093 50,322 40,660	33,449 41,105 49,222 55,259	9,821 9,405 7,997 7,298	4,079 4,372 4,518 4,924	-20 -50	84,441 87,079	685 685 698 660
Montserrat	2015 2016 2017 2018	  	19 11 10 *10	  	*1 *1 *1 *1	0 0 0	10 9	3,524 1,928 1,704 *1,768
Nicaragua	2015 2016 2017 2018	729 656 673 653	942 1,101 1,046 1,026	33 17 21 28	22 22 25 14	12 -18	1,706 1,691	268 271 265 250
Panama	2015 2016 2017 2018	  	6,166 6,951 8,049 7,763	3 0 0 0	3,714 4,214 4,961 4,855	-153 -253	2,891 3,341	746 716 814 704
Sint Maarten (Dutch part)	2015 2016 2017 2018	  	*533 *538 *521 *502	  	*248 *250 *240 *232		*288 *282 *370	*7,111 *7,054 *6,795 *6,443
St. Kitts-Nevis	2015 2016 2017 2018	  	*81 *84 *84 *85	  	*5 *5 *5 *5		*90	*1,492 *1,523 *1,523 *1,530
St. Lucia	2015 2016 2017 2018	  	*194 *196 *207 *206	  	35 36 38 38		*160 *168 *169	*888 *891 *931 *924
St. Pierre-Miquelon	2015 2016 2017 2018	  	*27 *28 *28 *25	  	*6 *6 *6 *5		*21 *21 *21 *20	*3,509 *3,578 *3,619 *3,353
St. Vincent-Grenadines	2015 2016 2017 2018	  	70 84 60 85		0 0 0 0	*4 *-11	80 70	713 734 641 724
Trinidad and Tobago	2015 2016 2017 2018	7,256 8,203 7,341 5,874	0 0 2	4,918 5,762 5,138 3,985	739 939 743 601	304	1,198 1,253	1,047 870 905 832

O country on a second	Vasa	Dan desation	lassa sata	E a sta	Develope	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Turks and Caicos Islands	2015 2016 2017 2018		*67 *70 *75 *77	  	  	  	*67 *70 *75 *77	*1,862 *1,901 *2,021 *2,031
United States	2015 2016 2017 2018	933,713 949,606 967,121 997,871	99,718 102,494 102,303 104,077	185,482 198,227 220,186 230,733	39,515 43,485 47,165 46,001	476	801,225 809,912 806,405 826,508	2,497 2,507 2,481 2,527
America, South	2015 2016 2017 2018	243,546 237,650 229,323 223,172	61,233 65,272 71,477 68,739	35,479 36,510 35,668 39,135	13,486 11,988 11,788 12,373	470 72	257,552 253,953 253,272 241,207	625 611 604 570
Argentina	2015 2016 2017 2018	31,527 30,659 30,390 28,812	3,523 4,025 3,709 3,917	1,598 1,523 1,831 3,198	1,811 1,622 1,784 1,618	105	31,638 31,513 30,379 27,963	734 724 691 630
Bolivia (Plur. State of)	2015 2016 2017 2018	3,007 2,910 2,746 2,632	1,005 992 1,209 1,408	662 499 451 289	82 81 79 77	-219 -320	3,439 3,541 3,745 3,810	316 321 335 336
Brazil	2015 2016 2017 2018	116,031 112,325 109,396 107,133	21,698 22,486 28,215 25,559	5,922 5,593 5,908 8,545	6,597 5,677 5,578 5,360	298	125,587 123,529 125,827 119,207	614 599 605 569
Chile	2015 2016 2017 2018	9,685 9,429 9,648 9,726	7,215 8,097 7,827 8,130	488 463 521 812	665 683 721 772	93 146	15,700 16,287 16,087 16,219	874 894 871 866
Colombia	2015 2016 2017 2018	11,778 17,048 17,918 19,473	6,287 8,569 6,291 4,343	2,518 4,995 5,094 5,648	1,573 1,611 1,535 1,590	559 605	15,753 18,452 16,975 16,581	331 383 347 334
Ecuador	2015 2016 2017 2018	6,478 7,929 8,004 8,546	6,689 5,609 5,792 6,142	1,368 2,519 3,110 3,138	974 535 620 977	-91 -2 -56 20	10,915 10,487 10,122 10,553	673 636 603 618
Falkland Is. (Malvinas)	2015 2016 2017 2018	  	11 11 10 11	  	  		11 11 10 11	3,784 3,692 3,409 3,438
Guyana	2015 2016 2017 2018	  	663 736 721 778	  	13 16 18 17	2 -6	643 718 709 765	838 931 915 982
Paraguay	2015 2016 2017 2018	174 216 223 244	1,933 2,382 2,494 2,787	  	33 45 60 72	76 -119	2,066 2,476 2,776 2,939	309 365 404 423
Peru	2015 2016 2017 2018	11,958 12,327 12,913 12,278	3,625 4,749 5,554 5,627	3,473 5,026 6,166 4,759	840 950 678 1,200	-51 -529	10,596 11,150 12,151 12,227	348 361 386 382

Country on ano	Vasu	Dan desation	lusa a auta	Es un a vota	Dunkana	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Suriname	2015 2016 2017 2018	433 536 674 660	494 443 451 445	416 452 383 370	*81 93 84 *78		429 434 658 656	768 768 1,153 1,139
Uruguay	2015 2016 2017 2018	1,945 2,103 658 2,168	447 234 1,523 202	0 0 1 1	269 230 201 248	-26 -52	2,181 2,133 2,029 2,122	639 623 590 615
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	50,531 42,168 36,755 31,501	7,644 6,939 7,681 9,391	19,034 15,440 12,202 12,375	548 445 430 364	0	38,593 33,222 31,804 28,153	1,283 1,113 1,082 975
Asia	2015 2016 2017 2018	1,959,000 2,049,020 2,117,066 2,164,305	551,729 556,534 585,673 599,001	542,114 601,427 623,761 637,250	177,168 181,497 187,936 191,157	1,197 7,023	1,786,888 1,821,433 1,884,019 1,925,981	403 407 417 422
Afghanistan	2015 2016 2017 2018	  	1,580 1,169 1,072 1,382	  	*10 *10 *11 *11		1,570 1,159 1,062 1,371	46 33 29 37
Armenia	2015 2016 2017 2018	  	340 340 384 386	0 0 0 0	*31 44 54 62	7 13	309 289 316 310	106 98 107 105
Azerbaijan	2015 2016 2017 2018	6,451 5,902 5,600 6,004	281 330 466 320	2,330 1,734 1,174 1,324	315 223 203 152	-139 50	4,274 4,413 4,638 4,678	444 453 471 470
Bahrain	2015 2016 2017 2018	13,512 13,058 13,303 13,227	*586 *552 *604 *612	11,893 11,182 11,899 11,540	436 435 447 483	139 -380	1,865 1,854 1,941 2,000	1,359 1,300 1,299 1,274
Bangladesh	2015 2016 2017 2018	1,432 1,336 1,576 1,403	4,039 3,970 4,664 4,575	40 100 40 2	446 462 499 529	-96 	4,937 4,840 5,701 6,277	32 31 36 39
Bhutan	2015 2016 2017 2018	  	165 174 191 223	  	*3 *3 *3 *4		163 172 188 219	223 233 252 290
Brunei Darussalam	2015 2016 2017 2018	486 322 249 338	313 373 440 354	0 0 0 0	174 113 71 81	-11 11	620 593 607 616	1,494 1,413 1,431 1,436
Cambodia	2015 2016 2017 2018	  	1,949 2,207 2,277 2,492	  	91 86 108 118	 7	1,858 2,121 2,162 2,374	120 135 135 146
China	2015 2016 2017 2018	603,236 633,757 678,284 711,792	52,760 53,843 61,271 67,525	40,869 53,042 56,633 63,519	16,790 18,026 19,452 20,960	-650 7,626	595,694 617,182 655,845 687,501	423 436 462 482

0 1					<b>5</b> .	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
China, Hong Kong SAR	2015 2016 2017 2018	  	20,017 20,301 21,375 21,605	703 371 293 224	14,911 15,384 17,578 17,869	1,061 928 -397 -281	3,342 3,618 3,900 3,792	465 499 534 514
China, Macao SAR	2015 2016 2017 2018	  	681 650 602 405	  	68 73 66 64	24 2 13 -1	575	977 938 840 542
Cyprus	2015 2016 2017 2018	  	2,460 2,615 2,644 2,595	23 16 0	477 551 554 580	69 27 33 -22	1,891 2,021 2,057 2,037	1,629 1,727 1,744 1,713
Georgia	2015 2016 2017 2018	12 25 24 22	1,357 1,496 1,440 1,451	111 119 *170 105	70 71 95 104	11 -28 -11 25	1,178 1,359 1,210 1,240	293 338 302 310
India	2015 2016 2017 2018	246,200 255,853 264,330 277,047	38,100 35,336 49,726 41,702	63,358 65,483 74,501 71,763	*5,789 *6,405 *5,370 *5,814	-1,298 *57 *10 *98	216,451 219,244 234,175 241,074	165 166 175 178
Indonesia	2015 2016 2017 2018	39,472 40,995 42,253 43,444	31,660 27,473 31,571 30,990	1,338 1,252 1,157 1,168	1,112 1,104 1,294 1,232	0 0 -41 128	68,681 66,112 71,414 71,905	266 253 270 269
Iran (Islamic Rep. of)	2015 2016 2017 2018	106,047 112,075 110,001 109,935	2,886 2,584 3,536 4,781	21,082 29,068 26,910 26,852	6,189 3,547 *3,021 *3,063	  0	82,044	1,040 1,031 1,036 1,037
Iraq	2015 2016 2017 2018	20,489 21,657 25,370 28,688	12,117 16,424 16,194 13,771	454 330 3,658 1,304	751 943 925 910	-1,218 1 -29 	36,807 37,010	917 1,005 986 1,047
Israel	2015 2016 2017 2018	14,765 14,174 14,088 14,783	4,776 5,028 4,805 4,549	6,225 5,687 5,745 5,952	1,107 1,067 1,263 1,380	199 -75 3 -8	12,010 12,523 11,882 12,008	1,505 1,544 1,441 1,433
Japan	2015 2016 2017 2018	167,617 168,687 162,881 156,897	44,127 39,707 43,392 42,464	17,885 17,973 17,136 17,173	10,811		179,833 178,487	1,440 1,408 1,400 1,345
Jordan	2015 2016 2017 2018	3,286 2,861 2,671 2,281	3,204 2,333 2,689 2,665	  	106 174 140 62	18 16 129 -15	5,004 5,090	687 524 520 492
Kazakhstan	2015 2016 2017 2018	14,599 14,094 14,833 16,079	1,631 1,794 1,922 1,536	4,337 4,001 4,289 5,511	*306 *331 *477 616	-512 -493 -380 43	12,049 12,369	689 676 684 625
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	515 515 515 515	441 511 424 416	  			956 1,026 939 931	38 41 37 36

Country on area	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Duo divetto e	luan a uta	Cunanta	Dunkara	Changes in	Sup	pply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Korea, Republic of	2015 2016 2017 2018	149,219 156,422 164,332 169,765	36,494 39,328 37,113 40,413	60,906 62,396 64,818 68,700	13,414 15,008 14,773 14,375	-46 440	118,392 121,414	2,196 2,322 2,376 2,468
Kuwait	2015 2016 2017 2018	49,003 45,808 40,932 41,391	  	35,080 31,741 27,376 27,766	1,980 1,836 1,881 1,876	-2,527 -2,992	14,758 14,667	3,568 3,730 3,616 3,584
Kyrgyzstan	2015 2016 2017 2018	320 379 431 544	1,593 1,331 1,250 1,653	103 64 75 134	103 103 19 4	-118 38	1,661 1,549	266 273 250 323
Lao People's Dem. Rep.	2015 2016 2017 2018	  	980 *988 *1,013 *1,033	  	*34 *34 *34 *36		*954 *979	140 *139 *141 *141
Lebanon	2015 2016 2017 2018	  	7,719 8,033 8,528 8,055	  	*235 *274 *300 *294		7,759 8,228	1,146 1,156 1,207 1,131
Malaysia	2015 2016 2017 2018	25,048 26,474 28,620 26,315	13,805 14,802 12,835 19,084	10,093 12,018 10,861 15,714	2,777 2,639 2,885 2,838	-878 -131	27,497 27,840	888 896 895 861
Maldives	2015 2016 2017 2018	  	508 543 565 645	  	*78 *70 *69 *78		473	946 995 998 1,099
Mongolia	2015 2016 2017 2018	  	1,096 995 1,268 1,396	  	  		995 1,268	366 325 407 440
Myanmar	2015 2016 2017 2018	523 404 418 234	3,571 4,564 3,858 6,418	  	2  71	196 -28	4,773 4,304	64 90 81 123
Nepal	2015 2016 2017 2018	  	1,119 1,846 2,211 2,438	  	62 128 127 124	0	1,718 2,084	39 63 75 82
Oman	2015 2016 2017 2018	11,053 11,130 11,950 13,716	47 60 335 552	1,439 1,400 1,979 4,051	1,713 1,861 1,271 2,769	163 4	7,766 9,031	1,848 1,734 1,936 1,575
Other Asia	2015 2016 2017 2018	44,778 45,114 44,315 46,317	17,184 17,405 17,318 16,577	16,640 17,020 16,490 17,710	3,643 4,030 4,046 4,071	-217 -370	41,686 41,467	1,786 1,765 1,752 1,736
Pakistan	2015 2016 2017 2018	12,298 12,765 14,322 14,003	14,795 17,483 15,497 14,489	107 243 345 291	360 340 *295 *250	54 *-81	29,611 29,259	132 145 141 132

Country or area	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Desdessias	lana a ata	E o ata	Bunkers	Changes in	Sup	ply
	Year	Production	Imports	Exports	Dulikeis	stocks	Total	Per capita
Philippines	2015 2016 2017 2018	9,811 10,089 9,847 11,110	9,866 10,817 12,172 12,085	1,390 1,321 1,550 1,757	1,260 1,365 1,702 1,733	523 133 174 390	16,504 18,086 18,594 19,315	162 174 177 181
Qatar	2015 2016 2017 2018	23,269 23,753 26,470 23,635	602 540 115 222	19,333 19,144 20,810 15,911	1,209 1,719 2,747 2,859	2,512 2,699 -367 291	817 731 3,395 4,796	318 275 1,246 1,724
Saudi Arabia	2015 2016 2017 2018	165,618 187,498 188,949 186,113	29,778 27,967 24,791 42,095	73,322 95,349 105,283 114,138	5,817 6,256 6,395 6,964	574 85 -611 451	,	3,647 3,507 3,102 3,165
Singapore	2015 2016 2017 2018	46,212 50,852 53,684 49,463	114,131 113,629 120,494 107,647	89,919 97,029 101,415 90,685	52,052 55,920 58,173 57,745	1,016 -375 192 -557		3,104 2,106 2,522 1,604
Sri Lanka	2015 2016 2017 2018	1,615 1,647 1,636 1,607	2,972 3,634 3,949 4,114	207 89 0 91	732 1,117 1,104 1,117	-786 -1,291 -822 -98	5,365	212 255 251 217
State of Palestine	2015 2016 2017 2018	  	991 1,084 1,090 1,001	0 0 0 0	  	0 0  0	1,090	219 234 230 206
Syrian Arab Republic	2015 2016 2017 2018	6,564 7,072 7,844 7,351	1,006 985 1,047 989	659 714 787 738	460 395 371 361	  	6,948	358 398 452 427
Tajikistan	2015 2016 2017 2018	*22 24 23 46	983 945 784 935	*12 *9 	54 35 18 29	  	925 789	111 107 89 105
Thailand	2015 2016 2017 2018	65,933 65,346 67,059 68,330	5,416 6,518 6,547 6,598	13,602 10,981 12,006 13,015	4,867 5,190 5,314 5,875	2,052 3,321 3,585 3,770	50,828 52,372 52,701 52,268	740 759 761 753
Timor-Leste	2015 2016 2017 2018	  	*167 *164 *166 *169	  	*3 *3 *3 *3	  	*164 *161 *163 *166	*137 *132 *131 *131
Turkey	2015 2016 2017 2018	30,956 31,667 34,042 30,160	23,315 24,669 26,417 27,480	7,588 6,489 6,760 5,004	4,337 4,227 4,320 4,633	666 410 299 739	45,210 49,080	531 566 605 574
Turkmenistan	2015 2016 2017 2018	9,224 9,178 9,187 9,233	·· ·· ··	2,554 2,554 2,554 2,554	470 470 470 470	  	6,163	1,114 1,087 1,070 1,061
United Arab Emirates	2015 2016 2017 2018	57,093 65,896 65,312 66,384	21,869 21,146 17,487 19,772	36,312 49,625 45,140 50,079	*20,681 *16,800 17,906 15,672		18,460	2,372 2,198 1,946 2,123

Country	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Duo di cotto o	l mana mta	Exports	Dunkara	Changes in	Sup	ply
Country or area	Year	Production	Imports	Ехропо	Bunkers	stocks	Total	Per capita
Uzbekistan	2015 2016 2017 2018	3,654 3,653 3,609 3,847	*512 *758 *779 *826	39 34 *41 0	*92 *91 *73 *90	-27 9	4,314 4,266	129 137 133 138
Viet Nam	2015 2016 2017 2018	7,663 7,674 7,144 11,282	12,898 15,046 14,600 13,734	1,509 2,655 1,635 2,165	1,074	108 -90	18,353 19,125	194 196 202 221
Yemen	2015 2016 2017 2018	1,006 864 964 1,006	2,844 2,044 1,757 1,780	651 *194 *230 *310	142 119 112 108		2,595 2,379	115 96 85 83
Europe	2015 2016 2017 2018	1,008,379 989,541 1,014,807 1,009,314	397,430 413,819 414,185 411,593	527,881 527,050 529,851 518,213	115,378 118,052 123,804 122,130	2,080 -6,811	756,179 782,149	1,014 1,013 1,046 1,046
Albania	2015 2016 2017 2018	288 183 503 291	1,193 1,208 1,230 1,075	171 19 155 145	22 40 42 37	127 170	1,205 1,366	408 417 474 382
Andorra	2015 2016 2017 2018	  	152 154 153 162	  	0 0 0 0		154 153	1,946 1,988 1,992 2,101
Austria	2015 2016 2017 2018	9,470 8,863 8,790 9,460	6,075 6,798 6,987 6,672	2,833 2,757 2,757 3,182	695 759 734 816	-130 -66	12,275 12,352	1,377 1,403 1,400 1,375
Belarus	2015 2016 2017 2018	23,196 18,717 18,471 18,878	1,165 1,796 1,756 1,254	17,310 13,637 12,973 11,409	111 119 126 144	5 234	6,752 6,894	738 715 730 858
Belgium	2015 2016 2017 2018	36,715 35,394 37,250 35,702	26,973 26,209 28,712 31,634	29,223 29,369 33,791 32,559	7,403 8,282 9,308 11,265	-254 -894	24,206 23,757	2,298 2,132 2,080 2,027
Bosnia and Herzegovina	2015 2016 2017 2018	919 826 862 704	883 1,071 1,092 1,132	259 235 272 242	10	6 27	1,646 1,645	427 486 491 488
Bulgaria	2015 2016 2017 2018	6,681 6,942 7,145 6,189	2,883 2,838 2,658 2,168	4,448 4,568 4,794 3,530	259 285 313 331	103 5	4,824 4,691	667 675 660 658
Croatia	2015 2016 2017 2018	3,381 3,755 3,926 3,968	2,140 2,101 2,318 2,189	1,854 2,076 2,483 2,426	123 148	117 -50	3,540 3,663	839 841 876 829
Czechia	2015 2016 2017 2018	7,973 5,946 8,654 8,273	3,903 4,869 3,855 4,402	2,465 2,225 2,430 2,265	306 343	-22 -84	8,306 9,820	860 782 923 925

Occupation on the contract of	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Desduction	lana anta	Francista.	Bunkers	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Duriners	stocks	Total	Per capita
Denmark	2015 2016 2017 2018	9,182 9,354 9,019 9,353	9,739 9,295 5,674 6,126	8,956 9,004 6,746 6,572	1,622 1,585 1,474 1,580	751 -175 -996 -453	7,469	1,335 1,442 1,303 1,353
Estonia	2015 2016 2017 2018	  	1,686 1,815 1,890 2,059	332 479 431 690	346 323 377 365	9 12 79 -64	1,003	760 760 760 807
Faeroe Islands	2015 2016 2017 2018	  	*229 *237 *267 *275	  	31 33 37 39	  	*230	*4,130 *4,231 *4,753 *4,867
Finland	2015 2016 2017 2018	13,278 14,749 15,356 15,118	5,264 5,919 5,145 4,813	6,848 9,065 9,000 8,807	923 915 1,016 1,086	410 -272 -176 -118	10,661	1,890 1,994 1,934 1,839
France	2015 2016 2017 2018	64,935 64,173 64,455 60,433	43,270 41,686 41,242 42,353	21,070 20,553 20,215 19,973	7,221 6,968 7,196 7,566	-100 21 -42 -401	80,014 78,317 78,328 75,648	1,201 1,171 1,168 1,125
Germany	2015 2016 2017 2018	108,775 109,616 111,005 105,695	37,436 38,760 41,065 40,334	22,302 22,833 23,497 22,623	10,274 11,284 11,639 11,327	391 720 -528 -494	113,244 113,539 117,462 112,573	1,385 1,381 1,421 1,354
Gibraltar	2015 2016 2017 2018	   	3,993 4,064 4,505 4,427	  	3,782 3,843 4,278 4,177	  	221	6,253 6,550 6,743 7,409
Greece	2015 2016 2017 2018	28,612 30,408 31,960 32,968	9,120 9,116 9,633 9,626	16,151 18,066 18,961 19,973	2,648 2,635 3,171 3,326	508 -173 252 -77	19,209	1,728 1,790 1,817 1,841
Hungary	2015 2016 2017 2018	8,186 7,878 7,615 8,198	3,014 3,197 3,793 4,133	2,757 2,896 3,083 3,554	175 186 216 267	155 223 -12 -84	8,113 7,770 8,121 8,594	830 797 835 885
Iceland	2015 2016 2017 2018	14 16 18 19	836 928 977 1,129	  	261 349 425 484	21 10 -4 63		1,720 1,761 1,717 1,785
Ireland	2015 2016 2017 2018	3,473 3,287 3,313 3,134	5,383 5,717 6,019 5,997	1,772 1,634 1,863 1,693	951 977 1,118 1,199	45 -72 127 -110	6,465 6,224	1,309 1,377 1,309 1,318
Italy	2015 2016 2017 2018	76,898 73,946 77,922 75,196	17,930 20,429 18,185 19,149	27,201 28,880 31,041 28,975	5,055 5,506 5,719 6,549	-648 -553 -108 45	60,542 59,455	1,043 997 979 969
Kosovo	2015 2016 2017 2018	  	704 683 759 764	10 11 3 12	4 4 6 3		690 668 750 749	386 376 419 417

Country or orga	Voor	Draduation	Importo	Cynorto	Dunkara	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Bunkers	stocks	Total	Per capita
Latvia	2015 2016 2017 2018	31 18 15 46	2,705 2,739 2,541 2,433	948 806 750 868	361 436 398 187		1,341 1,392	686 679 713 750
Lithuania	2015 2016 2017 2018	9,009 9,856 10,094 9,896	2,338 2,090 1,335 1,093	8,289 8,483 8,216 7,534	156 259 282 327		3,201 3,034	966 1,108 1,066 1,104
Luxembourg	2015 2016 2017 2018	  	2,673 2,700 2,852 3,001	7 10 25 4	445 493 558 597	-19 0 -8 -8	2,197 2,276	3,952 3,793 3,845 3,986
Malta	2015 2016 2017 2018	  	2,719 2,690 2,885 3,013	532 273 152 355	1,701 1,935 2,302 2,436		439 328	1,232 1,007 749 651
Montenegro	2015 2016 2017 2018	  	302 357 400 414	16 15 33 29	18 19 20 26		307 338	442 489 539 577
Netherlands	2015 2016 2017 2018	63,390 64,415 63,944 65,712	94,612 93,248 90,598 87,701	111,593 113,112 111,473 109,510	15,749 15,764 15,645 15,235		29,390 29,290	1,675 1,731 1,721 1,739
North Macedonia	2015 2016 2017 2018	0 0 0	1,143 1,213 1,117 1,095	173 110 99 127	  	22 -4	1,081 1,022	468 519 491 469
Norway	2015 2016 2017 2018	25,192 22,684 26,273 26,399	5,322 5,760 6,038 5,750	18,192 16,943 19,092 20,433	690 574 672 710	-344 -186	11,271 12,733	2,198 2,146 2,404 2,027
Poland	2015 2016 2017 2018	29,011 28,280 28,102 29,896	5,392 7,416 9,763 9,263	8,247 7,125 5,196 5,914	823 847 1,092 1,247	-190 145 324 135	27,579 31,253	671 726 823 840
Portugal	2015 2016 2017 2018	15,631 15,417 15,995 14,323	3,707 3,563 3,758 3,781	6,802 6,681 6,915 5,289	1,682 1,908 2,051 2,166	35 -50	10,356 10,837	1,043 1,003 1,053 1,003
Republic of Moldova	2015 2016 2017 2018	11 16 15 10	831 899 937 1,014	14 16 35 27	24 32 47 54	18 -9	849 879	193 209 217 233
Romania	2015 2016 2017 2018	11,907 12,236 12,527 12,649	2,996 2,905 3,229 3,258	4,668 5,099 4,968 5,284	248 279 320 137	129 2	9,634 10,466	506 487 533 546
Russian Federation	2015 2016 2017 2018	282,886 273,944 281,548 285,776	2,154 1,303 1,266 1,187	*132,022 *124,764 *120,834 *120,131	22,339 21,139 22,521 *17,258	82	128,754 139,377	909 886 958 1,024

0	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Dua divetta a	lanca a seta	Francista	Bunkers	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	Dulkeis	stocks	Total	Per capita
Serbia	2015	3,490	1,020	765	86	-9	3,668	517
	2016	3,572	1,098	736	135	-34	3,833	542
	2017	3,787	1,087	855	142	44	3,832	544
	2018	4,014	1,001	923	152	55	3,885	555
Slovakia	2015	6,808	1,655	4,381	42	56	3,984	733
	2016	6,582	1,754	4,116	48	26	4,146	762
	2017	6,560	1,972	3,895	39	-62	4,660	855
	2018	6,348	1,944	3,540	46	47	4,659	854
Slovenia	2015	26	4,035	1,717	90	-9	2,263	1,093
	2016	16	4,548	2,045	145	7	2,367	1,141
	2017	24	4,717	2,081	182	80	2,398	1,155
	2018	74	4,753	2,112	263	-19	2,471	1,189
Spain	2015	66,221	18,956	23,243	11,407	1,557	48,970	1,049
	2016	66,288	21,295	25,130	11,680	468	50,305	1,079
	2017	67,341	23,204	27,578	11,191	-1,296	53,072	1,138
	2018	69,592	20,871	25,500	11,706	-347	53,604	1,148
Sweden	2015	22,346	7,810	15,061	2,563	1,046	11,486	1,176
	2016	22,303	10,748	16,838	2,832	986	12,395	1,260
	2017	22,317	10,014	17,884	3,231	-1,574	12,790	1,291
	2018	23,066	9,118	17,096	2,752	-570	12,906	1,294
Switzerland	2015	2,899	7,921	431	1,586	-335	9,138	1,096
	2016	3,108	7,759	477	1,658	79	8,653	1,028
	2017	3,038	7,717	384	1,714	-129	8,786	1,034
	2018	3,273	6,907	440	1,798	-428	8,370	977
Ukraine	2015	2,865	7,747	113	121	-28	10,406	232
	2016	2,866	9,417	64	*121	573	11,525	258
	2017	3,121	9,751	308	*121	-317	12,760	287
	2018	2,516	10,542	322		-68	12,804	289
United Kingdom	2015	64,680	37,421	24,705	13,058	471	63,867	970
	2016	63,887	41,428	25,900	13,216	54	66,145	998
	2017	63,843	41,088	24,584	13,579	198	66,570	998
	2018	62,145	41,580	24,146	13,871	-278	65,986	983
Oceania	2015	34,274	29,149	2,934	5,598	159	54,732	1,373
	2016	30,816	33,551	3,057	6,023	377	54,911	1,358
	2017	29,730	34,463	3,602	6,502	-406	54,495	1,329
	2018	30,050	36,946	3,675	6,890	796	55,636	1,338
Australia	2015 2016 2017 2018	27,830 23,749 22,824 23,147	22,904 27,292 28,222 30,128	2,448 2,059 2,635 2,732	4,198 4,388 4,761 5,041	111 393 -287 842	43,937	1,838 1,822 1,787 1,794
Cook Islands	2015 2016 2017 2018	  	*32 *33 *35 *35	  	*11 *11 *11 *11	  	*22 *22 *24 *24	*1,226 *1,280 *1,390 *1,389
Fiji	2015 2016 2017 2018	  	821 764 801 *838	297 345 296 *301	*73 *82 *88 *96	*50 *-51 *-14 *13	401 388 431 *429	462 445 491 *485
French Polynesia	2015 2016 2017 2018	  	286 284 287 289	  	24 26 26 25	*4 *9 *9 0	259 250 252 264	949 909 914 950

Country on one	V	Duaduatian	lana a mta	ports Exports Bunkers Changes in stocks	Changes in	Sup	ply	
Country or area	Year	Production	Imports		Dulkeis		Total	Per capita
Kiribati	2015 2016 2017 2018		20 19 24 *24		*1 0 *1 *1		19 18 23 *23	174 160 202 *201
Marshall Islands	2015 2016 2017 2018	  	*49 *49 *50 *50	  	*2 *2 *2 *2		*47 *47 *48 *48	*813 *809 *820 *823
Micronesia (Fed. States of)	2015 2016 2017 2018	  	58 *58 *58 *59	  	10 *9 *10 *10		48 *49 *49 *49	444 *445 *439 *437
Nauru	2015 2016 2017 2018	  	*26 *26 *26 *25	  	*9	0	*40	*1,713 *1,631 *1,719 *1,642
New Caledonia	2015 2016 2017 2018	  	958 951 927 992	  	32 29 33 44	-20 40	930 941 854 928	3,429 3,432 3,082 3,316
New Zealand	2015 2016 2017 2018	5,813 5,699 5,528 5,518	2,321 2,728 2,658 3,122	188 211 236 205	1,121 1,345 1,444 1,528	95 -171		1,482 1,454 1,420 1,475
Niue	2015 2016 2017 2018	  	2 *2 *2 *2	  	*1		2 *2 *2 *2	1,228 *1,178 *1,140 *1,216
Palau	2015 2016 2017 2018	  	*77 *80 *83 *84	  	*10 *11 *12 *13	••	*67 *69 *71 *71	*3,808 *3,919 *3,992 *3,942
Papua New Guinea	2015 2016 2017 2018	631 1,368 1,378 *1,385	1,274 949 955 *959	0 442 434 *437	*72	-48 11	1,831 1,851 1,821 *1,829	226 224 216 *213
Samoa	2015 2016 2017 2018	  	101 92 102 95	0 1 *1 *1	12 12 *12 *12	*-1 *6	78 80 83 81	401 410 427 414
Solomon Islands	2015 2016 2017 2018	  	108 *106 *105 *107	  	*9 *9 *9	·· ··	99 *97 *96 *97	164 *156 *150 *149
Tonga	2015 2016 2017 2018	  	44 46 55 49	  	*5 *3 *5 *4	0	39 42 50 45	389 417 494 437
Tuvalu	2015 2016 2017 2018	  	*3 *3 *3 *3	  	0 0 0 0		*2 *2 *3 *3	*223 *216 *246 *257

Country or area	Vaar	Year Production	Imports	Exports	Bunkers	Changes in	Supply	
	Year					stocks	Total	Per capita
Vanuatu	2015 2016 2017 2018		61 59 76	 	. *11 . *12 *17		50 47 50	181 165
Wallis and Futuna Is.	2015 2016 2017 2018		9 9 9	·· ·· ··	. 1 . 1	  	8 8	636 676 675

#### Production of natural gas liquids - by end use

Thousand metric tons

#### **Table Notes**

**Production** refers to production of natural gas liquids.

End-use products refers to the output of natural gas liquids plants, arranged by product. Net imports refers to imports minus exports. Inputs of NGLs to refineries refers to quantities of natural gas liquids that are transformed in oil refineries. Data may not add up due to statistical differences or the presence of other natural gas liquid flows such as stock changes, transfers or energy industries own use.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Figure 66: Production of natural gas liquids by region, 1990-2018

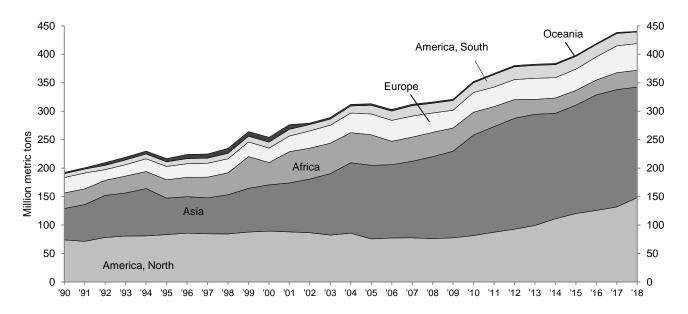
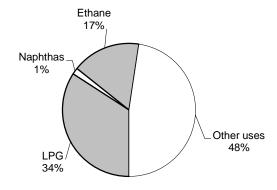


Figure 67: Production of natural gas liquids by end-use product, 2018



#### Production of natural gas liquids - by end use Thousand metric tons

		Total		End-use	products			Inputs of NGLs
Country or area	Year	production	LPG	Naphthas	Ethane	Other products	Net imports	to refineries
World	2015 2016 2017 2018	398,362 419,074 438,522 440,448	144,599 150,684	9,887 9,189 6,332 6,928	58,293 64,402 66,390 73,452	9,305 10,021	-56,541 -60,785	110,466 119,090
Africa	2015 2016 2017 2018	26,003 26,183 29,672 29,616	11,162 11,763	492 459 574 736		) 	-10,204 -12,994	4,157 4,900
Algeria	2015 2016 2017 2018	18,346 17,924 17,744 17,220	8,593 8,412	120 101 113 81	( (	) 	-5,209 -4,200	4,097 4,813
Angola	2015 2016 2017 2018	0 904 3,962 4,091	225	  	:	 	-810 -3,803	) }
Congo	2015 2016 2017 2018	301 301 301 301	  	  	:	 	-280 -276	) 21 5 24
Côte d'Ivoire	2015 2016 2017 2018	5 6 6 5	6 6	  		 		 
Egypt	2015 2016 2017 2018	1,366 1,312 1,230 1,299	1,312 1,230	  		 		 
Equatorial Guinea	2015 2016 2017 2018	542 605 660 587	605 660	  		 		 
Ghana	2015 2016 2017 2018	 112 80	 114	  		 		
Libya	2015 2016 2017 2018	2,109 2,108 2,831 3,375	281 277	372 358 461 655			-2,093	) }
Nigeria	2015 2016 2017 2018	2,970 2,747 2,557 2,424	•••	  			-2,366 -2,553	 }
South Africa	2015 2016 2017 2018	147 39 63 63		  		 		. 39 . 63
Tunisia	2015 2016 2017 2018	217 237 206 172	140 123	 			-70	) )

## Production of natural gas liquids - by end use Thousand metric tons

Country on one	\\\\	Total		End-use p	products		Not incorporate	Inputs of NGLs
Country or area	Year	production	LPG	Naphthas	Ethane	Other products	Net imports	to refineries
America, North	2015 2016 2017 2018	120,377 125,842 132,039 148,229	47,228 49,919	  	26,702 29,861 32,996 38,883	3,109 3,481	-9,583 -9,852	20,166 20,936
Belize	2015 2016 2017 2018	*1 *1 *1 *1	1 1 1	  	  	 		 
Canada	2015 2016 2017 2018	13,807 15,938 15,946 17,550		  	  	 	-2,202 -3,348	1,156 1,400
Curaçao	2015 2016 2017 2018	  	  	  	  	 	51 26	 ;
Mexico	2015 2016 2017 2018	9,218 8,691 7,920 6,764	4,181 3,807	  	2,230 2,216 2,106 1,767	 		2,110 1,866
Trinidad and Tobago	2015 2016 2017 2018	1,032 865 921 805	499 547	  	  	401		 
United States	2015 2016 2017 2018	96,319 100,347 107,251 123,109	42,547 45,564	  	24,472 27,645 30,890 37,116	2,708 3,075	-7,432 -6,540	16,900 17,670
America, South	2015 2016 2017 2018	22,297 21,497 21,745 20,305	7,515 7,376	 108 108 20	907 1,022 980 1,102	3,540 3,423	-244 -256	7,677 7,411
Argentina	2015 2016 2017 2018	3,547 3,478 3,435 3,859	1,537 1,573	  	907 1,022 980 1,102	! 0 !	-244 -256	675 626
Bolivia (Plur. State of)	2015 2016 2017 2018	940 1,047 1,057 1,032	421 418	  	  			573
Brazil	2015 2016 2017 2018	5,629 5,349 6,201 5,517	1,450 1,456	 108 108 20	  	1,465		1,206 1,363
Chile	2015 2016 2017 2018	38 41 108 224		  	  	 		 
Colombia	2015 2016 2017 2018	260 262 322 298	262 322	  	 			•••

## Production of natural gas liquids - by end use Thousand metric tons

Occupation on a second	Va a s	Total		End-use p	oroducts		Not been sets	Inputs of NGLs
Country or area	Year	production	LPG	Naphthas	Ethane	Other products	Net imports	to refineries
Ecuador	2015 2016 2017 2018	161 176 174 125	100	  	·	. 79 . 78		
Peru	2015 2016 2017 2018	3,447 3,491 3,336 3,141	1,435	  		1,891 1,773		
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	8,275 7,653 7,112 6,109	2,313 2,156	  		. 108 . 107		*5,232 *4,849
Asia	2015 2016 2017 2018	190,341 202,830 206,037 194,276	69,216 71,728	8,635 7,461 4,559 5,233	28,021 30,699 29,699 30,876	2,656 3,006	-43,420 -46,785	47,247 46,458
Azerbaijan	2015 2016 2017 2018	2,634 2,835 2,688 2,921	14	26 23 20 20		 	-2,494 -2,357	304 299
Bahrain	2015 2016 2017 2018	350 356 337 385		  			-367 -315	, 5
Bangladesh	2015 2016 2017 2018	294 321 409 407	8 6	  		. 154 . 138		. 146 . 256
Brunei Darussalam	2015 2016 2017 2018	621 513 544 518	17	  		 	-464	85 81
India	2015 2016 2017 2018	*4,016 *4,295 *4,609 *4,932	358 2,210	2,517 2,339 1,220 *1,250				
Indonesia	2015 2016 2017 2018	4,886 4,857 4,285 4,084	1,410 1,162	  		1,792 *2,168	649 423	) 3 185
Iran (Islamic Rep. of)	2015 2016 2017 2018	22,532 26,429 30,250 31,025	2,138 2,720	  	10,176 11,672 10,336 10,735	! !	-16,438 -18,177	2,243 2,567
Iraq	2015 2016 2017 2018	1,021 1,609 1,861 1,978	1,449					. 356 . 412
Japan	2015 2016 2017 2018	242 236 240 215		  			6,004	6,149 2,055

## Production of natural gas liquids - by end use Thousand metric tons

		Total		End-use	oroducts			Inputs of NGLs
Country or area	Year	production	LPG	Naphthas	Ethane	Other products	Net imports	to refineries
Kazakhstan	2015 2016 2017 2018	12,936 12,462 13,270 1,493	*1,267 1,238	  	 	•	-11,195	 !
Kuwait	2015 2016 2017 2018	6,838 7,961 8,781 8,942	5,868 6,688	  	2,093 2,093 2,093 2,093	 		
Malaysia	2015 2016 2017 2018	1,522 2,456 2,338 2,398	1,893 1,838	 243 230	  	 		
Myanmar	2015 2016 2017 2018	8 10 12 13	6 8	4 4 4 3	  	 		
Oman	2015 2016 2017 2018	241 254 238 239	238	  	  	 		
Pakistan	2015 2016 2017 2018	467 489 571 564	489 *571	  	  	 	3,656 5,882	 !
Qatar	2015 2016 2017 2018	39,625 42,516 42,546 39,177	9,830 9,682	  	1,573 1,070 960 1,006	 	-22,439	9,188 11,760
Saudi Arabia	2015 2016 2017 2018	45,615 47,837 46,923 47,596	27,829 27,469	*2,630 *865 *350 *961	10,680 12,408 12,590 13,356	 !	4,095	9,473 8,416
Syrian Arab Republic	2015 2016 2017 2018	76 76 76 76	76 76	  	  	  		  
Thailand	2015 2016 2017 2018	6,382 6,415 6,759 6,816	4,377 4,473	  	2,199 2,059 2,333 2,388		-65 -54 -33 -18	 }
Turkmenistan	2015 2016 2017 2018	980 934 943 989	638 655	  	 			. 296 . 288
United Arab Emirates	2015 2016 2017 2018	35,808 36,712 34,913 35,981	11,090	*3,458 *4,230 *2,722 *2,769	1,300 *1,397 1,387 1,298	, ,	40 540	. 17,169 18,164
Uzbekistan	2015 2016 2017 2018	1,728 1,747 1,953 2,145		  	 	•	91	1,839 1,976

## Production of natural gas liquids - by end use Thousand metric tons

O country on a con-	V	Total		End-use p	products		Not been out	Inputs of NGLs
Country or area	Year	production	LPG	Naphthas	Ethane	Other products	Net imports	to refineries
Viet Nam	2015 2016 2017 2018	1,052 1,017 1,017 979	156 308 317 420	  	  	. 710 . 700		 
Yemen	2015 2016 2017 2018	107 95 *97 12	*97		  	 		 
Europe	2015 2016 2017 2018	37,360 40,901 47,307 46,944	7,727 7,661 8,181 7,430	760 1,161 1,091 939	2,663 2,820 2,715 2,591	0 5 111	6,914 9,105	31,219 39,384
Austria	2015 2016 2017 2018	21 6 37 18	  		  	 	C	) 6 . 37
Belarus	2015 2016 2017 2018	66 63 74 100		  	  	 		 
Belgium	2015 2016 2017 2018	  	  	  	  	 	58 23	3 46 3 0
Croatia	2015 2016 2017 2018	56 59 64 58	39 40 42 38	  	 	 		. 19 . 22
Finland	2015 2016 2017 2018	  	  	  	  	 	1,367	938 7 1,272
France	2015 2016 2017 2018	0 0 		  	  	. 0	794 626	404 3 136
Hungary	2015 2016 2017 2018	232 260 282 242	121 89		  	 	-19	) 117 ) 130
Lithuania	2015 2016 2017 2018	  		  	  			0
Montenegro	2015 2016 2017 2018	  	  	  	  	 		
Netherlands	2015 2016 2017 2018	402 291 240 204			  		6,019 6,919	3,042 4,141

## Production of natural gas liquids - by end use Thousand metric tons

		Total		End-use	products			Inputs of NGLs
Country or area	Year	production	LPG	Naphthas	Ethane	Other products	Net imports	to refineries
Norway	2015 2016 2017 2018	9,848 10,263 10,504 10,006	6,433 6,902	1,161 1,091	1,636 1,483	 3		
Romania	2015 2016 2017 2018	101 116 96 91	••	  		 	-24	77 66
Russian Federation	2015 2016 2017 2018	23,483 26,019 31,862 32,199		  		 	-1,274	24,832 31,874
Serbia	2015 2016 2017 2018	31 33 35 34		  		 	60	93 76
Slovakia	2015 2016 2017 2018	2 2 2 2 2		  		 		. 2
Ukraine	2015 2016 2017 2018	656 650 665 669		  		 	14 109	665 762
United Kingdom	2015 2016 2017 2018	2,462 3,139 3,446 3,320	1,067 1,148	  	1,184 1,232	 2	270	978 867
Oceania	2015 2016 2017 2018	1,984 1,821 1,722 1,077	1,817 1,717	  		 	-5 -2	i !
Australia	2015 2016 2017 2018	1,779 1,644 1,536 893	1,644 1,536	  		 		
New Zealand	2015 2016 2017 2018	205 177 186 184	173 181			 	-5	 !

#### Production, trade and supply of natural gas

Terajoules

#### **Table Notes**

**Production** includes quantities from other sources, which would include any quantities of biogas, LPG or manufactured gas blended with natural gas.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Figure 68: Production of natural gas by region, 1990-2018

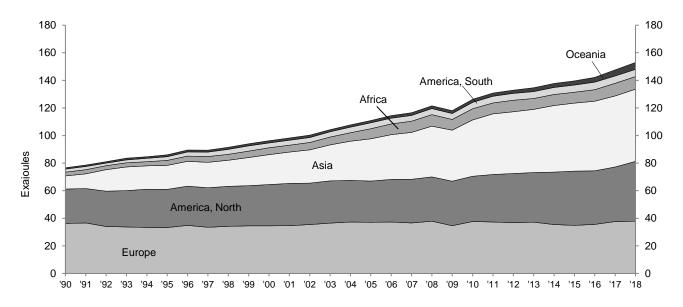


Figure 69: Major natural gas producing countries, 2018

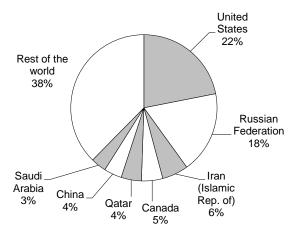
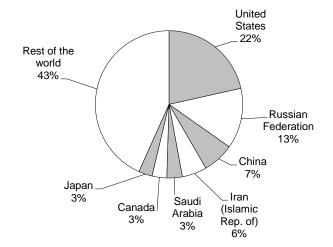


Figure 70: Major natural gas consuming countries, 2018



					Changes in	Supp	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
World	2015 2016 2017 2018	139,616,069 142,175,769 147,634,231 152,983,826	40,786,610 42,142,716 45,635,466 45,793,727	41,215,024 42,749,608 46,727,453 46,061,844	700,133 -996,597 426,021 -828,336	138,487,521 142,565,474 146,116,223 153,544,045	18,766 19,100 19,359 20,121
Africa	2015 2016 2017 2018	7,906,123 8,369,234 9,118,989 9,141,928	606,794 680,560 636,117 594,773	3,352,691 3,638,868 3,977,096 3,863,893	 2,888 2,068	5,160,226 5,410,925 5,775,122 5,870,740	4,368 4,465 4,646 4,605
Algeria	2015 2016 2017 2018	3,322,561 3,705,161 3,784,257 3,815,473	  	1,721,361 2,105,807 2,107,290 2,006,499	 2,888 2,068	1,601,200 1,599,354 1,674,079 1,806,906	40,304 39,440 40,447 42,789
Angola	2015 2016 2017 2018	29,260 64,980 220,400 235,220	  	0 34,580 188,480 202,540	  	29,260 30,400 31,920 32,680	1,049 1,054 1,071 1,061
Benin	2015 2016 2017 2018	  	1,211 76 1,526 750	   	  	1,211 76 1,526 750	115 7 137 65
Botswana	2015 2016 2017 2018	  	89  	  	  	89  	42  
Cameroon	2015 2016 2017 2018	19,176 20,710 23,011 61,363		  31,160		19,176 20,710 23,011 30,203	823 866 937 1,198
Congo	2015 2016 2017 2018	19,968 22,868 24,045 24,045	  	  	  	19,968 22,868 24,045 24,045	4,112 4,591 4,705 4,585
Côte d'Ivoire	2015 2016 2017 2018	78,464 97,045 87,679 79,833	 	  	  	78,464 97,045 87,679 79,833	3,378 4,074 3,588 3,185
Dem. Rep. of the Congo	2015 2016 2017 2018	46 14 12 15	 	  	  	46 14 12 15	1 0 0 0
Egypt	2015 2016 2017 2018	1,455,476 1,616,921 1,994,593 1,909,150	264,963 363,005 299,840 218,726	9,793 52,356 90,707 40,195	  	1,710,646 1,927,570 2,203,726 2,087,681	18,505 20,409 22,850 21,211
Equatorial Guinea	2015 2016 2017 2018	290,371 307,313 321,430 302,441		195,919 196,433 196,432 214,952	 	94,452 110,880 124,998 87,489	80,827 91,246 99,047 66,838
Gabon	2015 2016 2017 2018	20,735 20,773 18,360 17,872	 	 	  	20,735 20,773 18,360 17,872	10,646 10,346 8,892 8,433

					Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Gambia	2015 2016 2017 2018	  	*105 *106 *107 *108	  		*105 *106 *107 *108	*50 *49 *48 *48
Ghana	2015 2016 2017 2018	27,846 24,573 35,607 34,366	21,763 4,223 12,358 26,712	  	  	49,609 28,796 47,965 61,078	1,781 1,011 1,647 2,052
Guinea	2015 2016 2017 2018	3 3 3 4	  		  	3 3 3 4	0 0 0
Libya	2015 2016 2017 2018	588,734 591,678 543,752 527,439	  	270,180 182,400 174,800 171,000	  	318,554 409,278 368,952 356,439	49,632 63,042 56,066 53,371
Morocco	2015 2016 2017 2018	3,081 2,836 2,870 3,069	44,154 45,198 44,819 39,927	  	  	47,235 48,034 47,689 42,996	1,342 1,347 1,320 1,175
Mozambique	2015 2016 2017 2018	190,314 194,225 192,403 192,468	  	154,898 163,008 164,008 159,007	  	35,416 31,217 28,395 33,461	1,310 1,122 991 1,134
Nigeria	2015 2016 2017 2018	1,660,131 1,531,400 1,713,800 1,774,600		1,000,540 903,640 1,054,880 1,038,540		659,591 627,760 658,920 736,060	3,641 3,376 3,452 3,758
Rwanda	2015 2016 2017 2018	*240 *1,100 *753 *771	  		  	*240 *1,100 *753 *771	*21 *94 *63 *63
Senegal	2015 2016 2017 2018	946 878 736 461	  		  	946 878 736 461	65 59 48 29
South Africa	2015 2016 2017 2018	47,680 28,338 25,571 39,122	154,898 131,146 124,124 146,278	644 499		202,578 158,840 149,196 185,400	3,658 2,826 2,617 3,208
Togo	2015 2016 2017 2018		*1,467 *262 0 1,767	  	  	*1,467 *262 0 1,767	*200 *35 0 224
Tunisia	2015 2016 2017 2018	117,088 106,061 99,519 95,274	118,144 136,543 153,343 160,505		  	235,232 242,604 252,862 255,779	21,041 21,462 22,116 22,116
United Rep. of Tanzania	2015 2016 2017 2018	34,003 32,357 30,188 28,943	  	  	  	34,003 32,357 30,188 28,943	660 610 552 514

		5			Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
America, North	2015 2016 2017 2018	39,300,047 38,921,511 39,554,047 43,343,984	5,205,039 5,793,609 6,020,336 5,910,869	5,631,113 6,229,775 7,344,050 7,732,648	-497,072 -380,990	38,209,446 38,982,417 38,611,323 41,890,903	67,296 68,070 66,865 71,964
Barbados	2015 2016 2017 2018	647 542 457 1,002	 *111 *221 	  		647 653 678 1,002	2,269 2,284 2,367 3,496
Belize	2015 2016 2017 2018	81 81 63 51	  	  	*-13 *-20	95 94 82 54	262 256 219 141
Canada	2015 2016 2017 2018	6,473,252 6,907,454 7,066,694 7,197,198	770,134 793,845 976,449 897,508	3,054,761 3,199,060 3,284,020 3,115,967	-72,748	4,092,952 4,584,406 4,831,871 4,956,646	113,609 126,004 131,544 133,694
Cuba	2015 2016 2017 2018	48,562 46,255 41,003 37,854	  	  		48,562 46,255 41,003 37,854	4,288 4,081 3,616 3,339
Curaçao	2015 2016 2017 2018	   	5,584 *5,600 *2,800 *2,100	  		5,584 *5,600 *2,800 *2,100	34,935 *34,771 *17,285 *12,903
Dominican Republic	2015 2016 2017 2018	  	41,937 38,507 46,107 45,029	  	-338	41,159 38,845 46,027 45,610	4,003 3,736 4,378 4,292
Jamaica	2015 2016 2017 2018	   	 355 4,089 3,789	  		355 4,089 3,789	 122 1,400 1,291
Mexico	2015 2016 2017 2018	1,621,487 1,426,626 1,237,433 1,199,619	1,403,732 1,653,977 1,661,018 1,795,228	1,140 1,017 662 520	-10,064 -15,877	3,030,860 3,089,650 2,913,666 3,033,417	24,872 25,051 23,351 24,038
Panama	2015 2016 2017 2018	  	  10,180	  		  6,828	  1,635
Puerto Rico	2015 2016 2017 2018	  	57,717 65,818 54,411 *55,000	  		57,717 65,818 54,411 *55,000	17,068 20,047 17,199 *18,094
Trinidad and Tobago	2015 2016 2017 2018	1,488,155 1,305,208 1,299,510 1,400,178	  	681,865 579,166 596,636 672,949		806,290 726,042 702,874 727,229	588,390 527,048 507,835 523,246
United States	2015 2016 2017 2018	29,667,863 29,235,344 29,908,887 33,508,081	2,925,935 3,235,397 3,275,241 3,102,035	1,893,347 2,450,532 3,462,732 3,943,212	-404,490 -292,426	30,125,580 30,424,699 30,013,822 33,021,374	93,885 94,189 92,326 100,953

					Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
America, South	2015 2016 2017 2018	5,214,755 5,375,308 5,370,382 5,229,780	1,277,966 1,012,496 982,546 898,610	892,419 877,139 834,225 770,585	244 1,183 260 695	5,600,057 5,509,482 5,518,443 5,357,110	13,589 13,247 13,151 12,656
Argentina	2015 2016 2017 2018	1,501,710 1,574,580 1,561,420 1,644,456	403,130 385,560 401,380 324,728	3,081 2,170 2,662 14,845	350 350 -350 318	1,901,409 1,957,620 1,960,488 1,954,021	44,141 44,994 44,620 44,048
Bolivia (Plur. State of)	2015 2016 2017 2018	842,519 805,891 781,424 729,113	  	675,133 619,873 593,964 539,064	  	167,386 186,018 187,460 190,049	15,399 16,862 16,748 16,740
Brazil	2015 2016 2017 2018	856,061 888,729 996,545 940,384	712,865 454,181 415,166 410,360	  	  	1,568,926 1,342,910 1,411,711 1,350,744	7,673 6,514 6,792 6,448
Chile	2015 2016 2017 2018	39,414 47,202 47,932 48,866	145,745 170,076 163,040 160,701	 14,084 8,236 6,270	-106 833 610 377	185,265 202,361 202,126 202,920	10,310 11,113 10,943 10,834
Colombia	2015 2016 2017 2018	482,860 445,589 456,210 476,128	504 505 506	13,254 0 	  	469,606 446,093 456,715 476,634	9,882 9,260 9,338 9,598
Ecuador	2015 2016 2017 2018	31,179 33,658 31,263 28,551		 	  	31,179 33,658 31,263 28,551	1,923 2,041 1,862 1,671
Falkland Is. (Malvinas)	2015 2016 2017 2018		4 4 4 4	  		4 4 4 4	1,550 1,426 1,378 1,254
Peru	2015 2016 2017 2018	531,223 588,387 523,266 514,329	 	200,951 241,012 229,363 210,406	  	330,272 347,375 293,903 303,923	10,839 11,232 9,347 9,501
Suriname	2015 2016 2017 2018	152 136 136 195			  	152 136 136 195	271 241 239 339
Uruguay	2015 2016 2017 2018	  	1,919 2,171 2,451 2,311	  	   	1,919 2,171 2,451 2,311	563 634 713 670
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	929,637 991,136 972,186 847,757	14,302 0 0	  	  	943,939 991,136 972,186 847,757	31,379 33,202 33,065 29,347
Asia	2015 2016 2017 2018	49,289,211 50,424,971 51,514,191 52,362,222	15,548,411 16,077,945 17,679,844 19,195,776	13,171,467 13,127,668 13,559,038 14,001,411	4,390 -103,318 107,166 41,713	51,661,766 53,478,566 55,527,831 57,514,874	11,653 11,946 12,288 12,611

2					Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Afghanistan	2015 2016 2017 2018	5,705 6,450 6,091 5,978	  			5,705 6,450 6,091 5,978	166 182 168 161
Armenia	2015 2016 2017 2018	  	91,310 86,065 91,554 94,283	  	1,270 -73 904 -796	90,039 86,138 90,650 95,079	30,777 29,337 30,783 32,211
Azerbaijan	2015 2016 2017 2018	751,362 731,110 710,345 750,229	 11,656 82,413 70,238	318,152 314,398 345,951 387,155	-12,652 -8,859 22,143 680	445,862 437,226 424,664 432,633	46,334 44,908 43,134 43,483
Bahrain	2015 2016 2017 2018	574,065 552,332 568,359 577,458	  	  	-6 -3 -636 1	574,071 552,335 568,995 577,457	418,464 387,388 380,834 367,938
Bangladesh	2015 2016 2017 2018	985,805 1,075,390 1,070,946 1,070,345	  	  	-5,047 -13,176 -19,967 -14,689	990,852 1,088,566 1,090,912 1,085,034	6,341 6,891 6,832 6,724
Brunei Darussalam	2015 2016 2017 2018	437,932 422,384 462,777 452,350	  	334,342 315,089 327,214 307,980	4,165 -1,260 -3,125 1,567	99,425 108,555 138,688 142,803	239,628 258,593 326,724 332,905
China	2015 2016 2017 2018	5,294,673 5,532,939 6,046,598 6,013,670	2,279,548 2,780,352 3,526,510 4,679,887	120,909 125,902 131,677 126,275		7,453,312 8,187,390 9,441,431 10,567,283	5,298 5,790 6,644 7,402
China, Hong Kong SAR	2015 2016 2017 2018	28,403 28,814 29,049 29,550	123,628 126,743 126,387 123,197	  	  	152,031 155,557 155,436 152,747	21,157 21,475 21,274 20,721
China, Macao SAR	2015 2016 2017 2018	  	83 370 6,847 3,634	  	1 -1 2 	82 371 6,845 3,634	136 605 10,995 5,753
Georgia	2015 2016 2017 2018	437 254 333 403	99,949 90,502 95,263 94,744	3,847 0 		96,539 90,756 95,596 95,147	23,990 22,602 23,847 23,769
India	2015 2016 2017 2018	*1,218,477 1,228,788 1,257,639 1,282,737	*792,217 717,628 765,392 1,121,464	  		*2,010,694 1,946,416 2,023,031 2,404,201	*1,535 1,470 1,511 1,777
Indonesia	2015 2016 2017 2018	2,644,065 2,605,595 2,496,383 2,541,308	  	763,735 751,961 781,916 830,711	-35,667  	1,915,997 1,853,634 1,714,467 1,710,597	7,415 7,087 6,478 6,391
Iran (Islamic Rep. of)	2015 2016 2017 2018	7,271,954 7,864,956 8,489,798 8,865,103	334,293 230,942 151,954 62,642	353,776 356,898 520,558 611,589	  	7,252,470 7,739,000 8,121,194 8,316,156	92,397 97,268 100,667 101,664

			_	_	Changes in	Supp	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Iraq	2015 2016 2017 2018	263,997 290,397 329,997 448,795	 60,800 171,000	  	  	263,997 290,397 390,797 619,795	7,421 7,932 10,407 16,126
Israel	2015 2016 2017 2018	275,899 307,025 324,522 345,321	4,332 11,885 17,167 22,119	 2,410 	  	280,231 318,910 339,279 367,440	35,123 39,328 41,155 43,839
Japan	2015 2016 2017 2018	179,247 184,025 196,211 180,639	4,551,428 4,615,551 4,568,890 4,388,925	  	140 -1,276 -5,701 -18,912	4,730,535 4,800,852 4,770,802 4,588,476	36,962 37,576 37,417 36,072
Jordan	2015 2016 2017 2018	4,232 3,610 3,847 3,624	77,168 167,080 202,013 167,881	28,789 42,584 11,588	  	81,400 141,900 163,276 159,917	8,784 14,852 16,685 16,047
Kazakhstan	2015 2016 2017 2018	1,551,868 1,630,883 1,847,913 1,567,135	227,408 267,676 244,878 387,839	495,794 577,495 693,785 1,071,740	6,143 -15,419 11,338 17,083	1,277,339 1,336,483 1,387,668 866,151	72,692 74,953 76,751 47,280
Korea, Republic of	2015 2016 2017 2018	7,854 6,441 14,203 12,147	1,811,665 1,842,548 2,029,463 2,309,420	  	-10,889 -72,900 33,352 101,500	1,830,408 1,921,889 2,010,314 2,220,067	36,015 37,696 39,344 43,385
Kuwait	2015 2016 2017 2018	642,542 657,058 649,866 674,036	151,620 188,480 210,140 189,240	  	  	794,162 845,538 860,006 863,276	207,051 213,689 212,028 208,656
Kyrgyzstan	2015 2016 2017 2018	1,154 1,043 939 985	9,522 10,087 10,866 12,016	  	  	10,676 11,130 11,805 13,001	1,792 1,832 1,907 2,062
Malaysia	2015 2016 2017 2018	2,419,659 2,393,324 2,430,873 2,565,169	327,148 286,035 292,784 291,035	1,177,257 1,184,751 1,292,015 1,143,335	  	1,569,550 1,494,608 1,431,642 1,712,869	51,850 48,709 46,027 54,328
Myanmar	2015 2016 2017 2018	713,772 744,589 710,324 724,321	  	493,249 580,338 *538,261 532,642	  	220,523 164,251 172,063 191,679	4,186 3,096 3,223 3,569
Oman	2015 2016 2017 2018	1,315,495 1,343,097 1,348,927 1,523,605	82,386 81,558 81,558 66,240	417,000 443,688 464,955 547,104	  	980,881 980,967 965,530 1,042,741	229,858 219,004 206,932 215,912
Other Asia	2015 2016 2017 2018	12,519 10,767 8,899 6,618	713,973 743,987 827,923 845,219		2,245 -2,254 4,460 9,852	724,247 757,008 832,362 841,985	30,744 32,052 35,159 35,487
Pakistan	2015 2016 2017 2018	1,256,276 1,274,671 1,263,942 1,250,705	51,733 153,081 246,283 289,828	  	-1,239 *-1,246 	1,309,248 1,428,998 1,510,225 1,540,533	6,565 7,018 7,264 7,259

Country or area	Year	Production	Imports	Exports	Changes in	Sup	oly
Country of area	leai	1 Toduction	imports	Exports	stocks	Total	Per capita
Philippines	2015 2016 2017 2018	135,403 155,132 153,033 170,850				135,403 155,132 153,033 170,850	1,326 1,496 1,455 1,602
Qatar	2015 2016 2017 2018	6,830,586 6,917,940 6,893,100 6,855,840		5,129,046 5,242,068 5,122,836 5,067,774	  	1,701,540 1,675,872 1,770,264 1,788,066	663,185 631,361 649,703 642,800
Saudi Arabia	2015 2016 2017 2018	4,675,886 4,916,646 5,033,709 5,228,814		  	  	4,675,886 4,916,646 5,033,709 5,228,814	147,422 151,545 152,070 155,145
Singapore	2015 2016 2017 2018	  	395,798 405,304 413,314 416,980	  	-1,732 -2,159 3,598 -1,438	397,530 407,463 409,715 418,418	71,087 72,071 71,779 72,673
Syrian Arab Republic	2015 2016 2017 2018	162,110 141,375 139,490 138,736	  	 	  	162,110 141,375 139,490 138,736	9,007 8,094 8,159 8,187
Tajikistan	2015 2016 2017 2018	156 118 81 24	2,184	 	  	156 118 81 2,208	18 14 9 243
Thailand	2015 2016 2017 2018	1,199,937 1,176,806 1,098,964 1,063,777	556,232 541,690 576,394 588,243		  	1,756,169 1,718,496 1,675,358 1,652,020	25,557 24,916 24,207 23,795
Timor-Leste	2015 2016 2017 2018	300,462 246,223 225,541 *216,567		300,462 246,223 225,541 *216,567	  	0 0 0 0	0 0 0 0
Turkey	2015 2016 2017 2018	14,584 14,068 13,564 16,343	1,855,031 1,775,476 2,116,077 1,925,967	23,899 25,923 24,158 25,789	13,608 -16,318 47,789 8,384	1,832,108 1,779,939 2,057,694 1,908,137	23,330 22,297 25,367 23,174
Turkmenistan	2015 2016 2017 2018	3,171,309 3,022,406 3,050,065 3,199,347	  	2,178,093 2,029,190 2,056,849 2,206,145	  	993,216 993,216 993,216 993,202	178,466 175,406 172,503 169,752
United Arab Emirates	2015 2016 2017 2018	2,348,323 2,383,547 2,110,436 1,871,750	893,893 874,070 873,619 871,551	515,077 515,077 545,500 353,193	  	2,727,139 2,742,540 2,438,555 2,390,108	294,415 292,976 257,036 248,169
Uzbekistan	2015 2016 2017 2018	2,062,846 2,120,712 2,139,984 2,326,745	118,046 69,180 61,356 0	471,062 389,879 442,828 561,825	44,049 31,626 13,008 -61,518	1,665,782 1,768,387 1,745,504 1,826,438	53,857 56,243 54,616 56,239
Viet Nam	2015 2016 2017 2018	415,964 414,013 363,390 377,189	 	  	  	415,964 414,013 363,390 377,189	4,488 4,421 3,841 3,948

					Changes in	Supp	oly
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Yemen	2015 2016 2017 2018	114,254 20,045 24,053 4,009		75,768  	  	38,486 20,045 24,053 4,009	1,452 738 864 141
Europe	2015 2016 2017 2018	34,898,651 35,551,919 37,649,392 37,898,694	17,947,651 18,351,665 20,110,103 19,007,184	16,705,033 16,754,948 18,047,950 16,205,277	33,089 -398,356 699,819 -497,284	36,108,180 37,546,992 39,011,725 41,197,885	48,452 50,300 52,180 55,032
Albania	2015 2016 2017 2018	1,273 3,308 3,422 3,076	  	  	  	1,273 3,308 3,422 3,076	440 1,146 1,187 1,067
Austria	2015 2016 2017 2018	48,004 44,897 48,516 39,964	454,425 551,640 536,865 503,400	222,344 267,595 210,482 201,444	-39,579 -2,171 13,139 -2,080	319,664 331,113 361,760 344,000	36,833 37,853 41,016 38,689
Belarus	2015 2016 2017 2018	6,797 6,488 5,793 5,948	725,707 719,914 734,359 785,185		-4,094 -5,677 -8,999 -3,553	736,598 732,079 749,151 794,686	78,034 77,504 79,273 84,070
Belgium	2015 2016 2017 2018	   2	711,487 692,529 691,461 750,494	67,081 26,955 29,354 52,715	-4,384 3,700 -10,819 3,858	648,790 661,874 672,926 693,923	57,476 58,292 58,926 60,435
Bosnia and Herzegovina	2015 2016 2017 2018	  	8,254 8,592 9,292 9,261	  	   1	8,254 8,592 9,292 9,260	2,407 2,537 2,772 2,786
Bulgaria	2015 2016 2017 2018	3,931 3,566 3,082 1,328	117,186 120,650 126,673 120,455	91 107 1,246 482	318 -868 9 -217	120,708 124,977 128,500 121,518	16,766 17,475 18,092 17,233
Croatia	2015 2016 2017 2018	68,450 63,692 57,197 47,345	40,371 48,902 70,106 61,167	14,124 15,057 7,700 4,361	-2,153 -3,437 3,617 -2,483	96,850 100,974 115,986 106,634	22,880 23,992 27,729 25,655
Czechia	2015 2016 2017 2018	9,529 8,384 8,768 8,355	286,767 312,387 341,211 307,194	0  	-5,282 -5,628 14,989 -1,676	301,578 326,399 334,990 317,225	28,447 30,738 31,481 29,743
Denmark	2015 2016 2017 2018	193,912 192,046 208,080 180,146	27,493 28,463 21,606 16,136	91,499 88,240 93,373 64,077	-3,912 -5,071 2,809 -7	133,818 137,340 133,504 132,212	23,523 24,047 23,290 22,985
Estonia	2015 2016 2017 2018	  	18,164 19,923 18,885 19,241	  	  	18,164 19,923 18,885 19,241	13,809 15,133 14,313 14,544
Finland	2015 2016 2017 2018	302 327 400 407	104,042 95,787 89,099 101,361	11 15 	 -1,000 257	104,333 96,099 90,499 101,511	19,035 17,480 16,420 18,381

		5			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
France	2015 2016 2017 2018	1,186 1,611 2,120 2,930	1,832,029 1,918,226 2,007,600 2,036,747	226,317 155,205 252,252 247,462	-23,468 -17,340 -34,622 81,161	1,630,366 1,781,972 1,792,090 1,711,054	24,467 26,650 26,723 25,451
Germany	2015 2016 2017 2018	294,709 304,749 280,465 219,329	3,996,950 3,796,620 4,453,882 3,281,120	1,267,332 899,143 1,251,405	-6,653 -69,540 -21,906 78,810	3,030,980 3,271,766 3,504,848 3,421,639	37,059 39,806 42,402 41,163
Greece	2015 2016 2017 2018	219 446 422 589	124,377 161,072 196,550 192,807	  	66 -824 1,417 1,863	124,530 162,342 195,555 191,533	11,682 15,293 18,502 18,203
Hungary	2015 2016 2017 2018	63,688 66,468 65,834 68,457	264,077 336,120 519,322 494,127	21,315 41,533 136,859 194,125	-41,978 -12,394 50,724 -16,643	348,428 373,449 397,573 385,102	35,634 38,291 40,861 39,671
Ireland	2015 2016 2017 2018	5,246 115,739 132,498 127,802	168,442 79,082 65,565 80,961	  	-1,179 -2,734 -2,557	174,867 197,555 200,620 208,763	37,586 42,071 42,207 43,324
Isle of Man	2015 2016 2017 2018	  	4,220 4,768 4,748 4,642	  	  	4,220 4,768 4,748 4,642	50,702 57,242 56,787 55,214
Italy	2015 2016 2017 2018	257,975 220,409 211,346 208,644	2,334,234 2,487,320 2,653,666 2,585,940	8,420 8,077 10,385 14,878	11,163 -2,210 -8,968 10,067	2,572,626 2,701,862 2,863,595 2,769,639	42,444 44,514 47,170 45,658
Latvia	2015 2016 2017 2018	  	50,364 42,930 47,111 53,750	  	-733 -8,860 919 -634	51,097 51,790 46,192 54,384	25,578 26,233 23,675 28,201
Liechtenstein	2015 2016 2017 2018	  	1,018 1,012 1,061 986	  	  	1,018 1,012 1,061 986	27,220 26,857 27,986
Lithuania	2015 2016 2017 2018	  	99,602 87,896 96,757 88,715	3,706 1,707 7,980 7,001	-283 518 -608 -892	96,179 85,671 89,385 82,606	32,805 29,649 31,414 29,489
Luxembourg	2015 2016 2017 2018	222 218 248 231	35,771 32,988 32,245 31,803	  	 	35,993 33,206 32,493 32,034	63,509 57,324 54,895 53,015
Malta	2015 2016 2017 2018	  	 11,829 14,919	  	 584 1,292	 11,245 13,627	 25,677 31,023
Netherlands	2015 2016 2017 2018	1,839,292 1,776,159 1,546,180 1,297,149	1,360,066 1,538,076 1,807,950 2,030,350	1,848,263 1,996,314 1,870,990 1,816,500	15,058 -83,730 34,862 75,771	1,336,037 1,401,651 1,448,278 1,435,228	78,876 82,541 85,086 84,130

Occupa		Decide ()	lana a d	Francis	Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
North Macedonia	2015 2016 2017 2018		4,689 7,371 9,487 8,749		2 -1 7 5	4,688 7,372 9,480 8,744	2,255 3,543 4,553 4,198
Norway	2015 2016 2017 2018	4,784,439 4,760,715 5,057,651 4,950,498	0 0 0	4,500,753 4,501,580 4,837,764 4,710,681	-3,611 -902 4,279 -2,005	287,297 260,037 215,608 241,822	55,251 49,522 40,709 45,302
Poland	2015 2016 2017 2018	171,329 165,272 163,373 161,378	464,842 566,852 606,014 608,367	2,112 33,294 47,232 26,278	-6,790 18,084 3,664 -6,627	640,849 680,746 718,491 750,094	16,849 17,919 18,931 19,780
Portugal	2015 2016 2017 2018	  	189,121 198,228 252,977 236,115	 	673 -2,873 1,053 2,469	188,448 201,101 251,924 233,646	18,175 19,476 24,486 22,781
Republic of Moldova	2015 2016 2017 2018	3 4 4 4	34,146 35,159 35,006 38,250	 	-48 58 -52 97	34,197 35,105 35,062 38,157	8,401 8,634 8,637 9,417
Romania	2015 2016 2017 2018	408,689 362,111 396,451 394,323	7,512 54,722 44,318 56,210	38 44 965 1,143	1,330 -2,995 -7,291 -8,504	414,833 419,784 447,095 457,894	20,820 21,205 22,748 23,474
Russian Federation	2015 2016 2017 2018	24,391,734 25,046,466 27,025,965 27,755,267	336,386 341,547 335,736 358,750	7,674,559 8,146,589 8,725,080 8,433,194	108,497 -32,037 571,303 -706,326	16,945,064 17,273,461 18,065,317 20,387,149	116,875 118,902 124,135 139,893
Serbia	2015 2016 2017 2018	21,207 19,381 18,117 16,653	64,461 66,499 80,849 81,431	  	4,242 -2,106 474 -1,091	81,426 87,986 98,491 99,175	11,487 12,434 13,993 14,156
Slovakia	2015 2016 2017 2018	3,620 3,562 5,433 3,609	171,542 168,251 203,191 169,857	0  	-5,310 -9,398 16,185 -16,199	180,472 181,211 192,439 189,665	33,202 33,299 35,323 34,782
Slovenia	2015 2016 2017 2018	120 199 334 634	30,784 32,600 34,170 33,515	 143 436		30,904 32,799 34,361 33,713	14,921 15,813 16,548 16,225
Spain	2015 2016 2017 2018	2,516 2,231 1,439 3,850	1,311,020 1,311,571 1,401,449 1,409,177	205,013 161,381 116,622 131,438	-32,990 -12,427 17,502 21,391	1,141,513 1,164,848 1,268,764 1,260,198	24,458 24,978 27,199 26,989
Sweden	2015 2016 2017 2018	   	33,662 38,064 43,870 48,205	 205 661	  	33,662 38,064 43,665 47,544	3,447 3,870 4,408 4,768
Switzerland	2015 2016 2017 2018	944 1,109 1,228 1,300	132,689 139,395 139,993 132,791		  	133,633 140,504 141,221 134,091	16,034 16,692 16,627 15,658

		D 1 "			Changes in	Sup	ply
Country or area	Year	Production	Imports	Exports	stocks	Total	Per capita
Ukraine	2015 2016 2017 2018	689,341 705,926 719,737 766,963	618,333 409,787 523,927 393,516		-75,351 101,424		26,990 26,638 25,675 26,971
United Kingdom	2015 2016 2017 2018	1,629,974 1,676,436 1,685,289 1,632,514	1,783,417 1,896,723 1,861,272 1,861,490	552,055 412,112 447,913 298,401	-62,142	3,223,189 3,140,968	43,765 48,617 47,072 47,185
Oceania	2015 2016 2017 2018	3,007,281 3,532,827 4,427,231 5,007,218	200,750 226,441 206,519 186,515	1,462,302 2,121,210 2,965,094 3,488,029	966	1,637,092 1,671,778	43,852 40,488 40,770 41,197
Australia	2015 2016 2017 2018	2,706,341 3,216,042 4,106,757 4,707,645	200,750 226,441 206,519 186,515	1,365,964 2,018,675 2,857,996 3,379,860		1,423,808 1,455,280	64,395 58,683 59,195 60,820
New Zealand	2015 2016 2017 2018	188,106 196,791 194,413 172,251	  	  	6,020	195,825 197,535	41,223 42,029 42,011 37,756
Papua New Guinea	2015 2016 2017 2018	112,834 119,994 126,061 *127,322	  	96,338 102,535 107,098 *108,169		17,459	2,035 2,111 2,247 *2,225

# International trade of natural gas (Principal importers/exporters) Terajoules

#### 2017

				Ехроі	ters			
Importers	World	Algeria	Australia	Bolivia (Plur. State of)	Canada	Germany	Indonesia	Malaysia
Argentina	401,380	3,040		255,900				
Austria	536,865					••		
Belarus	734,359							
Belgium	691,461					47,459		
Brazil	415,166			337,688				
Canada	976,449							
China	3,526,510	3,114	767,357		2		161,564	219,520
Czechia	341,211							
France	2,007,600	157,756				18,281		
Germany	4,453,882							
Hungary	519,322							
India	765,392	10,506	84,617				7,038	11,070
Italy	2,653,666	743,354						
Japan	4,568,890	3,990	1,461,077				162,895	775,490
Kazakhstan	244,878							
Korea, Republic of	2,029,463	3,302	376,251				181,518	204,662
Malaysia	292,784		31,504				28,105	
Mexico	1,661,018						9,325	
Netherlands	1,807,950	3,913				274,242		
Poland	606,014					136,325		
Portugal	252,977	85,418						
Russian Federation	335,736							
Singapore	413,314	3,040	69,030				216,182	49,217
Slovakia	203,191							
Spain	1,401,449	676,834						
Thailand	576,394	3,420	19,616				10,260	19,000
Turkey	2,116,077	176,854				••		
Ukraine	523,927							
United Arab Emirates	873,619	9,880	7,064				3,040	
United Kingdom	1,861,272	8,847						
United States	3,275,241		<u></u>		3,187,384			

### International trade of natural gas (Principal importers/exporters) Terajoules

2017

			ers	Export			
n United Star	Turkmenistan	Trinidad and Tobago	Russian Federation	Qatar	Norway	Nigeria	Netherlands
17		24,916		76,428	0	19,473	
				••			
			734,359			••	
				44,455	205,030		288,122
19		19,622	**	11,828		23,656	
960		9,708			2,542		
142 113	1,220,442	6,620	22,594	415,313	3,558	18,104	••
			338,432		2,779	••	
			378,983	82,549	845,462	123,895	204,224
			2,420,367		433,211		
			493,356	••			••
22		9,565		438,084	5,380	176,241	
3		3,296	1,261,410	256,707	99,032	6,085	46,191
51		12,372	384,615	537,156		74,068	
726	12,726		171,453				
107		9,294	108,582	637,894		38,289	
••			**			••	
1,568		15,644	••	**	••	52,811	••
		7,754	312,773		879,784	6,450	
3			397,307	60,732	3,395		36
21				23,647		85,782	
				37,440			
			171,897				
30		18,573		140,318	138,952	178,379	4,081
3	••			116,918		7,280	
29	••	16,060	1,098,709	63,469	29,051	79,662	3,306
29							
		2.040	••	700 704	2 601	 1 <del>7</del> 100	••
14		3,040	0.000	708,724	3,691	17,100	
3		11,671	3,860	228,130	1,416,302	3,474	74,757
		79,609			6,828		

# International trade of natural gas (Principal importers/exporters) Terajoules

#### 2018

				Expo	rters			
Importers	World	Algeria	Australia	Bolivia (Plur. State of)	Canada	Germany	Indonesia	Malaysia
Argentina	324,728	3,040		182,063				
Austria	503,400					••		••
Belarus	785,185							
Belgium	750,494							
Brazil	410,360			320,278				
Canada	897,508							
China	4,679,887	3,698	1,129,631		64		252,935	312,816
Czechia	307,194							
France	2,036,747	143,956						
Germany	3,281,120							
Hungary	494,127							
India	1,121,464	12,387	90,446					14,440
Italy	2,585,940	684,669						
Japan	4,388,925		1,504,524				159,309	542,673
Kazakhstan	387,839							
Korea, Republic of	2,309,420		407,564				186,632	187,283
Malaysia	291,035		20,641				23,679	
Mexico	1,795,228							
Netherlands	2,030,350	11,179						
Poland	608,367							
Portugal	236,115	62,981						
Russian Federation	358,750							
Singapore	416,980		121,615				. 198,595	39,792
Slovakia	169,857							
Spain	1,409,177	723,416						
Thailand	588,243		8,228				9,500	26,790
Turkey	1,925,967	173,090						
Ukraine	393,516							
United Arab Emirates	871,551	13,110	3,839					
United Kingdom	1,861,490	8,769						
United States	3,102,035				3,022,199			

### International trade of natural gas (Principal importers/exporters) Terajoules

2018

			ers	Expor			,
United States	Turkmenistan	Trinidad and Tobago	Russian Federation	Qatar	Norway	Nigeria	Netherlands
30,12		20,244	1,900	60,338		18,694	
			785,185				
			3,324	91,323	269,326		347,469
38,96		18,445	17,100	3,667		9,857	**
874,27		16,716			3,195		3,327
98,89	1,308,405	19,665	58,901	502,570	14,309	58,477	
			305,672		1,522		
6,67			409,786	57,202	789,088	136,143	198,580
			1,680,697		95,922		
			469,421				
62,99		19,130	21,020	602,779	3,678	149,826	
24,54			1,251,487	248,978	120,364	3,391	51,031
154,11			347,953	528,069	3,441	57,370	
			183,601				
253,01		9,436	90,948	743,049	6,536	27,900	6,865
1,662,51							
		22,151	469,780		1,064,870	18,425	
3,32			373,635	90,364			69
19,91				27,471	3,345	95,948	
-,-							
4,02		2,508		19,680	··		
			 169,857				
12,09		87,270	35,138	135,672	 128,917	165,483	 54
12,00		18,853	2,911	97,541		46,191	
47.00					2.204		••
17,00	••	15,937	905,629	114,169	3,381	82,230	••
3,97				702,136		3,040	
47,54		24,130	60,064	114,118	1,355,792	3,068	108,345
		72,987				3,350	

Terajoules

#### **Table Notes**

**Production** refers to gasworks gas, coke oven gas, blast furnace gas and other recovered gases.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Figure 71: Production of manufactured and recovered gases by region, 1990-2018

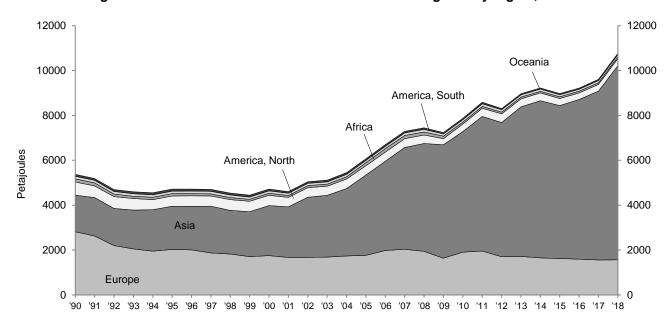


Figure 72: World production of manufactured and recovered gases by type, 2018

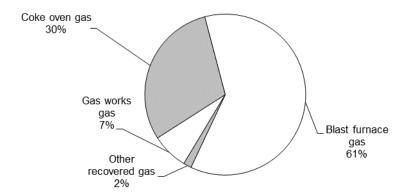


Table 29

Country or area	Year	Total	Gas works gas	Coke oven gas	Blast furnace gas	Other recovered gas
World	2015 2016 2017 2018	8,975,539 9,220,844 9,608,262 10,766,264	601,188 641,657 731,159 789,592	3,094,095 3,128,611 3,115,064 3,225,207	5,082,130 5,260,089 5,580,644 6,579,137	190,487 181,395
Africa	2015 2016 2017 2018	75,002 75,468 76,445 80,771	23,664 23,460 21,688 22,812	23,030 24,595 24,045 25,446	28,308 27,413 30,712 32,513	 !
Algeria	2015 2016 2017 2018	2,562 0 3,614 5,844	  	0  	2,562 0 3,614 5,844	 
Egypt	2015 2016 2017 2018	4,526 *4,534 4,268 4,764	74 82 131 88	 	4,452 *4,452 4,137 4,676	! 
South Africa	2015 2016 2017 2018	66,446 69,596 67,775 69,208	23,590 23,378 21,557 22,724	21,562 23,257 23,257 24,491	21,294	
Zimbabwe	2015 2016 2017 2018	1,468 1,338 788 955	  	1,468 1,338 788 955	  	 
America, North	2015 2016 2017 2018	313,541 295,773 298,124 314,394	53,682 56,271 61,479 63,886	104,419 93,099 92,773 99,602	155,440 146,403 143,872 150,906	 !
Canada	2015 2016 2017 2018	43,765 43,624 43,992 46,598	  	23,222 22,037 22,057 24,979		, ,
Cuba	2015 2016 2017 2018	3,647 3,707 3,473 3,325	3,636 3,696 3,467 3,319	  	11 11 6 6	 :
Mexico	2015 2016 2017 2018	34,848 31,637 30,293 29,043	  	14,770 11,252 10,653 9,709	20,078 20,385 19,640 19,334	 
United States	2015 2016 2017 2018	231,281 216,805 220,366 235,428	50,046 52,575 58,012 60,567	66,427 59,810 60,063 64,914	114,808 104,420 102,291 109,947	  
America, South	2015 2016 2017 2018	95,939 89,678 98,947 102,781	364 213 79 73	81,875 77,860 86,859 90,183	13,700 11,605 12,009 12,525	 
Argentina	2015 2016 2017 2018	14,316 11,403 12,411 13,374		5,142 3,875 4,312 4,788	9,174 7,528 8,099 8,586	 !

Country or area	Year	Total	Gas works gas	Coke oven gas	Blast furnace gas	Other recovered gas
Brazil	2015 2016 2017 2018	71,578 68,715 77,783 80,329	  	71,578 68,715 77,783 80,329		
Chile	2015 2016 2017 2018	7,293 6,980 6,425 6,727	364 213 79 73	3,608 3,820 3,456 3,745	2,947 2,890	,  
Colombia	2015 2016 2017 2018	2,752 2,580 2,328 2,351	  	1,547 1,450 1,308 1,321		 
Asia	2015 2016 2017 2018	6,817,331 7,115,392 7,523,971 8,654,099	498,846 539,155 625,763 680,904	2,180,153 2,222,605 2,227,086 2,349,821	4,247,175	106,456 101,797
China	2015 2016 2017 2018	4,837,464 5,082,630 5,471,011 6,551,575	494,572 534,862 621,403 676,437	1,477,609 1,499,092 1,484,174 1,586,618	3,048,676 3,365,434	 
India	2015 2016 2017 2018	*488,288 *535,132 567,891 *620,684	*974 *993 *1,060 *1,167	*154,406 *165,364 *181,607 *193,217		 
Indonesia	2015 2016 2017 2018	*3,300 *3,300 *3,300 *3,300	*3,300 *3,300 *3,300 *3,300	  		
Iran (Islamic Rep. of)	2015 2016 2017 2018	26,953 26,853 24,809 26,319	  	6,841 8,508 9,782 10,414	15,027	
Japan	2015 2016 2017 2018	800,697 804,534 787,616 779,347		294,030 299,255 295,706 295,367	440,073 438,870 429,842 423,160	66,409 62,068
Kazakhstan	2015 2016 2017 2018	36,080 40,578 43,921 39,530	  	15,917 16,909 17,490 16,668	26,431	
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	1,628 1,838 1,645 1,222	  	  	1,628 1,838 1,645 1,222	 
Korea, Republic of	2015 2016 2017 2018	398,071 394,580 400,459 401,861		147,921 147,900 153,969 157,103	222,139 217,967 217,678 215,927	28,713 28,812
Other Asia	2015 2016 2017 2018	132,220 137,287 132,319 137,945	  	50,731 53,638 51,249 54,176	70,153	11,334 10,917

Table 29

Country or area	Year	Total	Gas works gas	Coke oven gas	Blast furnace gas	Other recovered gas
Philippines	2015 2016 2017 2018	2,820 3,790 3,313 3,466	  	  	2,820 3,790 3,313 3,466	 
Syrian Arab Republic	2015 2016 2017 2018	3 3 3 3			3 3 3 3	 
Thailand	2015 2016 2017 2018	462 496 622 589	  	  	462 496 622 589	 !
Turkey	2015 2016 2017 2018	89,345 84,371 87,062 88,258		32,698 31,939 33,109 36,258	56,647 52,432 53,953 52,000	 
Europe	2015 2016 2017 2018	1,624,032 1,594,111 1,558,292 1,564,791	24,577 22,519 22,105 21,879	679,027 685,189 658,410 635,139	828,025 802,636 798,478 836,360	83,767 79,299
Austria	2015 2016 2017 2018	43,963 42,585 45,236 38,953		10,337 9,954 10,154 10,321	29,601 28,812 30,765 25,239	3,819 4,317
Belgium	2015 2016 2017 2018	35,518 37,373 37,904 37,292		10,742 10,320 10,062 10,020	21,477 23,522 24,077 23,607	3,531 3,765
Bosnia and Herzegovina	2015 2016 2017 2018	11,627 11,247 10,724 12,246	  	7,215 6,867 6,527 7,632	4,412 4,380 4,197 4,614	 
Croatia	2015 2016 2017 2018	11  	11  	  		
Czechia	2015 2016 2017 2018	61,096 61,160 59,003 60,383	17,024 16,933 15,177 13,932	18,946 17,859 20,320 20,673	19,473 20,643 18,064 19,796	5,725 5,442
Estonia	2015 2016 2017 2018	7,207 5,250 6,615 18,520	7,207 5,250 6,615 7,643	  10,877	  	
Finland	2015 2016 2017 2018	23,920 24,076 22,678 23,649		8,848 8,731 8,197 8,277	11,436 11,529 11,071 11,526	3,816 3,410
France	2015 2016 2017 2018	77,794 66,458 70,404 86,218	 	27,515 23,920 24,829 0	44,026 35,565 38,517 86,218	6,973 7,058

Country or area	Year	Total	Gas works gas	Coke oven gas	Blast furnace gas	Other recovered gas
Germany	2015 2016 2017 2018	261,627 259,995 254,151 250,530	  	73,796 77,811 68,044 64,646	165,776 159,763 162,818 160,885	22,421 23,289
Hungary	2015 2016 2017 2018	16,789 13,259 16,996 17,669	  	9,182 8,198 9,126 9,109	7,607 5,061 7,870 8,560	 
Italy	2015 2016 2017 2018	36,361 43,550 35,981 34,808	  	13,516 14,439 15,132 15,150	15,934 23,709 16,990 18,007	5,402 3,859
Netherlands	2015 2016 2017 2018	55,924 54,001 55,858 54,706	  	19,222 18,370 18,839 18,161	36,702 35,631 37,019 36,545	 
Norway	2015 2016 2017 2018	3,765 3,222 4,012 4,197		  	3,765 3,222 4,012 4,197	 
Poland	2015 2016 2017 2018	112,547 108,838 107,601 107,822	5 0 	79,263 78,303 76,852 78,254	26,470 25,158 27,164 26,377	5,377 3,585
Romania	2015 2016 2017 2018	10,195 9,990 9,408 10,137			10,195 9,990 9,408 10,137	 
Russian Federation	2015 2016 2017 2018	485,003 487,419 490,758 481,163		258,532 270,873 262,407 261,597	226,471 216,546 228,351 219,566	<u></u>
Serbia	2015 2016 2017 2018	7,253 9,549 10,609 12,281	  	  	7,253 9,549 10,609 12,281	 
Slovakia	2015 2016 2017 2018	37,866 39,159 39,567 40,606	  	13,709 13,679 12,688 13,427	20,114 21,068 22,124 22,696	4,412 4,755
Spain	2015 2016 2017 2018	36,804 34,728 30,325 30,055	10 14 	13,005 12,463 10,927 10,510	23,789 22,251 19,398 19,545	 
Sweden	2015 2016 2017 2018	22,770 24,202 24,169 22,036	320 322 313 304	9,110 9,138 8,890 7,692	11,798 12,791 12,974 12,149	1,951 1,992
Ukraine	2015 2016 2017 2018	198,737 207,944 177,103 175,545		79,704 90,483 81,374 75,559	90,856 97,121 77,902 81,674	20,340 17,827

Table 29

Country or area	Year	Total	Gas works gas	Coke oven gas	Blast furnace gas	Other recovered gas
United Kingdom	2015 2016 2017 2018	77,255 50,106 49,190 45,975		26,385 13,781 14,042 13,234	36,325 35,148	 
Oceania	2015 2016 2017 2018	49,694 50,423 52,484 49,428	39 45	25,591 25,263 25,891 25,016	26,249	264 299
Australia	2015 2016 2017 2018	37,685 39,302 40,718 38,161	39 45	20,867 21,127 21,506 20,687	18,136	
New Zealand	2015 2016 2017 2018	12,009 11,121 11,766 11,267		4,724 4,136 4,385 4,329	6,721	264 299

#### Net installed capacity of electric plants - by type

Megawatts

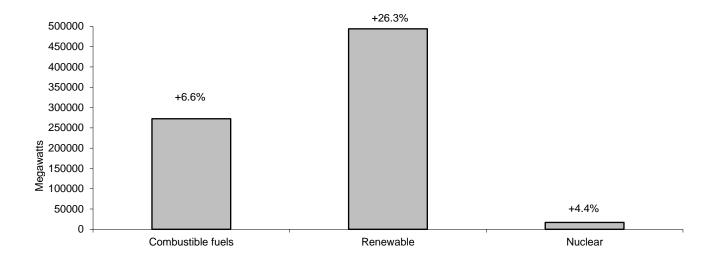
#### **Table Notes**

Electricity capacity broken down by source, and main activity producers against autoproducers. For total producers, Other refers to geothermal, tide, wave, marine and other nonspecified net installed capacity. autoproducers, Other refers to nuclear (if any), wind, solar, geothermal, tide, wave, marine and other non-specified net installed capacity. For main activity producers, Other refers to wind, solar, geothermal, tide, wave, marine and other non-specified net installed capacity.

For Austria data are given in gross maximum capacity.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Figure 73: Change in net installed capacity of electricity generating plants\* by source, 2015-2018



<sup>\*</sup> Renewable includes capacity from hydro, wind, solar and other sources

Table 30

## Net installed capacity of electricity plants by type Megawatts

Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
World	2015 2016 2017 2018	6,389,178 6,721,067 6,929,608 7,172,339	4,267,553 4,303,111	1,213,656 1,249,920 1,275,909 1,291,276	389,293 399,569 398,882 406,276	417,459 473,843 519,701 566,720	228,086 300,803 398,596 484,783	21,263 29,380 33,410 31,431
Africa	2015 2016 2017 2018	177,333 191,861 207,145 221,768	151,242 163,179	27,899 30,152 32,825 33,590	1,860 1,860 1,940 1,940	4,343 4,654 4,784 5,467	2,183 3,270 3,728 4,672	657 682 689 664
Algeria	2015 2016 2017 2018	17,239 19,006 19,474 20,963	18,549 18,892	228 228 228 129	  	10 10 10 10	40 219 344 344	  
Angola	2015 2016 2017 2018	*2,546 *2,886 *4,422 5,010	*1,284 *2,067	*1,442 *1,589 *2,342 2,699	  	  	13 13 13 13	  
Benin	2015 2016 2017 2018	*383 *383 *383 *383	*312 *312	*66 *66 *66	  	  	*5 *5 5	  
Botswana	2015 2016 2017 2018	621 621 753 796	620 752	  	  	  	1 1 1	  
Burkina Faso	2015 2016 2017 2018	325 325 329 349	293 293	32 32 32 32	  	  	 *4 *24	  
Burundi	2015 2016 2017 2018	65 64 70 70	*9 *17	51 51 48 48	  	  	3 4 5 5	  
Cabo Verde	2015 2016 2017 2018	162 *169 *200 *209	*136 *166	  	  	26 26 27 *31	8 8 8 *9	 
Cameroon	2015 2016 2017 2018	*1,909 *1,944 2,054 1,669	*1,200 *1,265	*732 *732 777 732	  	  	*10 *12 *12 *19	 
Central African Rep.	2015 2016 2017 2018	*44 *44 *44 *44	*19 *19	*25 *25 *25 *25	  	  	0 0 0 0	 
Chad	2015 2016 2017 2018	*86 *86 *86 *86	*86 *86	  	  	  	  	  
Comoros	2015 2016 2017 2018	*26 *26 *34 *34	*26 *34	  	  	  	  	  
Congo	2015 2016 2017 2018	600 *600 *606 *606	*391 *391	209 *209 214 214	  	  	0 0 1 1	  

## Net installed capacity of electricity plants by type Megawatts

	rs	activity producer	Main a		Autoproducers				
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total	
567,499 692,597 826,618 941,989	389,293 399,569 398,882 406,276	1,179,043 1,218,205 1,243,483 1,262,231	3,614,356 3,800,027 3,873,930 3,936,796	5,750,191 6,110,397 6,342,912 6,547,292	99,309 111,428 125,088 140,946	34,613 31,715 32,426 29,045	505,065 467,526 429,181 455,055	638,987 610,670 586,696 625,046	
3,215 3,778 4,177 5,096	1,860 1,860 1,940 1,940	27,294 29,453 32,057 32,801	123,271 131,452 145,250 155,336	155,639 166,543 183,424 195,173	3,969 4,829 5,024 5,707	605 699 767 789	17,119 19,790 17,929 20,099	21,693 25,318 23,720 26,595	
50 229 354 354	  	228 228 228 129	12,647 14,235 14,578 14,401	12,925 14,692 15,160 14,884	  	  	4,314 4,314 4,314 6,079	4,314 4,314 4,314 6,079	
13 13 13 13	  	*1,442 *1,589 *2,342 2,699	*907 *1,067 *1,817 *2,048	*2,362 *2,669 *4,172 4,760	  	  	*184 *217 *250 *250	*184 *217 *250 *250	
*5 *5 5 5	  	*66 *66 *66 *66	*267 *267 *267 *267	*338 *338 *338 *338	  	  	*45 *45 *45 *45	*45 *45 *45 *45	
1 1 1 1	  	  	600 600 732 795	601 601 733 796	  	  	20 20 20	20 20 20	
 *4 *24	  	32 32 32 32	293 293 293 293	325 325 329 349	  	  	  		
3 4 5 5	  	51 51 48 48	*9 *7 *14 *14	63 62 67 67	  	  	*2 *2 *3 *3	*2 *2 *3 *3	
33 33 35 *40	  	  	129 *135 *165 *168	162 *168 *200 *209	  	  	0 *1 *1 *1	0 *1 *1 *1	
*10 *12 *12 *19	  	*732 *732 777 732	*517 *550 615 268	*1,259 *1,294 1,404 1,019	  	  	*650 *650 *650 *650	*650 *650 *650 *650	
0 0 0 0	  	*25 *25 *25 *25	*19 *19 *19 *19	*44 *44 *44 *44	  	  	  	  	
  	   	  	*86 *86 *86 *86	*86 *86 *86 *86	  	  	  	  	
  	  	  	*26 *26 *34 *34	*26 *26 *34 *34	  	  	  	  	
0 0 1 1	  	209 *209 214 214	41 *41 *41 *41	250 *250 256 256	 	  	350 *350 *350 *350	350 *350 *350 *350	

Table 30

## Net installed capacity of electricity plants by type Megawatts

Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Côte d'Ivoire	2015	1,909	1,305	604				
00.0 4 0 0	2016	1,909	1,305	604				
	2017	2,195	1,316	879	÷÷	••	••	••
	2018	2,184	1,305	879				
Dem. Rep. of the Congo	2015	*2,549	*120	*2,429				
	2016	*2,677	*135	*2,542				
	2017 2018	3,120 3,179		2,998 3,005		••	 19	
				0,000			10	**
)jibouti	2015	130			••			
	2016 2017	130 130	130 130					
	2017	*130				••		
				0.000			4.40	
gypt	2015 2016	35,907 39,544		2,800 2,800		547 747	140 140	••
	2016	39,544 45,695		2,800		747 747	140	••
	2018	55,413		2,832		967	190	
quatorial Guinea	2015	349	222	127				
quatoriai Guiried	2015	349 349		127				••
	2017	554		327	••	••	 5	
	2018	*554		*327			*5	
ritrea	2015	*161	*159			1	*1	
na oa	2016	*161	*159		••	1	*1	
	2017	*216				1	*10	
	2018	*226	*205			1	*20	
swatini	2015	*188	*115	*73				
	2016	*188	*115	73				
	2017	*188		*73			0	
	2018	192	119	*73			0	
thiopia	2015	2,424		1,940		324	10	7
	2016	4,252		3,808	••	324	14	7
	2017	4,261	104	3,814		324	12	7
	2018	4,260	104	3,814	••	324	11	7
abon	2015	511	340	170			*1	
	2016	523		170			*1	
	2017 2018	533 751	359 418	173 332			*1 *1	
				002				
Sambia	2015	*120				1	2	
	2016 2017	*121 *121	*117 *118	••	••	1 1	2	
	2018	*126	*123	••		1	2 2 *2	
hana	2015	2 966	2.262	1 500				
hana	2015	3,866 4,005	2,263 2,402	1,580 1,580	••	••	23 23	••
	2017	4,609	3,006	1,580			23	
	2018	5,099		1,580			43	0
uinea	2015	596	228	367				
Janiou	2016	593	226	367	··			
	2017	640	*273	367				
	2018	610	*243	367		••	••	••
uinea-Bissau	2015	*23	*23					
	2016	*31	*27				*5	
	2017	*31	*26				*5	
	2018	*32	*26	••			*5	
enya	2015	2,263	819	800		26		619
	2016	2,254	786	798		26		644
	2017	2,270	766	826		26		652
	2018	2,647	864	821	••	336	••	627

	Autoproducers													
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other						
*23 *23 *23	*23 *23 *23	 	 	0.470	1,282 1,282 1,293	604 604 879								
*23	*23			0.404	1,282	879								
*449 *567 581 601	*20 *25 93	*429 *542 488	 	*2,110 2,539	*100 *110 29 32	*2,000 *2,000 2,510	 	  19						
	123	478	••	130	130	2,527	••							
 	 	  	  	130 130 130 *130	130 130 130 *130	 	  	 						
*687 *687	*687 *687	 		38,857	31,733 35,170	2,800 2,800								
*687 *887	*687 *887			E4 E00	41,321 50,537	2,800 2,832		4 4 5 7						
  	  	  	  	349	222 222 222 *222	127 127 327 *327	 	*=						
*10 *10 *10	*10 *10 *10	 	 	*151 *151 *206	*149 *149 *195	 	 	2 2 *11						
*10 *110 *110	*106 *106	*4		*79	*195 10	*69								
*110 *110 113	*106 *106 109	*4 *4 *4	0	*79	10 *10 *10	69 *69 *69	·· ··							
  	  	  	  	4,252 4,261	143 99 104 104	1,940 3,808 3,814 3,814	  	343						
*71 *71 *73 88	*70 *70 *70 85	 *2 *2	*1 *1 *1 *1	440 452 460 663	270 282 289 333	170 170 171 330	  	  						
*35 *35 *36 *36	*35 *35 *36 *36	  		*86 *86	*81 *82 *82 *87		  	3 *2						
*210 *210 *210 *210	*210 *210 *210 *210	  	 	3,795	2,053 2,192 2,796 3,266	1,580 1,580 1,580 1,580	  	22						
*100 150 *180	*100 150 *180	 	 	496 444 460	128 77 *93	367 367 367	 	 						
*148	*148			*19	*95 *19	367		 						
*5 *6 *5	*5 *6 *5	 		*26	*21 *21 *21		 	*E						
   19	   19	 	 	2.254	819 786 766 845	800 798 826 821	 	670 679						

Table 30

Country or area	Year		Combustible	· ·	Total producers			
Country or area	real	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Lesotho	2015	80		80			0	
	2016	81	*1	80			0	
	2017 2018	75 75		74 74			0	
							ŭ	•
Liberia	2015 2016	*102 *107		*9 *9			0	•
	2017	*111	*100	*9			*2	
	2018	*195		*92			*3	
₋ibya	2015	9,460	9,455				5	
.,.	2016	10,249	10,244				5	
	2017 2018	10,243 10,516					5 5	
	2010	10,510	10,311				3	•
Madagascar	2015	*543		164		0	0	
	2016 2017	526 663		159 166		0	*1 *1	•
	2018	*663		*166		ő	*1	
Malawi	2015	567	*211	356				
vialawi	2016	567		356				
	2017	567	*211	356				-
	2018	661	*211	450				
<i>M</i> ali	2015	*895		*490			*1	
	2016	1,011		520			*1	-
	2017 2018	1,112 *1,112	*560 *560	550 *550			*2 *2	
						0.4		
Mauritania	2015 2016	444 *461				34 34	18 35	•
	2017	*506				35	50	
	2018	*570				34	87	
//auritius	2015	792	711	61		1	19	
	2016	847	749	61		11	27	
	2017 2018	836 874	736 737	60 60		11 11	29 67	-
	2010	074	757	00			07	•
Morocco	2015	11,455		1,770		797	161	-
	2016	11,561 12,120		1,770 1,770		898 1,017	161 205	
	2018	12,350		1,770		1,168	261	
Mozambique	2015	2,508	410	2,097			1	
nozambique	2016	2,306 2,491	412	2,078			1	
	2017	*2,739	*413	*2,311			15	-
	2018	*2,744	*465	*2,239			40	
lamibia	2015	513	155	337		0	21	
	2016	529		350		0	36	-
	2017 2018	565 582		347 347		5 5	70 88	
ı.								
liger	2015 2016	277 288					7 8	
	2017	290	281				9	
	2018	311	291				20	
ligeria	2015	*10,439	*8,458	*1,970		<u></u>	*11	
-	2016	*12,385	*10,403	*1,970			*12	
	2017 2018	*12,534 *12,305		*2,380 *2,151			*12 *12	
								•
Rwanda	2015	172		80			9	
	2016 2017	193 217		84 101			9 12	
	2018	217		103			12	

80          80                81         *1         80                81         *1         80                75         *1         74                75         1         74            *70         *70           37         28         *9            *70         *70           *41         *30         *9            *70         *70           *125         *30         *92                9,460         9,455                   10,249         10,244	Other 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
81       *1       80              .75       *1       .74 </th <th>0 0 0  0 *2</th>	0 0 0  0 *2
81       *1       80              75       *1       74          *70       *70         *32       *23       *9          *70       *70         37       28       *9          *70       *70         *41       *30       *9          *70       *70         *125       *30       *92             9,460       9,455                10,249       10,244               10,243       10,238	0 0 0  0 *2
75       *1       74          *70       *70         *32       *23       *9          *70       *70         37       28       *9          *70       *70         *41       *30       *9          *70       *70         *125       *30       *92             9,460       9,455               10,249       10,244               10,243       10,238	0  0 *2
*70	 0 *2
*70	 0 *2 *3
*70	 0 *2 *3
*70	*2 *3
9,460 9,455 10,249 10,244 10,243 10,238	*3
10,249 10,244	
10,249 10,244	_
10,243 10,238	5 5 5 5
	5
10,516 10,511	5
*00 *00 *04 *047 404	0
*32	0 *1
*60 *60 603 436 166	*1
*60 *60 *603 *436 *166	*1
*215 *210 *5 352 *1 351	••
*215	
*215	
	*1
*200 *200 811 *290 520	*1
*260	*2 *2
200 200 052 300 550	_
*80 *80 364 312	52
*80 *80 *381 *312	69 85
*80	85 121
05 05 405 304	121
303 284 19 489 427 61	1
348 312 36 499 437 61	1
323 285 38 513 452 60	1
361 285 76 513 452 60	1
*3,300 *3,300 8,155 5,427 1,770	958
*3,300 *3,300 8,261 5,432 1,770	1,059
*3,300 *3,300 8,820 5,828 1,770	1,222
*3,300 *3,300 9,050 5,851 1,770	1,429
*48 *25 *22 1 2,460 385 2,075	
*128	
*155      *30      *85      40      *2,589      *435      *2,154         .	
513 155 337	21
	36
565 143	36 75
582 143 347	93
60 53 7 216 216	
60 53 7 216 216 61 53 8 226 226	
62 53 9 228 228	
73 53 20 238 238	
*3,051 *3,000 *40 *11 *7,388 *5,458 *1,930	
*3,051	••
*3,232 *3,180 *40 *12 *9,302 *6,962 *2,340	
*3,232 *3,180 *40 *12 *9,073 *6,962 *2,111	
*1 *1 171 81 80 *1 *1 192 98 84	9 9 12 12
*1	12
*1 *1 216 101 103	12

Table 30

Country or area	Year		Combustible	1	Total producers			
	ieai	Total	fuels	Hydro	Nuclear	Wind	Solar	Other
Sao Tome and Principe	2015	*26		2			0	••
	2016 2017	*27 *29		2 2	 		0 0	
	2018	*29		2			Ő	
Senegal	2015	886					*21	*31
-	2016 2017	*893 1,016					22 102	*31 30
	2018	1,174					143	*30
Seychelles	2015	116				6	1	
	2016 2017	*137 155				6 7	2	
	2018	*155				6	4	
Sierra Leone	2015	135	78	56			0	
	2016	139	78	60			1	
	2017 2018	*142 *137		*60 *57			4 4	
Somalia	2015	80	80					
	2016 2017	80 80	80					
	2018	80						
South Africa	2015	*47,109	*40,581	*740	*1,860	*2,328	*1,600	
	2016 2017	*49,930 *53,039		*740	1,860	*2,328 *2,320	*2,421 *2,500	
	2018	*53,028 *53,487		761 761	1,940 1,940	*2,330 *2,330	*2,500 2,959	
outh Sudan	2015	*84		3			*1	
	2016 2017	*84 *131		*3 *3			*1 *8	
	2018	*131		*3			*8	
St. Helena and Depend.	2015	10				*2	1	
	2016 2017	11 11			 	2 *3	1 1	
	2018	12			 	3	2	
udan	2015	3,321		1,593			11	••
	2016	3,540 3,770		1,593 1,753			12 13	
	2018	3,939		1,907			19	
- ogo	2015	227		67			••	••
	2016 2017	213 225	158 158	55 67		••		
	2018	227	157	67			3	
unisia	2015	5,447	5,120	62		240	25	••
	2016 2017	5,513 5,723	5,174 5,372	62 62		240 240	37 49	
	2018	5,800	5,352	62		240	146	
Jganda	2015	861		695	**		••	••
	2016	872 913		695 712		••	11 22	••
	2018	984		744			42	
United Rep. of Tanzania	2015	1,380	800	567			13	
	2016 2017	1,394 1,412	808 829	567 562			18 22	
	2018	1,602		562			25	
Zambia	2015	2,411	142	2,269	••		0	
	2016 2017	2,827 2,897	439 498	2,388 2,398			0 1	
	2018	2,898	499	2,398			1	

	Autopro	ducers				activity produce	ers		
otal	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other	
		,		*26	*24	2		(	
••	••	••		*27	*25	2 2 2 2		(	
			••	2 <i>1</i> *20	20 *26	2	••	(	
••	••	••	••	*29	*26	2	••	(	
				*29	*26	2		(	
*270	*226		*50	508	500				
*378 *383	*326 *330	••	*52 *53	*510	508 *510	••	••	•	
*462			132	554	554		••	•	
			132			••	••	-	
503	330	••	173	671	671				
*28	*28			89	82			-	
*28	*28			*108	*100		••		
*29	*29			126	116		••	10	
*29	*29		••	*126	*116		••	10	
20	25	••	••	120	110			10	
*1	*1			133	77	56		(	
*1	*1	••		138	77	60		,	
*1		**	••	*141	*77	*60	••	2	
*1	*1	••		*136	*75	*57	••	2	
1	į	••		130	75	37		4	
				80	80				
			••	80	80		••	•	
			••	80	80	••	••		
••	••	••	••	80	80	••	••		
••	••	••	••	00	00		••	-	
*6,068	*2,200	*40	*3,828	*41,041	*38,381	*700	*1,860	*100	
*9,080	*4,391	40	*4,649	*40,850	*38,190	*700	1,860	*100	
*7,191	*2,400	61	*4,730	*45,837	*43,097	700	1,940	100	
*7,650		*61	5,189	*45,837	*43,097	700	1,940	*100	
7,000	2,400	01	3,109	45,057	43,037	700	1,340	100	
*41	*40		*1	*43	*40	3		0	
*41	*40		*1	*43		*3		Ö	
*41	*40		*1	*90		*3	••	*7	
*41	*40		*1	*90		*3		*7	
71	+0	••	'	90	00	3	••	,	
				10	8			*3	
				11	8			*3 *3	
	••		••	11	8			*3	
••	••	••		12	8	••	••	4	
••		••	••	12	U		••	7	
201	190		11	3,120	1,527	1,593			
202	190		12	3,338	1,745	1,593	••	···	
203	190		13	3,567	1,814	1,753	••		
218	199	••	19	3,721	1,814	1,907	••	••	
210	199	••	19	5,721	1,014	1,307	••		
*8	*8			219	152	67			
*8		••	••	205	150		••	••	
*8	*8 *8	••	••	217	150	55 67	••	••	
*11	*8	••	3	216	149	67	••		
11	· ·	••	3	210	173	37	••		
*223	*198		25	5,224	4,922	62		240	
*235	*198		37	5,278	4,976	62		240	
*247			49	5,476	5,174	62		240	
*244	*198		146	5,456	5,154	62		240	
	100	••	140	0,400	0,104	02	••	2-10	
*344				732	102	630		-	
	65	65		740	102	630		11	
130		65 65		/42					
130 130	65	65		742 752	102	630		2	
130 130 160	65 76	65 82	 2	752	102	630		2	
130 130 160 212	65 76 96	65	 2 *2	752 772	102 102	630 630		2	
130 130 160 212 *33	65 76 96 *20	65 82	 2 *2 13	752 772 1,347	102 102 780	630 630		2´ 4´	
130 130 160 212 *33	65 76 96 *20 *20	65 82 114	 2 *2 13	752 772 1,347	102 102 780	630 630 567 567		2′ 4′	
130 130 160 212 *33 *38	65 76 96 *20 *20	65 82 114 	 2 *2 13	752 772 1,347 1,356	102 102 780 788	630 630 567 567		2° 4°	
130 130 160 212 *33 *38 54	65 76 96 *20 *20 32	65 82 114	 2 *2 13 18 22	752 772 1,347 1,356 1,358	102 102 780 788 796	630 630 567 567 562	   	21 41	
130 130 160 212 *33 *38	65 76 96 *20 *20	65 82 114  	 2 *2 13	752 772 1,347 1,356	102 102 780 788	630 630 567 567	 	21 41  	
130 130 160 212 *33 *38 54 211	65 76 96 *20 *20 32 186	65 82 114  	13 18 22 25	752 772 1,347 1,358 1,358 1,390	102 102 780 788 796 829	630 630 567 567 562 562	  	21 41	
130 130 160 212 *33 *38 54 211	65 76 96 *20 *20 32 186	65 82 114   	13 18 22 25	752 772 1,347 1,356 1,358 1,390 2,411	102 102 780 788 796 829	630 630 567 567 562 562 2,269	   	21 41	
130 130 160 212 *33 *38 54 211	65 76 96 *20 *20 32 186	65 82 114  	13 18 22 25	752 772 1,347 1,358 1,358 1,390	102 102 780 788 796 829	630 630 567 567 562 562	  	21 41  	

Table 30

Zimbabwe 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Year 2015 2016 2017 2018 2015 2016 2017 2018 2015 2016 2017	1,992 2,015 2,015 2,315 1,324,669 1,347,192 1,363,410 1,387,028	Combustible fuels  1,235 1,265 1,265 1,265 887,706 885,425 884,325	757 750 750 1,050 201,082 203,317	Nuclear	Wind	Solar	Other
America, North  Anguilla	2016 2017 2018 <b>2015</b> <b>2016</b> <b>2017</b> <b>2018</b> 2015 2016	2,015 2,015 2,315 <b>1,324,669</b> <b>1,347,192</b> <b>1,363,410</b>	1,265 1,265 1,265 887,706 885,425	750 750 1,050 <b>201,082</b>		  	  	
America, North	2017 2018 2015 2016 2017 2018 2015 2016	2,015 2,015 2,315 <b>1,324,669</b> <b>1,347,192</b> <b>1,363,410</b>	1,265 1,265 1,265 887,706 885,425	750 750 1,050 <b>201,082</b>			 	
America, North  2 2 2 2 2 Anguilla	2018 2015 2016 2017 2018 2015 2016	2,315 1,324,669 1,347,192 1,363,410	1,265 <b>887,706</b> <b>885,425</b>	1,050 <b>201,082</b>				
America, North	2015 2016 2017 2018 2015 2016	1,324,669 1,347,192 1,363,410	887,706 885,425	201,082				
Anguilla 2	2016 2017 2018 2015 2016	1,347,192 1,363,410	885,425		114 215	00.0=0		
Anguilla 2	<b>2017 2018</b> 2015 2016	1,363,410		203 317		88,653	27,584	5,430
Anguilla 2	<b>2018</b> 2015 2016		884,325		115,206	99,148	38,689	5,407
Anguilla 2	2015 2016	, ,	888,864	203,992 204,923	115,270 115,074	105,610 113,894	47,962 58,710	6,250 5,563
	2016	34	·	,	•	,	. 1	
2		34	33 33	••	••	••	1 1	
		24	24				*1	
	2018	*25	*24				*1	
Antigua and Barbuda 2	2015	*117	*111				6	
	2016	*117	*111				6	
	2017	*119	*113				6	
	2018	91	82		••		9	
Aruba 2	2015	288	258			30		
	2016	288	258			30		
	2017	288	258			30		
2	2018	288	258		••	30		
	2015	576	576					
	2016	576	576					
	2017 2018	576 576	576 576				••	
4	2016	570	576	••			••	••
	2015	258	249				9	
	2016 2017	268 281	249 262	••		••	19 19	
	2017	259	234		 		25	
Belize 2	2015	154	99	55			0	
	2016	146	94	51			0	••
	2017	165	113	51	••		Ö	
2	2018	165	113	51			0	
Bermuda 2	2015	*171	*171		<u></u>			
	2016	*171	*171					
	2017	*171	*171					
2	2018	*176	*172	••			4	••
Bonaire, St Eustatius, Saba 2	2015	*27	*16			*11		
2	2016	33	20			.11	2	
	2017 2018	*33 *34	*20 *20	••		*11 *12	*2 *2	
						12	2	••
	2015	45	44	••		1	1	
	2016 2017	45 *32	44 *31			1 0	1 *1	
	2018	*33	*32			ő	Ó	
Canada 2	2015	144,846	36,871	79,405	14,033	11,214	3,253	*70
	2016	146,601	37,557	80,304	14,033	11,973	2,665	*69
	2017	147,449	37,307	80,831	14,033	12,250	2,932	*96
2	2018	148,762	37,322	81,396	14,033	12,816	3,095	*100
Cayman Islands 2	2015	132	132					
2	2016	161	161					
	2017	161	161					
2	2018	161	161					
	2015	3,626	661	2,152		*565	1	247
	2016	3,824	597	2,328		*679	13	207
	2017 2018	3,557 3,676	617 629	2,328 2,388		378 408	27 44	207 207

	s ,	activity producer				icers .	Autoprod	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	otal
		757	1,190	1,947			*45	*45
	••	750	1,220	1,970		••	*45	*45
	••	750 750	1,220	1,970		••	*45	*45
	••	1,050	1,220	2,270			*45	*45
	••	1,030	1,220	2,210			40	43
106,24	114,215	195,007	838,792	1,254,254	15,426	6,075	48,914	70,415
123,51	115,206	197,302	833,687	1,269,714	19,726	6,014	51,737	77,478
136,39	115,270	198,178	832,872	1,282,718	23,425	5,814	51,757 51,453	80,692
149,94	115,074	199,138	836,835	1,300,994	28,219	5,786	52,029	86,034
145,54	110,074	100,100	000,000	1,000,004	20,213	3,700	32,023	00,004
			33	34				
			33	34				
*			24	24				
*			*24	*25				
	**	••	*110	*116	••	••	*1	*1
			*110	*116			*1	*1
	••		*112	*118			*1	*1
		••	81	90	••	••	*1	*1
_			050	000				
3			258	288			••	
3			258	288			••	
3			258	288			••	
3			258	288				
			537	537			*39	*39
	••	••	537	537	••	••	*39	*39
	••	••	537	537		••	*39	*39
	••	••	537	537		••	*39	*39
	••	••	557	557	••	••	39	39
	<u></u>		239	248	••		*10	*10
1			239	258		••	*10	*10
1		••	252	271		•••	*10	*10
2		••	224	249		••	*10	*10
		55	66	121			34	34
		51	60	112			*34	*34
		51	68	120			*45	*45
		51	68	120			*45	*45
			***	***				
			*167	*167			*4	*4
	••	••	*167	*167	••	••	*4	*4
		••	*167	*167	;		*4	*4
	••	••	*167	*167	4	••	5	9
**			*16	*27				
	••	••	20	33	••	••	••	••
1 *1	••	•••	*20	*33	••	••	••	••
*1			*20	*34	••			
	••		20	04	••		••	••
			44	45				
			44	45				
,		···	*31	*32		···		
*			*32	*33				
13,67	14,033	74,135	31,133	132,975	863	5,270	5,738	11,871
13,56	14,033	75,181	31,873	134,654	1,140	5,123	5,684	11,947
13,89	14,033	75,699	31,748	135,378	1,380	5,132	5,559	12,071
14,44	14,033	76,221	31,648	136,350	1,563	5,175	5,674	12,412
			132	132				
			161	161			••	
	••	••	161	161			••	••
			161	161			••	
	••		101	101		••		••
48		1,942	636	3,061	*330	*210	*25	*565
		2,118	572	3,217	*372	*210	*25	*607
52								
52 59		2,328	572	3,490	22	0	45	67

Table 30

				-	Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Cuba	2015 2016 2017 2018	6,314 6,454 6,476 6,661	6,341 6,325	63 66 66 64	  	*14 *16 *22 *36	*19 *30 *63 *103	  
Curaçao	2015 2016 2017 2018	301 *307 *257 *258	*262 *200	  	  	30 30 47 47	*9 *15 11 11	  
Dominica	2015 2016 2017 2018	45 45 45 45	35 35	10 10 10 10	  	  	  	  
Dominican Republic	2015 2016 2017 2018	5,230 5,205 5,134 5,278	4,382 4,276	617 617 617 617	  	85 135 135 183	23 69 103 203	2 2 2 3
El Salvador	2015 2016 2017 2018	*1,671 *1,727 1,923 2,009	*1,016 *1,034	497 495 575 575	  	  	11 12 110 167	204 204 204 204
Greenland	2015 2016 2017 2018	187 187 187 *187	*96 96	91 91 91 *91	  	  	  	  
Grenada	2015 2016 2017 2018	49 49 50 53	48 50		  	  	0 0 0 0	  
Guatemala	2015 2016 2017 2018	3,139 3,442 3,356 3,499	1,942 1,845	1,039 1,306 1,311 1,492	  	76 76 75 107	85 85 92 92	34 34 34 39
Haiti	2015 2016 2017 2018	*333 *336 *344 *352	*274 *282	61 61 61 61	  	  	1 1 1 1	  
Honduras	2015 2016 2017 2018	2,250 2,439 2,562 2,637	1,185 1,185	632 670 666 696	  	152 175 225 225	388 409 451 511	  35 35
Jamaica	2015 2016 2017 2018	965 1,031 1,041 1,045	871 871	29 29 29 29	  	65 101 101 102	30 40 40	  
Mexico	2015 2016 2017 2018	67,504 72,574 74,431 76,921	53,047 54,388	12,223 12,580 12,628 12,628	1,510 1,608 1,608 1,608	3,271 4,051 4,180 4,853	173 362 642 2,434	906 926 985 1,010
Montserrat	2015 2016 2017 2018	5 5 5 5	5 5 5 5	  	  	  	  	 
Nicaragua	2015 2016 2017 2018	1,346 1,396 1,482 1,482	912 985	138 142 142 142	  	186 186 186 186	1 1 14 14	155 155 155 155

	Autoproducers												
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other					
529 494 531 553	494 531	  	  	5,785 5,960 5,945 6,108	5,847 5,794	63 66 66 64	  	*34 *47 *85 *139					
146 *146 *84 *84	*146 *84	  	  	155 *161 *173 *174	*116 *116	  	  	39 45 57 58					
18 18 18 *18	15 15	3 3 3 3		27 27 27 27	20 20 20 20	7 7 7 7	  	  					
1,520 1,395 1,296 1,308	1,353 1,219	1 1 1 2	24 40 75 117	3,711 3,809 3,838 3,970	3,009 3,028 3,057 3,082	616 616 616 616	  	86 165 165 272					
*218 *268 *316 *405	*234 *244	25 23 22 22	11 12 50 107	*1,453 *1,459 1,607 1,604		473 473 553 553	  	204 204 264 264					
*16 *16 16 *16	*16 16	  	  	171 171 171 *171	*80 *80 80 *80	91 91 91 *91	  	  					
0 0 0 0	0	  	  	48 48 50 52	48 50	  	  	0 0 0 0					
690 705 679 652	701 675	4 4 4 5	  	2,449 2,737 2,677 2,846	1,241 1,170	1,035 1,302 1,307 1,487	  	194 194 200 237					
*96 *96 *99 *102	*96 *99	  	  	*237 *240 *245 *250	*183	61 61 61 61	  	1 1 1 1					
169 210 210 210	210 210	  	  	2,081 2,229 2,352 2,428	975	632 670 666 696	  	540 584 711 771					
324 370 380 380	262 262	  	62 108 118 118	641 661 661 665	609 609 609 612	29 29 29 29	  	3 23 23 24					
12,648 16,670 16,895 17,897	12,767 12,772	195 232 233 233	2,767 3,671 3,890 4,892	54,856 55,904 57,536 59,024	40,280 41,616	12,028 12,348 12,395 12,395	1,510 1,608 1,608 1,608	1,583 1,668 1,917 3,405					
  	  	  	  	5 5 5 5	5 5	  	  	  					
135 178 178 178	177 177	1 1 1 1	 	1,211 1,219 1,305 1,305	735 809	137 142 142 142	  	342 342 355 355					

Table 30

	1				Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Panama	2015 2016 2017 2018	3,224 3,371 3,423 4,055	1,235 1,225	1,726 1,769 1,777 1,777		253 270 270 270	89 143	 8 8 8
Puerto Rico	2015 2016 2017 2018	*6,112 6,257 *6,265 *6,265	5,900 *5,900	99 99 *99 99	  	125 125 101 101	133 165	  
Sint Maarten (Dutch part)	2015 2016 2017 2018	97 97 *88 *92	97 *88	  	  	  		  
St. Kitts-Nevis	2015 2016 2017 2018	64 65 65 71	60 60	  	  	2 *2 *2 2	2 2	  
St. Lucia	2015 2016 2017 2018	88 88 88 91	88 88	  	  	  		  
St. Pierre-Miquelon	2015 2016 2017 2018	25 25 25 26	25 25	  	  	0 0 0 0		
St. Vincent-Grenadines	2015 2016 2017 2018	53 53 48 46	46 41	6 6 6		  	1 1 2	  
Trinidad and Tobago	2015 2016 2017 2018	2,502 2,505 2,509 2,156	2,502 2,506	  	  	  	3 3	  
Turks and Caicos Islands	2015 2016 2017 2018	82 82 82 84	82 82	  	  	  	  	  
United States	2015 2016 2017 2018	1,072,470 1,086,849 1,100,333 1,119,131	764,787 762,765	102,239 102,692 102,703 102,801	98,672 99,565 99,629 99,433	72,573 81,287 87,597 94,516	34,716 43,115	3,812 3,802 4,524 3,802
United States Virgin Is.	2015 2016 2017 2018	340 340 336 336	316 316	  	  	  	*24 *20 *30	  
America, South	2015 2016 2017 2018	284,326 302,177 314,375 325,561	122,803 125,280	152,474 161,189 166,089 170,756	3,753 3,753 3,745 3,745	9,951 12,955 15,687 18,683	1,476 3,550	67 1 25 41
Argentina	2015 2016 2017 2018	37,593 37,430 39,764 42,128	25,314 26,510	10,063 10,127 11,262 11,308	1,763	217 217 229 752	9	  
Bolivia (Plur. State of)	2015 2016 2017 2018	*2,417 *2,447 *2,611 *2,772	*1,919 *1,953	496 496 620 692		3 27 27 27	5 11	  

	Autoproducers					n activity produc	ers	
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
232	172	60		2,992	1,030	1,666		296
232	172	60		3,139	1,063	1,709		367
232	172	60		3,191	1,053	1,717		421
232	172	60		3,823	1,639	1,717		467
*61	*61			*6,051	*5,739	99		213
*61	*61			6,196	5,839	99		258
*61	*61			*6,204	*5,839	*99		266
*60	*60	••		*6,205	*5,840	99		266
				97	97			
				97	97			
				*88 *92	*88 *92			
••						••	••	
*4	*4			60	56			4
*4 *4	*4 *4			61 61	56 56			*4 *4
*4	*4			67	63			4
				88	88			
				88 88	88 88			
				91	88			3
		-	-				-	
				25	25			0
	••			25 25	25 25			0
				26	26		••	ő
						_		
0	••		0	53 53	46 46	6		1
0	••		0	48	41	6 6		1
0			Ö	45	38	6		2
*97	*97			2,405	2,402			3
*100	*100	••		2,405	2,402			3 3 3 3
*104	*104			2,405	2,402			3
*107	*107			2,049	2,046			3
				82	82			
				82	82			
				82	82			
				84	84			••
40,974	29,315	306	11,353	1,031,496	742,417	101,933	98,672	88,474
43,858	29,133	357	14,368	1,042,991	735,654	102,335	99,565	105,437
47,338	29,106	357	17,875	1,052,995	733,659	102,346	99,629	117,361
51,200	29,552	284	21,364	1,067,931	737,457	102,517	99,433	128,524
*15			*15	325	316			9
*15		••	*15	325	316		••	9 5
*15 *15	0		*15 *15	321 321	316 316	••		5
34,049	28,555	5,425 5,533	69 128	250,277	88,689	147,049	3,753	10,786 14,303
36,542 38,519		5,633 5,611	399	265,634 275,856	91,922 92,771	155,656 160,478	3,753 3,745	18,862
39,686		5,688	734	285,875	93,285	165,069		23,776
3,646	3,624	20	2	33,947	21,917	10,043	1,763	224
3,614	3,592	20	2	33,816	21,722	10,043	1,763	224
3,614	3,592	20	2	36,150	22,918	11,242	1,755	235
3,614	3,592	20	2	38,514	24,530	11,288		941
*174	*173	*1		*2,243	*1,740	495		8
*188	*187	*1		*2,259	*1,732	495		32
*196	*195	*1		*2,415	*1,758	619		38
*185	*183	*2		*2,588	*1,800	690	••	98

Table 30

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Brazil	2015 2016 2017 2018	140,857 150,422 157,579 163,509	41,286 41,881	91,650 96,931 100,319 104,198	1,990 1,990 1,990 1,990	7,633 10,129 12,293 14,400	21 86 1,096 2,360	  
Chile	2015 2016 2017 2018	21,436 24,530 26,309 27,514	15,695 16,500	6,499 6,671 6,656 6,630	  	910 1,039 1,295 1,529	576 1,125 1,834 2,438	0 0 24 40
Colombia	2015 2016 2017 2018	17,686 17,622 17,864 *17,939	5,972 6,084	11,484 11,606 11,726 *11,726	  	18 18 18 *18	*25 *25 *36 111	66 0 0 0
Ecuador	2015 2016 2017 2018	6,545 8,697 8,385 9,028	4,105 3,702	2,529 4,545 4,636 5,216	  	21 21 21 21	26 26 26 27	  
Falkland Is. (Malvinas)	2015 2016 2017 2018	11 11 11 11	9 9	  	  	2 2 2 2	0 0 0 0	  
Guyana	2015 2016 2017 2018	369 360 348 348	356 343	  	  	0 0 0 0	3 3 5 8	  
Paraguay	2015 2016 2017 2018	8,775 8,761 8,761	1 1	8,760 8,760 8,760 8,760	  	  	  	  
Peru	2015 2016 2017 2018	12,089 14,517 14,775 15,214	8,988 9,005	4,130 5,189 5,246 5,363	  	240 240 240 372	100 100 284 325	  
Suriname	2015 2016 2017 2018	501 501 501 504	*307 *307	189 189 189 189	  	  	5 *5 *5 *5	  
Uruguay	2015 2016 2017 2018	3,989 3,913 4,546 4,912	1,075 1,255	1,538 1,538 1,538 1,538	  	857 1,212 1,511 1,511	65 89 243 248	  
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	32,059 32,967 32,923 32,923	17,777 17,732	15,137 15,137 15,137 15,137	  	50 50 50 50	2 2 3 3	1 1 *1 *1
Asia	2015 2016 2017 2018	3,130,610 3,390,941 3,533,427 3,698,083	2,346,971 2,370,920	552,326 571,960 587,717 595,110	104,036 112,342 111,923 118,698	166,733 196,412 217,574 240,190	91,886 144,517 223,520 285,562	10,618 18,738 21,772 20,420
Afghanistan	2015 2016 2017 2018	519 *519 *519 *519	*135 *135	384 *384 *384 *384	  	  		  
Armenia	2015 2016 2017 2018	3,538 3,564 3,582 3,591	1,840 1,840	1,286 1,312 1,327 1,336	408 408 408 408	3 3 3 3	1 1 4 18	  

	rs	activity produce	Main			ucers	Autoprod	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
7,643 10,150 13,218 16,248	1,990 1,990 1,990 1,990	86,766 91,982 95,300 99,137	21,607 22,101 22,130 20,636	118,006 126,223 132,638 138,011	11 65 171 512	4,884 4,949 5,019 5,061	17,956 19,185 19,751 19,925	22,851 24,199 24,941 25,498
1,485 2,162 3,040 3,903	  	6,491 6,635 6,648 6,619	12,132 13,247 12,842 12,652	20,108 22,044 22,530 23,174	1 2 113 104	8 36 8 11	1,319 2,448 3,658 4,225	1,328 2,486 3,779 4,340
84 18 29 104	  	11,392 11,512 11,632 *11,632	4,565 4,442 4,554 *4,554	16,041 15,973 16,215 *16,290	*25 *25 *25 *25	*92 *94 *94 *94	*1,528 *1,530 *1,530 *1,530	*1,645 *1,649 *1,649 *1,649
47 47 47 48	  	2,402 4,418 4,486 5,036	3,109 3,142 2,902 2,964	5,557 7,607 7,435 8,048	  	128 127 *150 *180	861 963 *800 800	988 1,090 *950 980
2 2 2 2	  	  	7 7 7 7	9 9 9	  	  	*2 *2 *2 *2	*2 *2 *2 *2
3 3 5 8	  	  	312 302 293 289	315 306 298 297	  	  	54 54 50 51	54 54 50 51
  	  	8,760 8,760 8,760 8,760	15 1 1 1	8,775 8,761 8,761 8,761	  	  	  	  
340 340 484 657	  	4,026 5,072 5,116 5,232	6,145 7,632 7,639 7,762	10,511 13,044 13,239 13,651	 *40 *40	104 117 130 131	1,474 1,356 1,366 1,392	1,578 1,473 1,536 1,563
5 *5 *5 *5	  	  	184 *184 *184 187	189 *189 *189 192	  	189 189 189 189	123 *123 *123 *123	312 312 312 312
891 1,266 1,705 1,708	  	1,538 1,538 1,538 1,538	1,098 643 823 1,183	3,527 3,447 4,066 4,429	30 34 48 51	  	432 432 432 432	461 466 480 482
53 53 54 54	  	15,137 15,137 15,137 15,137	15,859 16,767 16,722 16,722	31,049 31,957 31,913 31,913	  	  	1,010 *1,010 *1,010 *1,010	1,010 *1,010 *1,010 *1,010
220,459 308,428 404,918 481,632	104,036 112,342 111,923 118,698	532,978 555,858 570,813 581,648	1,884,845 2,072,090 2,140,914 2,189,102	2,742,319 3,048,718 3,228,568 3,371,079	48,778 51,240 57,949 64,540	19,347 16,102 16,904 13,463	320,166 274,881 230,006 249,001	388,291 342,223 304,859 327,004
 	  	254 *254 *254 *254	*70 *70 *70 *70	324 *324 *324 *324	  	*130 *130 *130 *130	65 *65 *65 *65	*195 *195 *195 *195
4 4 5 11	408 408 408 408	1,286 1,312 1,327 1,336	1,840 1,840 1,840 1,827	3,538 3,564 3,580 3,581	  2 10	  	  	 2 10

Table 30

	Total producers										
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other			
Azerbaijan	2015 2016 2017 2018	7,808 7,911 7,942 7,829	6,766 6,791	1,103 1,105 1,106 1,131	  	8 16 16 66	5 25 28 35	  			
Bahrain	2015 2016 2017 2018	6,978 6,977 6,977 6,977	6,971 6,971	  	  	1 1 *1 *1	5 5 *5 *5	  			
Bangladesh	2015 2016 2017 2018	11,150 11,866 12,213 *15,293	11,495 11,817	*230 230 230 230	  	*1 *1 *1 *1	135 140 165 135	  			
Bhutan	2015 2016 2017 2018	1,622 1,624 1,623 1,623	9 8	1,614 1,614 1,614 1,614	  	 1 1	0 0 0 *1	  			
Brunei Darussalam	2015 2016 2017 2018	*819 *820 993 993	*819 992	  	  	  	*1 *1 1	  			
Cambodia	2015 2016 2017 2018	1,659 1,683 1,878 2,187	751 888	930 930 980 1,330	  	  	*2 *2 10 10	  			
China	2015 2016 2017 2018	1,628,711 1,763,172 1,839,700 1,959,450	1,160,274 1,149,480	331,671 344,371 356,980 361,130	27,170 33,642 35,820 44,660	130,750 147,472 164,000 184,270	42,180 76,313 130,420 174,330	*1,100 *1,100 *3,000 *200			
China, Hong Kong SAR	2015 2016 2017 2018	12,625 12,625 12,492 12,282	12,625 12,492	  	  	  	  				
China, Macao SAR	2015 2016 2017 2018	512 512 512 448	512 512	  	  	  	  	  			
Cyprus	2015 2016 2017 2018	1,752 1,756 1,782 1,794	1,515 1,515	  		158 158 158 158	76 84 110 119				
Georgia	2015 2016 2017 2018	2,993 3,299 3,592 3,591	849 849	2,378 2,430 2,723 2,695	  	 20 20 20	  	  			
India	2015 2016 2017 2018	287,134 374,789 400,701 411,773	267,129 276,294	40,337 44,591 45,358 45,447	5,780 6,780 6,780 6,780	*25,088 35,480 38,186 38,825	*5,499 12,514 24,538 28,455	8,295 9,545 9,916			
Indonesia	2015 2016 2017 2018	74,448 59,305 *60,980 64,265	52,622 *53,517	6,186 4,868 *5,190 5,741	  	*5 *7 *7 1	10 13 *17 14	2,280 *1,795 *2,249 2,126			
Iran (Islamic Rep. of)	2015 2016 2017 2018	74,185 74,106 *76,569 *78,794	61,262 *63,145	11,354 11,578 11,949 11,953	1,020 1,020 1,020 1,020	159 191 259 282	9 43 184 286	12 12 12 12			

	Autoprod	lucers			Mair	n activity produce	ers	
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
663 745 770 852	663 737 762 852	  	 8 8 0	7,145 7,167 7,172 6,977	6,029 6,029 6,029 5,746	1,103 1,105 1,106 1,131	  	13 33 36 101
*3,050 *3,050 *3,050 *3,050	*3,050 *3,050 *3,050 *3,050	  	  	3,928 3,927 3,927 3,927	3,922 3,921 3,921 3,921	  	  	6 6 *6
2,377 2,279 2,404 *2,636	2,377 2,279 2,404 *2,636	  	  	8,773 9,587 9,809 *12,657	8,407 9,216 9,413 *12,291	*230 230 230 230	  	136 141 166 136
  	  	  	  	1,622 1,624 1,623 1,623	8 9 8 8	1,614 1,614 1,614 1,614	  	0 1 1 1
*110 *110 117 117	*110 *110 117 117	  	  	*709 *709 876 876	*708 *708 875 875	  	  	*1 *1 1
  	  	  	  	1,659 1,683 1,878 2,187	728 751 888 847	930 930 980 1,330	  	*2 *2 10 10
*102,431 *111,630 *57,400 *59,730	*90,300 *99,330 *44,530 *51,190	*12,131 *12,300 *12,870 *8,540	  	1,526,280 1,651,542 1,782,300 1,899,720	1,005,540 1,060,944 1,104,950 1,143,670	319,540 332,071 344,110 352,590	27,170 33,642 35,820 44,660	174,030 224,885 297,420 358,800
  	  	  	 	12,625 12,625 12,492 12,282	12,625 12,625 12,492 12,282	  	  	  
*40 *40 *40 *40	*40 *40 *40 *40	  	  	472 472 472 408	472 472 472 408	  	  	  
67 67 72 78	41 37 37 37	  	26 30 35 41	1,685 1,689 1,710 1,716	1,478 1,478 1,478 1,481	  	 	208 212 233 236
  	  	  		2,993 3,299 3,592 3,591	615 849 849 876	2,378 2,430 2,723 2,695	  	 20 20 20
82,020 52,283 56,877 59,594	79,955 48,799 53,387 56,071	65 59 65 48	*2,000 *3,425 *3,425 *3,475	205,114 322,506 343,824 352,179	130,475 218,330 222,907 226,279	40,272 44,532 45,293 45,399	5,780 6,780 6,780 6,780	*28,587 52,864 68,844 73,721
*19,054 *19,325 *19,881 21,024	*17,000 *17,000 *17,289 18,863	*1,300 *1,300 *1,386 2,159	*754 *1,025 *1,206 2	55,394 39,980 *41,099 43,241	48,967 35,622 *36,228 37,520	4,886 3,568 *3,804 3,582	 	1,541 790 *1,067 2,139
5,581 5,581 *5,753 *5,905	5,581 5,581 *5,753 *5,905	  	  	68,604 68,525 *70,816 *72,889	56,051 55,681 *57,392 *59,336	11,354 11,578 11,949 11,953	1,020 1,020 1,020 1,020	179 246 455 580

Table 30

				-	Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Iraq	2015 2016 2017 2018	31,148 32,214 26,133 27,412	29,664 24,300	2,513 2,513 1,796 1,796	  	  	37 37 37 216	   
Israel	2015 2016 2017 2018	17,221 17,585 17,827 18,019	16,689 16,813	7 7 9 9	  	6 27 27 35	742 862 978 1,358	  
Japan	2015 2016 2017 2018	326,444 338,210 342,198 347,368	198,299 197,092	50,034 50,117 50,014 50,037	42,048 41,482 39,132 38,042	2,808 3,246 3,483 3,497	34,150 42,040 49,500 56,162	*3,016 *3,026 *2,977 *2,974
Jordan	2015 2016 2017 2018	4,455 4,475 4,506 4,736	3,969 3,890	12 12 12 12	  	118 198 198 280	5 296 406 699	  
Kazakhstan	2015 2016 2017 2018	*25,149 *25,223 *25,256 24,658	*22,500 *22,500	*2,500 *2,500 *2,500 *2,500	  	*100 *170 *200 *200	*49 *53 *56 *56	  
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	7,435 7,671 7,731 8,160	2,960 2,960	4,467 4,701 4,761 4,790	  	  	*8 *10 *10 *10	  
Korea, Republic of	2015 2016 2017 2018	103,191 111,203 122,950 127,475	75,559 86,377	6,471 6,485 6,489 6,490	21,716 23,116 22,529 21,850	847 1,067 1,215 1,420	3,615 4,502 5,834 8,099	434 474 506 603
Kuwait	2015 2016 2017 2018	18,279 18,892 18,765 18,867	18,890 18,763	  	  	  	 *2 *2 *4	  
Kyrgyzstan	2015 2016 2017 2018	*3,865 *3,786 3,869 *3,869	*722 *734	*3,064 *3,064 3,135 *3,135	  	  	  	  
Lao People's Dem. Rep.	2015 2016 2017 2018	5,813 6,457 6,916 7,171	1,918 1,903	3,894 4,538 5,006 5,256	  	  	2 2 7 7	  
Lebanon	2015 2016 2017 2018	3,643 3,662 3,698 3,704	3,359 3,409	*274 280 *253 *253	  	  	10 23 36 42	  
Malaysia	2015 2016 2017 2018	30,440 33,090 33,334 34,389	25,732 26,848	5,716 6,137 6,128 6,168	  	  	226 280 358 1,004	979 940  786
Maldives	2015 2016 2017 2018	271 274 *277 *277	266 *266	  	  	1 1 1	4 7 10 10	 
Mongolia	2015 2016 2017 2018	*1,171 *1,189 1,286 *1,461	*1,103 1,132	26 29 29 31	  	52 52 102 156	1 5 23 64	  

	Autoprod	ucers				activity produce	rs	
otal	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
37			37	31,111	28,598	2,513		
37			37	32,177	29,664	2,513		
37	•••	••	37	26,096	24,300	1,796		
216	••	••	216	27,196	25,400	1,796	••	
1,235	491	2	742	15,986	15,975	5 5	••	
1,387	523	2 5	862	16,198	16,166	5		
1,591 2,018	608 653	5 7	978 1,358	16,236 16,001	16,205 15,964	4 2		2
94,960 63,756	51,348 23,907	4,248 596	39,364 39,253	231,484 274,454	143,040 174,392	45,786 49,521	42,048 41,482	6 9,0
69,367	23,831	452	45,084	272,831	173,261	49,562	39,132	10,8
75,725	25,187	455	50,083	271,643	171,469	49,582	38,042	12,5
*199	*199			4,256	4,121	12		12
*199	*199			4,276	3,770	12		4
*199	*199			4,307	3,691	12		6
*199	*199			4,537	3,546	12		9
*1			*1	*25,148	*22,500	*2,500		*14
*1			*1	*25,222	*22,500	*2,500		*2:
*1			*1	*25,255	*22,500	*2,500		*2
*1	••	••	*1	24,657	21,902	*2,500	••	*2
	••	••		7,435	2,960	4,467	••	
			••	7,671	2,960	4,701		*
••	••		••	7,731	2,960	4,761		*
	••	••		8,160	3,360	4,790	••	
7,496	6,404		1,092	95,695	63,704	6,471	21,716	3,8
7,461 9,037	6,656 8,247	••	805 790	103,742 113,913	68,903 78,130	6,485 6,489	23,116 22,529	5,2 6,7
9,862	8,875	•• ••	987	117,613	80,138	6,490	21,850	9,13
*20	*20			18,259	18,259			
22	20		 *2	18,870	18,870		••	
22	20		*2 *2	18,743	18,743	··		
74	70		*4	18,793	18,793			
*6	*6			*3,859	*795	*3,064		
*6	*6			*3,780	*716	*3,064		
*6	*6	••	••	3,863	*728	3,135		
*6	*6			*3,863	*728	*3,135		
			<del></del>	5,813	1,918	3,894		
				6,457	1,918	4,538		
				6,916	1,903	5,006		
	••	••		7,171	1,909	5,256	••	
*1,060	*1,050		10	2,583	2,309	*274		
*1,073 *1,136	*1,050 *1,100	••	23 36	2,589 2,562	2,309 2,309	280 *253		
*1,142	*1,100		42	2,562	2,309	*253		
		0						•
3,072 3,301	2,210 2,506	2 2	860 793	27,368 29,789	21,309 23,226	5,714 6,135		3
2,442	2,438	2	2	30,892	24,410	6,126	••	3
2,676	1,952	0	723	31,714	24,479	6,168		1,0
125	125			146	141			
125	125			149	141	••	••	
*125	*125			*152	*141			
*125	*125			*152	*141			
36	*10	26		*1,135	*1,082			
39	*10	29	••	*1,150	*1,093			
39	*10	29		1,247	1,122	••		1
41	*10	31		*1,420	*1,200			2

Table 30

					Total producers					
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other		
Myanmar	2015 2016 2017 2018	5,259 5,390 5,799 5,828	2,135 2,387	3,183 3,255 3,402 3,436		  		  		
Nepal	2015 2016 2017 2018	798 979 *1,141 1,189	53 53	738 919 *1,081 1,129		*6 *6 *6	*1 *1	  		
Oman	2015 2016 2017 2018	7,870 8,167 8,236 8,828	8,165 8,228	  		  	0			
Other Asia	2015 2016 2017 2018	48,702 49,618 49,324 52,484	37,544 36,717	4,691 4,691 4,694	5,144 5,144 5,144 4,508	941 976 986 1,016	1,786	  		
Pakistan	2015 2016 2017 2018	24,699 26,756 31,418 34,880	17,926 21,684	7,115 7,115 7,115 7,270	750 1,090	256 339 791 1,041		163 226 338 379		
Philippines	2015 2016 2017 2018	18,989 21,869 23,341 23,951	15,127 16,470	3,616 3,634 3,643 3,717	••	427 427 427 427	765	1,917 1,916 1,916 1,944		
Qatar	2015 2016 2017 2018	*8,561 *8,559 *10,170 *10,590	*8,559 *10,170	  	  	  	••	  		
Saudi Arabia	2015 2016 2017 2018	69,156 74,703 80,474 *76,944	74,702 80,471	  	  	 0 3 *3	1	  		
Singapore	2015 2016 2017 2018	13,059 13,445 13,612 13,614	13,348 13,500	  		  	97 112	  		
Sri Lanka	2015 2016 2017 2018	3,948 4,010 4,094 4,124	2,088 2,144	1,684 1,722 1,720 1,793		127 129 128 128	102	  		
State of Palestine	2015 2016 2017 2018	172 185 190 200	160 160	 		  	25 30	  		
Syrian Arab Republic	2015 2016 2017 2018	*9,123 9,687 *9,691 10,059	8,192 *8,199	1,572 1,494 1,490 1,490		1 1 1 1	  1 1	  		
Tajikistan	2015 2016 2017 2018	6,283 6,577 *6,577 *6,619	719 *719	5,861 5,858 *5,858 *5,900		  	  	  		
Thailand	2015 2016 2017 2018	58,508 61,032 61,024 64,051	53,653 53,505	3,453 3,452 3,452 3,667		233 *507 *628 1,103	*3,419 *3,438	0 0 0 0		

	Autoprod	ucers			Main	activity produce	rs .	
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
*628 800 591 673	*456 628 414 496	*172 172 *177 *177	  	4,631 4,590 5,208 5,155	1,620 1,507 1,973 1,896	3,011 3,083 3,225 3,259	  	 *10 
97 278 513 561	  	97 278 513 561	 0 0	701 701 *628 628	53 53 53 53	641 641 *568 568	  	*7 *7 *7 *7
  	  	  	  	7,870 8,167 8,236 8,828	7,868 8,165 8,228 8,820	  	  	2 2 8 8
16,996 17,113 17,536 19,028	15,465 15,186 15,076 15,577	  	1,531 1,927 2,460 3,451	31,706 32,505 31,788 33,456	21,561 22,358 21,641 23,933	4,691 4,691 4,691 4,694	5,144 5,144 5,144 4,508	310 312 312 321
630 693 831 872	467 467 493 493	  	163 226 338 379	24,069 26,063 30,587 34,008	15,848 17,459 21,191 23,831	7,115 7,115 7,115 7,270	750 750 1,090 1,430	356 739 1,191 1,477
*224 *444 *613 *136	*208 *428 *597 *120	*16 *16 *16 *16	  	18,765 21,425 22,728 23,815	12,656 14,699 15,873 16,847	3,600 3,618 3,627 3,701	  	2,509 3,108 3,228 3,267
*7,277 *7,275 *8,644 *9,038	*7,277 *7,275 *8,644 *9,038	  	  	*1,284 *1,284 *1,526 *1,553	*1,284 *1,284 *1,526 *1,553	  	  	  
10,979 12,124 14,626 *19,235	10,979 12,124 14,626 *19,235	  	  	58,177 62,579 65,848 *57,709	58,176 62,578 65,845 *57,706	  	  	1 1 3 *3
418 418 569 569	418 418 569 569	  	  	12,641 13,027 13,043 13,046	12,595 12,931 12,931 12,931	  	  	46 97 112 115
355 412 436 482	20 24 29 *32	307 338 356 394	28 50 51 *56	3,593 3,598 3,658 3,642	2,088 2,064 2,115 2,037	1,377 1,384 1,364 1,399	  	128 150 179 206
26 33 35 40	20 20 20 20	  	6 13 15 20	146 153 155 160	140 140 140 140	  	  	6 13 15 20
*1,095 912 *912 972	*1,095 912 *912 972	  	  	*8,028 8,775 *8,779 9,087	*6,455 7,280 *7,287 7,595	1,572 1,494 1,490 1,490	  	1 1 2 2
  42	  	   42	  	6,283 6,577 *6,577	422 719 *719 *719	5,861 5,858 *5,858 *5,858	  	  
*17,974 *17,974 *16,949 *17,755	*15,974 *15,974 *14,949 *15,755	  	*2,000 *2,000 *2,000 *2,000	40,534 43,058 44,075 46,296	35,429 37,679 38,556 39,496	3,453 3,452 3,452 3,667	  	1,652 *1,926 *2,066 *3,132

Table 30

Country or area	Voor L		Combustible		Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Timor-Leste	2015	283	283	0			1	
	2016	283		0			1	
	2017	283		0			1	
	2018	283	283	0		••	1	
Turkey	2015	73,147		25,868		4,503	249	717
	2016	78,497		26,681		5,751	833	954
	2017 2018	85,201 88,551		27,273 28,291		6,516 7,006	3,421 5,062	1,229 1,480
Гurkmenistan	2015	*4,400	*4,400					
urkinenistan	2016	4,674						
	2017	5,200		···	···			
	2018	5,200	5,200					
Jnited Arab Emirates	2015	28,745					123	
	2016	28,761	28,638				123	
	2017	30,371					323	
	2018	*30,934	*30,349	••	••	••	585	
Jzbekistan	2015	13,217	11,335	1,880			1	
	2016	14,104		1,880			2	
	2017 2018	14,377 14,195		1,858 1,915			3 4	
(int Name							6	
/iet Nam	2015 2016	*39,133 *43,416		16,213 17,461		135 166	6 6	
	2017	*44,334		18,161		211	9	
	2018	*44,815		18,341		243	106	
emen emen	2015	1,579	1,519				60	
	2016	1,769	1,519				*250	
	2017	*1,769		••	••		*250	
	2018	*1,769	*1,519			••	*250	
Europe	2015	1,390,982		265,692	165,429	142,803	99,521	3,478
	2016 2017	1,408,833 1,431,665		269,123 271,098	166,408 166,004	155,594 170,462	105,992 112,281	3,537 3,660
	2017	1,457,716		271,056	166,820	182,039	121,180	3,705
Mbania	2015	1,922	123	1,799			0	
iibai iia	2016	1,925	*123	1,801	•••	··	1	
	2017	2,172	123	2,048			1	
	2018	2,229	123	2,105		••	1	
Andorra	2015	51		46		••	0	
	2016	51	5 5	46	••	••	0	
	2017 2018	52 53	5	46 46			1 2	
Austria	2015 2016	24,742 25,217		13,650 14,117	••	2,489 2,730	937 1,096	1 1
	2017	24,920		14,150		2,887	1,269	1
	2018	25,620		14,516		3,133	1,438	1
Belarus	2015	9,798	9,750	34		7	7	
	2016	10,009	9,826	74	••	62	47	••
	2017	10,151		103		84	80	
	2018	*10,269		*105	••	101	157	
Belgium	2015	21,167		1,422	5,913	2,176	3,132	4
	2016	21,668		1,425	5,913	2,370	3,327	4
	2017 2018	22,236 22,793		1,417 1,418	5,918 5,918	2,797 3,261	3,617 3,987	4 4
Roonia and Horzagovina							·	
Bosnia and Herzegovina	2015 2016	*4,304 4,364		*2,117 2,155		••	 9	
	2017	4,522	2,295	2,211	**		16	
	2018	4,440	2,135	2,236	••	51	18	

	S	activity producer		1		icers	Autoprodu	,,
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
		0	283	283				
		Ö	283	283				
•		0	283	283				
•	••	0	283	283				
5,37		25,324	37,999	68,694	98	544	3,811	4,453
7,034		26,131	40,055	73,220	504	550	4,223	5,277
9,944		26,722	42,345	79,011	1,222	551	4,417	6,190
12,112	••	27,740	42,262	82,114	1,436	551	4,450	6,437
			*4,400	*4,400	••			
			4,674	4,674				
			5,200	5,200				
			5,200	5,200				
123		<u></u>	28,622	28,745			<u></u>	
123			28,638	28,761				
323			30,048	30,371				
588			*30,349	*30,934				
•		1,880	11,335	13,217				
2	••	1,880	12,222	14,104		••		
3		1,858	12,516	14,377				
4		1,915	12,276	14,195				
13		15,905	*19,965	*36,005	*6	*308	*2,814	*3,128
166		17,131	*20,728	*38,025	*6	*330	*5,055	*5,391
214		17,809	*20,828	*38,851	*6	*352	*5,125	*5,483
343		17,989	*21,000	*39,332	*6	*352	*5,125	*5,483
			1,402	1,402	60		*117	*177
	••		1,402	1,402	*250		*117	*367
-		••	*1,402	*1,402	*250		*117	*367
	••	••	*1,402	*1,402	*250		*117	*367
220,704	165,429	262,637	629,750	1,278,520	25,098	3,055	84,309	112,462
236,100	166,408	265,862	623,705	1,292,081	29,018	3,261	84,473	116,752
255,166 272,598	166,004 166,820	267,867 269,234	616,551 616,839	1,305,588 1,325,491	31,237 34,326	3,231 3,221	91,609 94,678	126,077 132,225
		4.700	00	4.007			*05	
(		1,799 1,801	98 *98	1,897 1,900			*25 *25	*25 *25
	••	2,048	98	2,147	••		25 25	25
•		2,105	98	2,204			25	25
(		46	5	51				
(		46		51				
•		46	5 5	52		••		
2		46	5	53				
3,427		13,113	5,964	22,504		537	1,701	2,238
3,82		13,571	5,561	22,959		546	1,712	2,258
4,157		13,718	5,272	23,147		432	1,341	1,773
4,572		14,088	5,244	23,904		428	1,288	1,716
8		28	8,953	8,989	6	6	797	809
100		68	8,985	9,153	9	6	841	856
122		97	9,078	9,297	42	6	806	854
175		*98	*9,097	*9,369	83	*7	*810	*900
2,163	5,913	1,422	7,199	16,697	3,149		1,321	4,470
2,35	5,913	1,425	7,162	16,851	3,350		1,467	4,817
2,769	5,918	1,417	7,017	17,121	3,649	••	1,466	5,115
3,233	5,918	1,418	6,660	17,229	4,019		1,545	5,564
		*2,117	*1,957	*4,074	••		*230	*230
Ç	••	2,155	1,970	4,134		••	*230	*230
16		2,211	2,065	4,292			*230	*230
69		2,236	2,065	4,370			70	70

Table 30

				-	Total producers				
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other	
Bulgaria	2015 2016 2017 2018	11,016 10,904 11,069 11,286	3,822 3,785	3,219 3,223 3,372 3,379	1,975 1,967 *1,967 *1,967	699 699 698 699	1,029 1,028 1,036 1,033	103 165 211 191	
Croatia	2015 2016 2017 2018	4,764 4,794 4,982 4,999	2,082 2,141	2,207 2,175 2,205 2,202	  	*375 482 576 586	*58 56 60 68	  *1	
Czechia	2015 2016 2017 2018	21,866 21,989 22,267 22,276	13,087 13,334	2,260 2,262 2,265 2,264	4,290 4,290 4,290 4,290	281 282 308 316	2,075 2,068 2,070 2,075	  	
Denmark	2015 2016 2017 2018	14,002 14,226 14,321 15,073	8,120 7,916	7 9 9	  	5,077 5,246 5,490 6,121	782 851 906 998	  	
Estonia	2015 2016 2017 2018	2,857 2,577 2,542 2,819	2,251 2,208	6 6 7 7	  	300 310 312 310	 10 15 32	  	
Faeroe Islands	2015 2016 2017 2018	*128 *129 125 125	*70 69	39 *39 40 40	  	20 *20 16 16	  	  	
Finland	2015 2016 2017 2018	16,616 16,289 17,174 17,154	8,672 8,997	3,249 3,249 3,272 3,287	2,752 2,764 2,779 2,784	1,005 1,565 2,044 2,041	17 39 82 140	  	
France	2015 2016 2017 2018	132,219 133,150 133,089 133,457	24,895 21,907	25,552 25,620 25,707 25,793	63,130 63,130 63,130 63,130	10,298 11,567 13,499 14,900	7,137 7,702 8,611 9,617	235 236 235 234	
Germany	2015 2016 2017 2018	203,255 208,215 215,324 229,195	95,716 95,134	11,255 11,207 11,120 10,940	10,799 10,799 10,799 10,799	44,580 49,435 55,580 58,843	39,222 40,677 42,291 45,179	432 381 400 404	
Gibraltar	2015 2016 2017 2018	*43 *43 *43 *43	*43 *43	  	  	  	  	 0 0	
Greece	2015 2016 2017 2018	18,942 19,165 19,427 19,582	10,799 10,805	3,392 3,392 3,392 3,409	  	2,091 2,370 2,624 2,877	2,604 2,604 2,606 2,652	  	
Guernsey	2015 2016 2017 2018	*115 *115 *132 *132	*115 *132	 		 	  0	  	
Hungary	2015 2016 2017 2018	8,634 8,758 8,860 9,249	6,100 6,090	57 57 57 57	2,000 2,000 2,000 2,013	329 329 329 329	172 235 344 726	14 37 40 41	
Iceland	2015 2016 2017 2018	2,772 2,772 2,823 2,973	117 116	1,987 1,987 1,995 2,099	  	3 3 2 2	  	665 665 710 756	

	rs	activity produce				ucers	Autoprod	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
1,728 1,727 1,734 1,732	1,975 1,967 *1,967 *1,967	3,219 3,223 3,372 3,379	3,854 3,635 3,551 3,783	10,776 10,552 10,624 10,861	103 165 211 191	  	137 187 234 234	240 352 445 425
*433 531 636 658	  	2,205 2,173 2,202 2,199	1,959 1,917 1,984 1,980	4,597 4,627 4,822 4,834	  	*2 *2 3 *3	165 *165 157 162	167 *167 160 165
2,356 2,356 2,378 2,39	4,290 4,290 4,290 4,290	2,069 2,071 2,081 2,081	11,275 11,385 11,582 11,586	19,990 20,096 20,331 20,348	  	191 191 184 183	1,685 1,702 1,752 1,745	1,876 1,893 1,936 1,928
5,077 5,246 5,490 6,12	  	7 9 9 9	7,521 7,501 7,286 7,306	12,605 12,756 12,785 13,436	782 851 906 998	  	615 619 630 639	1,397 1,470 1,536 1,637
294 314 325 347	  	6 6 7 7	2,526 2,226 2,183 2,445	2,826 2,546 2,515 2,793	6 6 2 1	  	25 25 25 25	31 31 27 26
20 *20 16 16	  	39 *39 40 40	*69 *70 69 69	*128 *129 125 125	  	  	  	  
1,006 1,568 2,047 2,044	2,752 2,764 2,779 2,784	3,063 3,063 3,084 3,098	7,743 6,826 6,958 6,864	14,564 14,221 14,868 14,790	16 36 79 137	186 186 188 189	1,850 1,846 2,039 2,038	2,052 2,068 2,306 2,364
13,64 <sup>2</sup> 15,186 17,554 19,445	63,130 63,130 63,130 63,130	25,368 25,435 25,518 25,609	22,162 21,065 18,204 16,063	124,301 124,816 124,406 124,247	4,029 4,319 4,791 5,306	184 185 189 184	3,705 3,830 3,703 3,720	7,918 8,334 8,683 9,210
83,974 90,255 98,044 104,199	10,799 10,799 10,799 10,799	11,212 11,164 11,078 10,908	86,552 85,409 83,824 91,301	192,537 197,627 203,745 217,207	260 238 227 227	43 43 42 32	10,415 10,307 11,310 11,729	10,718 10,588 11,579 11,988
0 0	  	  	*43 *43 *43 *43	*43 *43 *43 *43	  	  	  	  
4,695 4,974 5,230 5,529	  	3,392 3,392 3,392 3,409	10,294 10,231 10,234 10,076	18,381 18,597 18,856 19,014	  	  	561 568 571 568	561 568 571 568
	  	  	*115 *115 *132 *132	*115 *115 *132 *132	  	  	  	
345 355 374 443	2,000 2,000 2,000 2,013	57 57 57 57	5,856 5,878 5,837 5,837	8,258 8,290 8,268 8,350	170 246 339 653	  	206 222 253 246	376 468 592 899
668 668 712 758	  	1,987 1,987 1,995 2,099	117 117 116 116	2,772 2,772 2,823 2,973	  	  	 	

Table 30

Country or area	Year		Combustible		Total producers			
	icai	Total	fuels	Hydro	Nuclear	Wind	Solar	Other
Ireland	2015 2016	9,679		529 529		2,451	2	
	2017	10,017 10,608	6,745	529		2,786 3,318	6 16	
	2018	10,981	6,752	529		3,676	24	
sle of Man	2015 2016	194 184		1				
	2017	187	186	1		 		
	2018	187		1				
Italy	2015 2016	116,964 114,162		22,220 22,298		9,137 9,384	18,901 19,283	1,089 1,101
	2017 2018	114,240 115,220		22,426 22,498		9,737 10,230	19,682 20,108	1,106 1,108
I				22,400	••	10,230	20,100	1,100
Jersey	2015 2016	78 78	78			 		
	2017 2018	78 78						
Kosovo	2015	959		43		1		
103070	2016	1,009	915	86		1	 7	
	2017 2018	1,409 1,409		80 80		34 34	7 7	
_atvia	2015	2,931	1,275	1,588	••	68		0
	2016 2017	2,927 2,942	1,292	1,564 1,564		70 78	1 1	0
	2018	2,915		1,565		79	2	
iechtenstein	2015	*16		*10			*5	
	2016 2017	*16 *16		*10 *10			*5 *5	
	2018	*16		*10			*5	
₋ithuania	2015	3,587	2,180	877		436	69	25
	2016 2017	3,665 3,326	1,832	877 877		509 518	70 74	25 25
	2018	3,354	1,837	877		533	82	25
Luxembourg	2015 2016	2,024 1,710		1,330 1,330		64 120	116 122	
	2017	1,711	133	1,330		120	128	
	2018	1,718		1,330		123	131	••
Malta	2015 2016	668 573	480			0	75 94	
	2017 2018	707 726				0	112 131	
Montonogra	2015	870		651				
Montenegro	2016	870	219	651				
	2017 2018	949 *999		652 *652		72 118	3	
Netherlands	2015	33,866	28,401	37	485	3,391	1,515	37
	2016 2017	34,176 33,815	27,311	37 37	485 485	4,257 4,202	2,049 2,904	37 37
	2018	35,024		37	485	4,393	4,522	37
North Macedonia	2015	1,790	1,074	658		37	17	4
	2016 2017	1,823 1,836	1,104	660 671		37 37	17 17	5 7
	2018	1,839	1,104	674		37	17	7
Norway	2015	33,837		31,372		867		35
	2016 2017	33,808 34,228	1,074	31,817 31,912		883 1,207		35 35
	2018	35,348	1,073	32,530	••	1,710		35

Autoproducers Main activity producers								
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
361 367 386 403	343 345 350 356	  	18 22 36 47	9,318 9,650 10,222 10,578	6,354 6,351 6,395 6,396	529 529 529 529	  	2,435 2,770 3,298 3,653
*8 8 8	*8 8 8 8	  	  	186 176 180 180	185 175 179 179	1 1 1	  	  
5,258 4,834 5,034 5,521	5,042 4,658 4,863 5,347	121 117 119 105	95 59 52 69	111,706 109,328 109,206 109,699	60,575 57,438 56,426 55,929	22,099 22,181 22,307 22,393	  	29,032 29,709 30,473 31,377
*28 *28 *28 *28	*28 *28 *28 *28	  	  	50 50 50 50	50 50 50 50	  		  
	  	  	  	959 1,009 1,409 1,409	915 915 1,288 1,288	43 86 80 80	  	1 8 40 40
42 44 34 35	41 41 31 30	1 1 1 2	0 2 2 3	2,889 2,883 2,908 2,880	1,234 1,251 1,268 1,239	1,587 1,563 1,563 1,563	  	68 69 77 78
	  	  	  	*16 *16 *16 *16	*1 *1 *1 *1	*10 *10 *10 *10	  	*5 *5 *5 *5
274 278 280 280	249 253 255 255	  	25 25 25 25 25	3,313 3,387 3,046 3,074	1,931 1,931 1,577 1,582	877 877 877 877	  	505 579 592 615
180 201 188 188	62 77 58 55	2 2 2 2	116 122 128 131	1,844 1,509 1,523 1,530	452 61 75 79	1,328 1,328 1,328 1,328	  	64 120 120 123
78 98 117 136	3 5 5 5	  	75 94 112 131	590 475 590 590	590 475 590 590	  	  	  
  	  	  	  	870 870 949 *999	219 219 225 *225	651 651 652 *652	  	 72 121
7,041 7,446 8,258 10,058	5,001 4,920 4,919 5,444	  	2,040 2,526 3,339 4,614	26,825 26,730 25,557 24,966	23,400 22,391 21,231 20,106	37 37 37 37	485 485 485 485	2,903 3,817 3,804 4,338
0 0 0	0 0 0	  	  	1,790 1,823 1,836 1,839	1,074 1,104 1,104 1,104	658 660 671 674	  	58 59 61 61
588 588 574 587	553 553 539 552	  	35 35 35 35	33,249 33,220 33,654 34,761	1,010 520 535 521	31,372 31,817 31,912 32,530	  	867 883 1,207 1,710

Table 30

					otal producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Poland	2015	37,327	29,961	2,370		4,886	108	2
	2016	38,105	29,783	2,386	••	5,747	187	2 2
	2017	42,850 43,046	34,412 34,314	2,391 2,392		5,758 5,766	287 562	12
Dortugal	2015		•	•				25
Portugal	2015 2016	19,624 20,613	8,048 7,990	6,168 6,960	••	4,936 5,125	447 513	25 25
	2017	20,933	7,974	7,226	••	5,125	579	29
	2018	21,185	8,080	7,236	••	5,173	667	29
Republic of Moldova	2015	*1,091	473	16		1	1	*600
	2016	*1,063 *1,077	443 450	16 16	••	2 9	2 2	*600 *600
	2018	*1,078	425	16		34	3	*600
Romania	2015	23,830	11,233	6,730	1,411	3,130	1,326	
	2016	23,580	11,038	6,734	1,411	3,025	1,372	••
	2017	23,572 23,551	11,067 11,022	6,691 6,700	1,411 1,411	3,029 3,032	1,374 1,386	••
			•	•	•			••
Russian Federation	2015	257,075 264,730	179,148 185,815	50,998 51,016	26,304 27,189	101 96	446 536	78 78
	2017	267,639	187,701	51,241	27,109	98	574	74 74
	2018	271,600	190,215	51,333	29,140	161	678	74
Serbia	2015	7,358	4,327	3,022			9	
	2016	7,410		3,030	••	17	11	••
	2017 2018	7,416 8,088	4,343 4,873	3,038 2,936		25 264	10 *15	
Slovakia	2015	7,782	2,754	2,522	1,940	3	533	30
olovania	2016	7,762		2,524	1,940	3	533	32
	2017	7,671	2,645	2,523	1,940	4	528	31
	2018	7,625	2,651	2,528	1,940	4	471	31
Slovenia	2015	3,360	1,133	1,295	688	5	239	••
	2016	3,536 3,619	1,318 1,332	1,293 1,347	688 688	5 5	232 247	
	2018	3,798	1,514	1,344	688	5	247	
Spain	2015	114,057	56,350	20,253	7,399	22,947	7,018	*90
•	2016	113,252	55,454	20,280	7,399	22,994	7,030	*95
	2017	111,144 111,093	53,510 53,063	20,279 20,280	7,117 7,117	23,104 23,460	7,039 7,078	*95 *95
Nove dans	i i		•		•			
Sweden	2015 2016	40,885 41,511	8,945 8,689	16,329 16,466	9,688 9,768	5,819 6,435	104 153	
	2017	39,798	7,442	16,502	8,999	6,611	244	
	2018	41,223	8,408	16,431	8,656	7,300	428	
Switzerland	2015	19,618	1,016	13,815	3,333	60	1,394	
	2016	20,839 21,614		14,806 15,354	3,333 3,333	75 75	1,664 1,906	••
	2018	22,061	940	15,542	3,333	75	2,171	••
Jkraine	2015	55,904	35,335	5,883	13,835	428	423	
Mano	2016	57,335	36,475	6,172	13,835	428	425	••
	2017 2018	52,764 51,508		6,213 6,243	13,835 13,835	465 476	759 1,201	••
	i i			•	•			
United Kingdom	2015 2016	96,395 97,739	58,316 55,437	4,677 4,736	9,487 9,497	14,305 16,125	9,601 11,931	9 13
	2017	109,286	62,767	4,773	9,361	19,585	12,782	18
	2018	108,280	59,278	4,779	9,314	21,770	13,119	20
Oceania	2015	81,257		14,184		4,975	6,074	1,014
	2016 2017	80,064 79,587		14,179 14,188		5,079 5,584	6,858 7,553	1,014 1,014
	2017	82,182		14,440		6,448	8,873	1,014

	s	activity producer	Main			Autoproducers					
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total			
4,886		2,369	27,934	35,189	110	1	2,027	2,138			
5,747		2,385	27,895	36,027	189	1	1,888	2,078			
5,758		2,390	31,929	40,077	289	1	2,483	2,773			
5,766		2,391	31,220	39,377	574	1	3,094	3,669			
5,208		6,162	6,205	17,575	200	6	1,843	2,049			
5,407 5,424	••	6,954 7,220	6,209 6,205	18,570 18,849	256 309	6 6	1,781 1,769	2,043 2,084			
5,424 5,511	·· ··	7,220 7,230	6,208	18,949	358	6	1,872	2,004			
*602		16	330	*948			143	143			
*604		16	330	*950		···	113	113			
*607		16	330	*953	4		120	124			
*612		16	330	*958	25		95	120			
3,572	1,411	6,619	8,895	20,497	884	111	2,338	3,333			
3,474	1,411	6,644	8,887	20,416	923	90	2,151	3,164			
3,621 3,666	1,411 1,411	6,610 6,617	8,908 8,872	20,550 20,566	782 752	81 83	2,159 2,150	3,022 2,985			
625	26,304	50,521	154,773	232,223		477	24,375	24,852			
710	27,189	50,566	161,794	240,259	••	450	24,021	24,652			
746	27,952	50,779	162,912	242,389		461	24,789	25,250			
913	29,140	50,871	165,054	245,977	••	462	25,161	25,623			
9		3,022	4,250	7,281			77	77			
28		3,030	4,223	7,281			129	129			
35		3,038	4,223	7,296			120	120			
279	••	2,936	4,733	7,948	••		140	140			
104	1,940	2,495	2,119	6,658	462	27	635	1,124			
104 150	1,940 1,940	2,493 2,493	2,106 2,012	6,643 6,595	464 413	31 30	604 633	1,099 1,076			
200	1,940	2,496	1,882	6,518	306	32	769	1,107			
12	688	1,179	1,086	2,965	232	116	47	395			
11	688	1,177	1,272	3,148	226	116	46	388			
12	688	1,231	1,286	3,217	240	116	46	402			
12	688	1,228	1,467	3,395	240	116	47	403			
29,951	7,399	20,053	49,350	106,753	*104	*200	*7,000	*7,304			
30,015	7,399	20,080	48,454	105,948	*104	*200	*7,000 *7,000	*7,304			
30,134 30,478	7,117 7,117	20,079 20,080	46,510 46,063	103,840 103,738	*104 *155	*200 *200	*7,000 *7,000	*7,304 *7,355			
5,923	9,688	16,321	7,751	39,683		8	*1,194	*1,202			
6,588	9,768	16,454	7,751 7,495	40,305	••	12	*1,194	*1,202			
6,855	8,999	16,484	6,175	38,513	··	18	1,267	1,285			
7,728	8,656	16,413	6,978	39,775		18	1,430	1,448			
60	3,333	13,304	260	16,957	1,394	511	756	2,661			
75	3,333	14,111	217	17,736	1,664	695	744	3,103			
75 75	3,333	14,621	257	18,286	1,906	733 751	689 683	3,328			
75	3,333	14,791	257	18,456	2,171	751	683	3,605			
848	13,835	5,878	32,584	53,145	3	5 5	2,751	2,759			
851	13,835 13,835	6,167 6,206	33,013	53,866	2	5	3,462	3,469			
1,193 1,634	13,835	6,238	29,265 27,662	50,499 49,369	31 43	7 5	2,227 2,091	2,265 2,139			
13,131	9,487	4,357	51,961	78,936	10,784	320	6,355	17,459			
14,984	9,497	4,360	48,730	77,571	13,085	376	6,707	20,168			
19,201	9,361	4,361	50,057	82,980	13,184	412	12,710	26,306			
21,877	9,314	4,366	46,055	81,612	13,032	413	13,223	26,668			
6,094		14,078	49,008	69,181	5,969	105	6,002	12,077			
6,464		14,073	47,170	67,707	6,487	105	5,764	12,357			
7,097		14,089	45,572 45,300	66,758	7,055 7,420	99	5,676 5,984	12,829			
8,939	••	14,342	45,399	68,680	7,420	99	5,984	13,503			

Table 30

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
American Samoa	2015	46					2	
	2016 2017	50 50		••			4 4	••
	2018	*51					5	
Australia	2015	68,435	49,983	8,271		4,234	5,946	1
	2016	67,265	47,977	8,271		4,327	6,689	1
	2017 2018	66,761 69,274		8,271 8,523		4,816 5,679	7,354 8,626	1 1
Cook Islands	2015	*14					3	
JOOK ISIAITUS	2016	*15	*11				4	
	2017 2018	*15 *17					4 6	
	i i							••
Fiji	2015 2016	304 328		135 130		10 21	3 5	
	2017	*360	*194	138	••	*21	7	
	2018	*363	*194	138		*21	10	
French Polynesia	2015	*252 *262		47			28	
	2016 2017	*263 *267		47 47			32 35	
	2018	*268		47		0	35	
Guam	2015	498				0	26	
	2016 2017	498 446				0 0	26 26	
	2017	446				0	26	
Kiribati	2015	*10	*8				2	
	2016	*11					3	
	2017 2018	*11 *11				·· ·-	3 3	
Marshall Islands	2015	37	36				1	
	2016	*38	*36				2	
	2017 2018	*39 *39					2 2	
Micronesia (Fed. States of)	2015	*34	*32	2			1	
viiororiesia (i ea. etates or)	2016	*34	*32	2	••		1	
	2017 2018	*34 *36		*2 *2		 1	1 2	
VI	i i			-		·		••
Nauru	2015 2016	*6 *7			••		0 1	
	2017	*8	*7				1	
	2018	*14					1	
New Caledonia	2015 2016	998 1,001		78 78		38 38	7 10	
	2017	*1,020	*875	78		54	13	
	2018	*1,040	*875	78		54	*33	
New Zealand	2015	9,448	2,384	5,381		689	37	957
	2016 2017	9,290 9,306	2,210 2,209	5,381 5,381		689 689	53 70	957 957
	2018	9,353		5,381		689	90	981
Niue	2015	*2	*2		••	••	0	
	2016 2017	*2 *2	*2 *2				0 0	
	2018	*2	*2			 	0	
Northern Mariana Islands	2015	*95	*95			**		**
	2016 2017	95 *95						
	2017	*95						

		Autoproducers Main activity producers						
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
				46	44			2
				50	46			4
				50	46			4
				*51	*46			2 4 4 5
11,073	5,221		5,852	57,362	44,762	8,271		4,329
11,336	4,983		6,353	55,929	42,994	8,271		4,664
11,785	4,883		6,902	54,976	41,436	8,271		5,269
12,433	5,191		7,242	56,841	41,254	8,523		7,064
	••			*14	*11			3 4
	••			*15	*11	••	••	4
	••			*15	*11	••	••	4 6
				*17	*11			6
* 40	*40			000	44.4	405		
*42	*42			263	114	135		14
*42	*42			286	*130	130		26 *28
*54	*54			*306	*140	138	••	^28
54	54			*309	*140	138	••	*31
				+050	+4 <del>77</del>	4-		22
	••	••	••	*252 *262	*177 *105	47		28 32 35
	••	••	••	*263	*185	47	••	32
	•••	••	••	*267	*185	47	••	35
••	•••	••	••	*268	*186	47	••	35
				498	472			26
	••	••		498	472 472		••	26 26
••	••	••		496 446	420			26
••	••	••		446	420 420		••	26 26
••	••	••		440	420	••	••	20
*1	*1			*9	*7			2
*1	*1	**		*10	*7			3
*1	*1			*10	*7			3
*1	*1			*10	*7	 	 	2 3 3 3
•	•	••	••		•	••	••	ŭ
				37	36			1
				*38	*36			2
				*39	*37			2
				*39	*37			1 2 2 2
	••			*34	*32	2 2 *2 *2		1
				*34	*32	2		1
				*34	*32	*2		1
				*36	*32	*2		3
								_
	••	••	••	*6	*6	••	••	0
	••	••	••	*7	*6 *7	••	••	1
	••			*8	^/	••	••	1
••	••	••		*14	*13	••	••	1
*60	*60		0	027	015	70		4.4
*60 *61	*60 *60	••	0	937 940	815 815	78 78	••	44
*63	*60 *60		1 3	*957	*815	76 78		46 64
*68	*60	••	ა *8	*972	*815	76 78	••	79
00	00	••	O	912	010	10	••	19
285	221	3	61	9,163	2,163	5,378		1,622
301	221	3	77	8,989	1,989	5,378		1,622
318	221	3	94	8,988	1,988	5,378	 	1,622
338	221	3	114	9,015	1,991	5,378		1,646
		-		,,	.,	-,		.,
				*2	*2			0
				*2	*2			0
				*2 *2 *2 *2	*2 *2 *2 *2 *2			0 0 0
				*2	*2			0
				*95	*95			
				95	95			
				*95	*95			
				*95	*95			

Table 30

		Total producers								
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other		
Palau	2015	31	30				1			
	2016	40					*1			
	2017	*40		••			*1			
	2018	*40					*2			
Papua New Guinea	2015	*905	*590	*258		••	1	56		
·	2016	*971	*656	*258			1	56		
	2017	*971	*656	*258	••	••	1	56		
	2018	*971	*656	*258			1	56		
Samoa	2015	*44		11		1	10			
	2016	*52		*11		1	17			
	2017	*53		*12		1	17			
	2018	*54	*23	*12		1	*18			
Solomon Islands	2015	*37	*36	0			1			
	2016	*38		0	••	••	2			
	2017	*39		0			3			
	2018	*39	*36	0	••		3			
Tonga	2015	*17				0	*2			
	2016	20				0	2			
	2017	24		••	••	0	6			
	2018	24	18	••		0	6			
Tuvalu	2015	*5	*3				2			
	2016	*5					2			
	2017	*5	*3				2 2			
	2018	5	3	••			2			
Vanuatu	2015	30		1		4	0			
	2016	32		1		4	1			
	2017	*33		1	••	3	3			
	2018	*33	*25	1	••	3	3			
Wallis and Futuna Is.	2015	9	9	0			0			
	2016	*9		0			0			
	2017	*9		0	••	••	0			
	2018	*9	*9	0			0			

				mogamano					
	Autoprod	ucers		Main activity producers					
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other	
*2 *2 *2	*2 *2 *2			29	28			1	
*2	*2			38	37			*1	
*2	*2		••	*38				*1	
*2	*2	••		*38	*37		••	*2	
*608		*102	56	*296	*140	*155		1	
*608	*450	*102	56	*363	*206	*155		1	
*602	*450	*96	56	*369	*206	*162	••	1	
*602	*450	*96	56	*369	*206	*162	••	1	
0			0	*44	*23	11		11	
0			0	*52	*23	*11		18	
0			0	*53	*23	*12		18	
0			0	*54	*23	*12		*19	
*5	*5			*32	*31	0		1	
*5	*5			*33		0		2	
*5	*5			*34	*31	0		2 3 3	
*5	*5			*34	*31	0		3	
				*17	*15			*2 2 6 6	
				20	17			2	
				24	18			6	
				24	18			6	
				*5	*3			2	
				*5	*3			2	
				*5 *5 5	*3 *3 3			2 2 2 2	
				5	3			2	
				30	25	1		4	
				32	25	1		5	
				*33	*25	1		4 5 6	
	••			*33	*25	1		6	
				9	9	0		0	
				*9	*9	Ö		Ö	
				*9 *9	*9 *9	0		0	
				*9	*9	0		0	

#### Utilization of installed electricity capacity - by type

Kilowatt-hours per kilowatt divided by 8760

#### **Table Notes**

Data on utilization are derived by dividing the data on electricity production shown in Table 32 by the net installed capacity shown in Table 30, and then by the total number of hours in a year to yield a percentage of theoretical maximal utilization.

For this table, **Other** under total producers refers to geothermal, tide, wave, marine and other non-specified sources. **Other** under autoproducers refers to nuclear (if any), wind, solar, tide, wave, marine and other non-specified sources. **Other** under main activity producers refers to wind, solar, tide, wave, marine and other non-specified sources.

For Austria data are given in gross maximum capacity.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Figure 74: Utilization of installed electric generating capacity by source and region, 2018

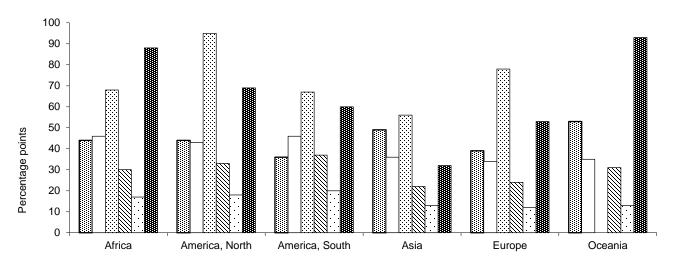


Table 31

### Utilization of installed electricity capacity - by type Kilowatt-hours per kilowatt divided by 8760

		Total producers								
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other		
World	2015 2016 2017 2018	42 42 42 42	2 45 2 45	37 38 37 38	75 74 75 76	23 23 25 26	13 12 13 13	63 60 58 44		
Africa	2015 2016 2017 2018	5 <sup>7</sup> 48 46 44	3 49 6 46	50 47 45 46	75 98 93 68	21 25 28 30	16 14 17 17	79 75 79 88		
Algeria	2015 2016 2017 2018	46 43 45 42	3 43 5 46	7 7 26 56	  	22 22 78 96	17 1 2 2	  		
Angola	2015 2016 2017 2018	44 4* 28 27	1 40 3 17	41 42 37 37	  	  	16 16 16 16	  		
Benin	2015 2016 2017 2018	10 8 10	3 10 0 12	0 1 0	  	  	11 11 11 11	  		
Botswana	2015 2016 2017 2018	55 49 46 45	9 49 6 46		  	  	11 18 18 44	  		
Burkina Faso	2015 2016 2017 2018	35 34 38 33	4 32 3 37	33 50 46 33	  	  	 27 26	  		
Burundi	2015 2016 2017 2018	3 <sup>2</sup> 32 3 <sup>3</sup> 40	2 39 1 56	31 32 24 31	  	  	18 18 18 18	  		
Cabo Verde	2015 2016 2017 2018	30 30 28 27	30 3 28		  	35 34 32 34	9 9 10 13	  		
Cameroon	2015 2016 2017 2018	48 42 45 59	2 26 5 27	68 68 75 78	  	  	11 11 15 11	  		
Central African Rep.	2015 2016 2017 2018	37 37 38	7 1 7 1	64 65 66 67	  	  	16 16 16 16	  		
Chad	2015 2016 2017 2018	30 3° 3°	1 31 1 31	 	  	  	  	 		
Comoros	2015 2016 2017 2018	20 26 30 33	6 26 0 30	  	  	  	  	  		
Congo	2015 2016 2017 2018	50 56 68 68	5 53 5 66	60 62 64 66	  	  	25 25 20 20	  		

### Utilization of installed electricity capacity - by type Kilowatt-hours per kilowatt divided by 8760

Autoproducers Main activity producers								
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
37 38 40 40	44 48	29	16 16 16 15	43 42	45 45	38 38 38 38	75 74 75 76	21 21 21 21
24 29 25 26	32 5 26	9 15	14 16 21 21	54 51 48 47	51 49	51 48 46 47	75 98 93 68	38 37 36 38
11 13 14 10	3 13 4 14	  	  	57 51 53 55	53 55	7 7 26 56	  	18 2 4
35 31 20 19	31 20	  	  	45 42 28 27	42 17	41 42 37 37	  	10 10 10 10
28 24 25 29	28 24 5 25 9 29	  	  	7 6 8 3	7 10	0 1 0	  	1: 1: 1: 1:
  		  	  	56 51 47 45	51 47	  	  	1: 18 18 4-
  	 		  	35 34 38 33	32 37	33 50 46 33	  	2 20
34 40 38 23	40 3 38	  	  	11	39 60	31 32 24 31	  	18 18 18 18
15 14 17 18	14 7 17		  	30 30 28 27	30 28	  	 	2 <sup>1</sup> 2 <sup>1</sup> 2 2 <sup>1</sup>
57 44 48 58	57 44 3 48 3 58	  	  	43 41 44 60	6 5	68 68 75 78	  	1 <sup>1</sup> 1 <sup>1</sup> 1 <sup>1</sup> 1
  		  	  	37 37 37 38	1 1	64 65 66 67	  	16 16 16
  	  	  	  	30 31 31 31	31	  		
  	  	  	  	23 26 30 33	23 26 30 33	  	  	- - -
55 60 74 74	) 60 74	  	  	50 51 54 55	  	60 62 64 66	  	25 25 20 20

Table 31

### Utilization of installed electricity capacity - by type Kilowatt-hours per kilowatt divided by 8760

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Côte d'Ivoire	2015 2016 2017 2018	52 61 53 53	76 3 70	26 29 27 38			  	  
Dem. Rep. of the Congo	2015 2016 2017 2018	40 39 35 43	3 3	42 41 36 42		  	  16	  
Djibouti	2015 2016 2017 2018	16 8 5 5	8 5 5	  	  			  
Egypt	2015 2016 2017 2018	57 55 49 42	56 9 49	55 55 52 51		31 34	21 14 47 32	  
Equatorial Guinea	2015 2016 2017 2018	28 28 18 15	33 33	18 18 7 7			  	  
Eritrea	2015 2016 2017 2018	25 26 21 25	3 26 21	  	  	23 23 23 23	23 23 13 25	  
Eswatini	2015 2016 2017 2018	30 24 25 31	26 5 29	36 19 18 33			 13 13	  
Ethiopia	2015 2016 2017 2018	49 34 36 36	5 5 4	57 35 38 39		28 19	21 17 21 21	  
Gabon	2015 2016 2017 2018	48 51 49 40	45	62 64 61 36		  	23 23 23 23	  
Gambia	2015 2016 2017 2018	27 29 30 29	29	  		1	18 18 18 18	  
Ghana	2015 2016 2017 2018	34 38 35 37	36 33	42 40 41 43			2 14 14 9	  
Guinea	2015 2016 2017 2018	21 31 31 36	26 23	27 34 38 37	  	  	  	  
Guinea-Bissau	2015 2016 2017 2018	29 31 31 31	34 34	  	  		 15 15 15	  
Kenya	2015 2016 2017 2018	48 51 51 48	21 38	50 57 38 55		25 27	  	83 79 83 93

	Autoprod	ducers		Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
52	2 52			52	65	26		••
86	86			61	76	26 29 27		
86 30	86	••		52 53	70 63	27 38		-
30		••	••		03		••	
1	1 14	0		49	1	51		-
(		0 4		49 42	1 2	52 42	••	-
25	5 90	8	••	48	2	48		16
				16 8	16 8			
			•• ••	5	5		··	
				5	5			-
91	1 91			57	58	55		27
93	3 93		••	55	55	55 52		29
93	3 93			48	48	52		29 36 27
78	3 78	••		41	41	51		27
				28	33	18		-
				28	33	18		-
		••	••	18 15	33 33 28	7 7	••	-
•		••	••	13	20	,	••	-
13	13			26	26			23 23
13 16	3 13 5 16			27 21	27 21	••		23
16	5 16		••	25	26			13 24
28 28	3 29	**		34 18	0	38 20		-
31	3 29 1 32	••	 13	17		19		
31	1 33		13	30		34		-
				49	0	57		26
			···	34 35	0	35		26 27 18 18
				35	0	38 39		18
•				36	1	39		18
35	36 37	**	23 23	49	42	62		•
36	37		23	53 51	47 44	64		
37 22	7 38 2 22	29 29	23 23	42	48	62 36		
12	2 12	••		34	35 36	••		12
12 12 12	2 12 2 12 2 12	••	••	35 37 36	36 38 37	••	••	12 12 12
12	2 12			36	37			12
10	) 10			36	31	42		
10	10		···	36 39 37	39	40		14 14 9
10	10	••	••	37	39 34 36	41		14
10	) 10	••	••	38	36	43	••	(
20 36	20 36 36			22 29	6	27		
36	36	••	••	29	6 5 9	34	••	
29 48	9 29 3 48			32 32	9 14	38 37		
		••	••			31	••	•
33 40	33	••	••	28	28	••		
39	9 40 9 39			28 29 29 29	32 33			1: 1:
41	1 41			29	28 32 33 33			15 15 15
						50		
-				48 51 51	20 21	50 57		81 77 81 65
		••	••	51	38	57 38 55	••	81
76	6 76			48	21	55		65

Table 31

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Lesotho	2015 2016 2017 2018	76 72 76 79	9 14	76 72 77 80	   	  		
Liberia	2015 2016 2017 2018	39 47 45 26	47 45	50 50 51 15	  	  	 17 15	
Libya	2015 2016 2017 2018	45 35 37 37	35 37	  	  	  	18 18 18 18	
Madagascar	2015 2016 2017 2018	36 41 34 36	31 . 27	65 64 54 67	  	  	11 1 1 1	
Malawi	2015 2016 2017 2018	43 43 40 39	10	63 63 58 53	  	  	  	
Mali	2015 2016 2017 2018	30 29 31 33	35 39	24 24 23 23		  	17 22 16 17	
Mauritania	2015 2016 2017 2018	25 26 27 25	25 28		  	35 37 34 35	19 19 13 19	
Mauritius	2015 2016 2017 2018	43 41 43 41	44 46	23 19 17 24	  	24 19 16 16	16 13 15 8	
Morocco	2015 2016 2017 2018	31 32 31 33	34	15 11 10 13	  	36 38 34 38	0 28 23 42	
Mozambique	2015 2016 2017 2018	89 86 71 69	86 81	93 86 69 71	  	  	10 14 2 1	
Namibia	2015 2016 2017 2018	35 32 36 27	5 5	51 44 52 38	  	30 30 11 40	21 18 18 23	
Niger	2015 2016 2017 2018	22 18 22 18	17	 	  	  	19 19 19 19	
Nigeria	2015 2016 2017 2018	35 31 31 34	28 30	33 47 37 34	  	  	25 26 27 27	
Rwanda	2015 2016 2017 2018	35 38 37 38	39	40 38 37 39			18 19 15 17	

Total   Combustible   Hydro   Other   Total   Combustible   Hydro   Nuclear   Other		Autoprod	lucers		Main activity producers					
33 33 33	Total	Combustible		Other	Total	Combustible			Other	
33 33 33					76		76			
33 33 33					72	9	72			
33       33         54       55       50          43       43         45       45       50          34       34         45       45       55       50               45       45					76	14	77			
43					79	14	80			
43	33	33			52	53	50			
46	43	43			54	55	50		•• ••	
	46	46			45	45	51		17	
	34	. 34			21	41	15		15	
					45	45			18	
					35	35			18	
61 61 61					37	37			18	
52       52         34       22       67          100       10       11        63       63       63          10       10       11        64       63       64          10       10       11        59       63       59          66       66       66         25       27       24          40       40       40         27       32       24          43       43         28       36       23          52       52         28       36       23          45       45          21       19           45       45         21       19           49       49         22       21           65       69        16       29       30       23 <td></td> <td></td> <td></td> <td></td> <td>37</td> <td>37</td> <td></td> <td></td> <td>18 18</td>					37	37			18 18	
52       52         34       22       67          100       10       11        63       63       63          10       10       11        64       63       64          10       10       11        59       63       59          10       10       11        59       63       59          66       66       66         25       27       24          40       40       40         27       32       24          43       43         28       36       23          52       52         28       36       23          45       45          21       19           45       45         21       19            49       49         23       23       23 <td>0.4</td> <td>24</td> <td></td> <td></td> <td>0.4</td> <td>20</td> <td>0.5</td> <td></td> <td></td>	0.4	24			0.4	20	0.5			
52       52         34       22       67          100       10       11        63       63       63          100       10       11        64       63       64          100       10       11        59       63       59          100       10       11        59       63       59          100       10       11        59       63       59          100       10       11        59       63       59          66       66       66         25       27       24          40       40       40         27       32       24          43       43         28       36       23          45       45         21       19           45       45         21       19	61 61	61 61			34	20	65		1	
52       52         34       22       67          100       10       11        63       63       63          10       10       11        64       63       64          10       10       11        59       63       59          66       66       66         25       27       24          40       40       40         27       32       24          43       43         28       36       23          52       52         28       36       23          45       45          21       19           45       45         21       19           49       49         22       21           65       69        16       29       30       23 <td>ნ1 51</td> <td>61 51</td> <td></td> <td></td> <td>39 32</td> <td>21 24</td> <td>64 54</td> <td></td> <td>1</td>	ნ1 51	61 51			39 32	21 24	64 54		1	
10       10       11        63       63       63       64        10       10       11        64       63       64        10       10       11        59       63       59         10       10       11        53       63       53          25       59	52	52			34	22	67		1	
10       10       11        64       63       64          10       10       11        59       63       59          10       10       11        53       63       53          66       66       66         25       27       24          40       40         27       32       24          43       43         28       36       23          55       52         28       36       23          45       45         21       19           51       51         20       19            49       49         22       21            65       69        16       29       30       23           65       69        16       29       30       17 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>										
66       66       66         25       27       24          40       40       40         27       32       24          43       43         28       36       23          52       52         28       36       23          45       45         21       19           51       51         20       19           49       49         23       23           46       46         22       21           65       69        16       29       30       23          60       65        14       28       29       19          65       69        9       30       31       24          5       0         42       53       15	10	10	11		63	63	63			
66	10	10	11		64	63	64			
66	10	10	11		59 53	63	59 53			
40       40         27       32       24          43       43         28       36       23          45       45         21       19           51       51         20       19           49       49         23       23           46       46       46         22       21           46       46         22       21           65       69        16       29       30       23          60       65        14       28       29       19          56       69        9       30       31       24          5       0         42       53       15          5       0         42       53       15          5	10	10			33	03	33			
43       43         28       36       23          45       45         21       19           51       51         20       19           49       49         23       23           46       46         22       21           65       69        16       29       30       23           60       65       69        14       28       29       19           65       69        14       28       29       19	66	66	••		25	27	24		17	
45       45         21       19 </td <td>40</td> <td>40</td> <td></td> <td></td> <td>27</td> <td>32</td> <td>24</td> <td></td> <td>22</td>	40	40			27	32	24		22	
45       45         21       19 </td <td>43</td> <td>43</td> <td></td> <td></td> <td>28</td> <td>36</td> <td>23</td> <td></td> <td>16 17</td>	43	43			28	36	23		16 17	
65       69        16       29       30       23          60       65        14       28       29       19          65       72        15       28       30       17          56       69        9       30       31       24          5       0         42       53       15          5          42       53       15          5          43       54       11          5          41       53       10          5          41       53       10          5          44       54       13          40       25       60       10       90       74       93          28       25       61       14       86       90       86          29       16 <t< td=""><td>52</td><td>52</td><td></td><td></td><td>28</td><td>30</td><td>23</td><td></td><td>17</td></t<>	52	52			28	30	23		17	
65       69        16       29       30       23          60       65        14       28       29       19          65       72        15       28       30       17          56       69        9       30       31       24          5       0         42       53       15          5          43       54       11          5          41       53       10          5          41       53       10          5          41       53       10          5          44       54       13          40       25       60       10       90       74       93          28       25       61       14       86       90       86          29       16 <t< td=""><td>45</td><td>45</td><td>••</td><td></td><td>21</td><td>19</td><td></td><td></td><td>29</td></t<>	45	45	••		21	19			29	
65       69        16       29       30       23          60       65        14       28       29       19          65       72        15       28       30       17          56       69        9       30       31       24          5       0         42       53       15          5          43       54       11          5          41       53       10          5          41       53       10          5          41       53       10          5          44       54       13          40       25       60       10       90       74       93          28       25       61       14       86       90       86          29       16 <t< td=""><td>51</td><td>51</td><td>••</td><td></td><td>20</td><td>19</td><td>••</td><td></td><td>29 28 22 23</td></t<>	51	51	••		20	19	••		29 28 22 23	
65       69        16       29       30       23          60       65        14       28       29       19          65       72        15       28       30       17          56       69        9       30       31       24          5       0         42       53       15          5          43       54       11          5          41       53       10          5          41       53       10          5          41       53       10          5          41       53       10          40       25       60       10       90       74       93          28       25       61       14       86       90       86          29       16 <t< td=""><td>49</td><td>49</td><td></td><td></td><td>23</td><td>23</td><td></td><td></td><td>22</td></t<>	49	49			23	23			22	
60 65	46	46		••	22	21			23	
60 65	65	69	••	16	29	30	23		24	
5       0         42       53       15          5          43       54       11          5          41       53       10          5          44       54       13          40       25       60       10       90       74       93          28       25       61       14       86       90       86          29       16       38       2       73       86       71          1        2       1       73       72       74              35       3       51               32       5       44               36       5       52	60	65		14	28	29	19		31 24 22	
5       0         42       53       15          5          43       54       11          5          41       53       10          5          44       54       13          40       25       60       10       90       74       93          28       25       61       14       86       90       86          29       16       38       2       73       86       71          1        2       1       73       72       74              35       3       51              32       5       44              35       3       51              36       5       52	65	72		15	28	30	17		24	
5           43       54       11          5          41       53       10          5          44       54       13          40       25       60       10       90       74       93          28       25       61       14       86       90       86          29       16       38       2       73       86       71          1        2       1       73       72       74          1        2       1       73       72       74              35       3       51              32       5       44              32       5       44              27       2       38	56	69	••	9	30	31	24		22	
5           43       54       11          5          41       53       10          5          44       54       13          40       25       60       10       90       74       93          28       25       61       14       86       90       86          29       16       38       2       73       86       71          1        2       1       73       72       74              35       3       51               32       5       44               32       5       44               27       2       38 <td>5</td> <td>0</td> <td></td> <td></td> <td>42</td> <td>53</td> <td>15</td> <td></td> <td>30</td>	5	0			42	53	15		30	
40       25       60       10       90       74       93          28       25       61       14       86       90       86          29       16       38       2       73       86       71          1        2       1       73       72       74              35       3       51              32       5       44              36       5       52              27       2       38          5       3        19       26       26            5       3        19       21       21            5       3        19       27       27            5       2        19       21       21	5	·			43	54	11		30 37 32 38	
40       25       60       10       90       74       93          28       25       61       14       86       90       86          29       16       38       2       73       86       71          1        2       1       73       72       74              35       3       51              32       5       44              36       5       52              27       2       38          5       3          27       2       38          5       3               5       3               5       2               5	5				41	53	10		32	
28       25       61       14       86       90       86          29       16       38       2       73       86       71          1        2       1       73       72       74              35       3       51              32       5       44              36       5       52              27       2       38          5       3        19       26       26            5       3        19       21       21            5       2        19       27       27            5       2        19       21       21            5       2        19       21       21	5				44	54	13		38	
28       25       61       14       86       90       86          29       16       38       2       73       86       71          1        2       1       73       72       74              35       3       51              32       5       44              36       5       52              27       2       38          5       3        19       26       26            5       3        19       21       21            5       2        19       27       27            5       2        19       21       21            5       2        19       21       21	40	25	60	10	90	74	93			
35       3       51              32       5       44              36       5       52              27       2       38          5          27       2       38          5               5               5                5	28	25	61	14	86	90	86		•	
.	29	16	38	2	73	86	71			
5     3      19     26     26         5     3      19     21     21         5     2      19     27     27         7     2      19     21     21         22     22     33     25     41     44     33        20     19     48     26     35     32     47        21     21     45     27     35     34     37        24     23     38     27     37     38     34	1	••	2	1	73	72	74		-	
5     3      19     26     26         5     3      19     21     21         5     2      19     27     27         7     2      19     21     21         22     22     33     25     41     44     33        20     19     48     26     35     32     47        21     21     45     27     35     34     37        24     23     38     27     37     38     34					35	2	F1		2	
5     3      19     26     26         5     3      19     21     21         5     2      19     27     27         7     2      19     21     21         22     22     33     25     41     44     33        20     19     48     26     35     32     47        21     21     45     27     35     34     37        24     23     38     27     37     38     34		••	••		32	5	44		18	
5     3      19     26     26         5     3      19     21     21         5     2      19     27     27         7     2      19     21     21         22     22     33     25     41     44     33        20     19     48     26     35     32     47        21     21     45     27     35     34     37        24     23     38     27     37     38     34					36	5	52		17	
5     2      19     27     27         7     2      19     21     21         22     22     33     25     41     44     33        20     19     48     26     35     32     47        21     21     45     27     35     34     37        24     23     38     27     37     38     34					27	2	38		24	
5     2      19     27     27         7     2      19     21     21         22     22     33     25     41     44     33        20     19     48     26     35     32     47        21     21     45     27     35     34     37        24     23     38     27     37     38     34	_			4.0						
5     2      19     27     27         7     2      19     21     21         22     22     33     25     41     44     33        20     19     48     26     35     32     47        21     21     45     27     35     34     37        24     23     38     27     37     38     34	5	3	••	19	26	26	••		-	
22     22     33     25     41     44     33        20     19     48     26     35     32     47        21     21     45     27     35     34     37        24     23     38     27     37     38     34	5	3	••	19	27	27	••			
22     22     33     25     41     44     33        20     19     48     26     35     32     47        21     21     45     27     35     34     37        24     23     38     27     37     38     34	7	2		19	21	21		••	•	
			22							
	22	22	33	25 26	41	44	33		•	
	21	, 19 21	40 45	20 27	ან 35	32 34	47 37	••	•	
	24	23	38	27	37	38	34		-	
23 23 35 32 40 23 23 38 40 38 23 23 23 37 30 37										
ک کی ۔	23	23		••	35	32	40		18	
	23	23			38 37	40 39	38		19 15 17	
23 23	23	23	••	••	38	41	30	••	17	

Table 31

					otal producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Sao Tome and Principe	2015 2016 2017 2018	3 3 3 3	6 36 6 37	38 38 34 29		  	14 14 14 14	  
Senegal	2015 2016 2017 2018	4 5 5 4	2 55 0 55	  	  	  	2 3 11 6	 
Seychelles	2015 2016 2017 2018	4 4 3 3	1 43 8 39	  	  	13 13 11 14	34 13 11 11	  
Sierra Leone	2015 2016 2017 2018	2 2 2 1	5 12 5 12	38 42 42 16	  	  	17 16 17 15	
Somalia	2015 2016 2017 2018	5 5 5 5	0 50 0 50	  	  	  	  	 
South Africa	2015 2016 2017 2018	6 5 5 5	8 61 5 57	57 61 80 85	75 98 93 68	12 18 25 32	17 15 18 16	 
South Sudan	2015 2016 2017 2018	7 6 4 5	1 63 7 51	  	  	  	16 16 4 4	
St. Helena and Depend.	2015 2016 2017 2018	1 1 1 1	2 13 2 13	  	  	14 11 8 11	11 15 11 11	 
Sudan	2015 2016 2017 2018	4 4 4 4	7 38 7 36	60 58 61 58	  	  	  	  
Togo	2015 2016 2017 2018	2 5 3 3	1 54 5 35	10 43 35 34	  	  	  .1	
Tunisia	2015 2016 2017 2018	4 4 4 4	1 42 1 42	13 8 3 3	  	21 23 21 22	19 19 31 14	  
Uganda	2015 2016 2017 2018	4 4 4 4	6 17 8 24	50 54 55 55	  	  	 4 13 9	
United Rep. of Tanzania	2015 2016 2017 2018	5 5 5 5	9 68 9 67	42 48 48 45	  	  	13 20 20 40	• • •
Zambia	2015 2016 2017 2018	6 4 5 6	7 17 6 46	66 53 58 60	  	  	   10	 

	Autoprod	ucers		Main activity producers					
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other	
				36	36	38		14	
-				36 36	36 37	38 34		14 14	
				36	37	29		14	
22	2 24		1	70	70				
26	3 28		1	72	72				
24 26	4 28 3 33	·· ·-	9 5	71 57	71 57	·· ·-			
3!	5 35			49	51			15	
3! 3!	5 35 5 35			43	46			13	
3! 3!	5 35 5 35			38 39	41 41			11 13	
39				22		38		17	
39	39			25 25	12	42		16 17	
39	9 39 9 39			25 13	12 12	42 16		17 15	
0.	30	••							
				50 50	50				
-				50 50	50 50				
3 <sup>-</sup> 42	2 70	32 26	14 16	65 62	60	59 63	75 98	30 38	
32 35	2 54 5 63	26 14	21 22	59 58	57 57	85 92	93 68	39 78	
		1-7				32	00		
92 72	2 94 2 73		11 11	65 50	70 54			27 25	
1 <sup>-</sup> 12	1 11		23 23	64 68	72			25 2 2	
14	2 11	••	25			••	••		
-				13 12	12 13			13 12 9	
				12 11	13			9 11	
•		••	••				••	11	
(	5 7 5 7			48 49	35 42	60 58			
-	7 7 6 7			50 50	39	61 58			
		••	••				••	••	
17 19	7 17 9 19			23 52	28 55	10 43			
19 19	9 19 9 19 7 6		 11	52 36 31	55 36 29	43 35 34			
		••							
50 57	0 42 7 51		19 19	41 40	42 42	13 8		21 23	
5; 5; 49	5 47		19 31 14	40 41	42	13 8 3 3		23 21 22	
			14					22	
42 42	2 31 2 31	54 52		44 47	8 7	50 54		4	
29 38	9 22	37 45		52	26	58 57		14 9	
		45		50				9	
; 1(	5 )		13 20	57 60	70	42 48			
1( 8	 3 -		20	61	70	48 48			
;			40	59		45			
•				64 47	33 17	66 53			
-				56	46	53 58			
	· ·	••		64	81	60		10	

Table 31

Country or area	Year		Combustible		Total producers	T		
- Country of area		Total	fuels	Hydro	Nuclear	Wind	Solar	Other
Zimbabwe	2015	55	42	74				
	2016	40	38	44				
	2017 2018	43 46	32 39	60 55				
						••		••
America, North	2015 2016	47 46	45 44	40 41	94 94	30 32	16 17	73 73
	2017	45	42	44	94	33	19	62
	2018	46	44	43	95	33	18	69
Anguilla	2015	32	33				2 5	••
	2016 2017	35 38	36 38		••	••	5 7	
	2018	41	41				7	
Antigua and Barbuda	2015	34	35				13	
ntigua and Barbuda	2016	34	35			••	17	
	2017	34	35				17	
	2018	45	49				16	
Aruba	2015	37	35			53	••	
	2016 2017	38 39	35 37			55 55		
	2018	39	36			67		
Bahamas	2015	40	40					
	2016	39	39					
	2017 2018	39 45	39 45		 			
) orbodos			47					
Barbados	2015 2016	46 45	48		••		18 16	
	2017	43	44		••	••	23	••
	2018	47	49	••			20	
Belize	2015	31	21	49				
	2016 2017	32 44	19 37	58 60	••	••	••	
	2018	45	40	56				
Bermuda	2015	45	45					
	2016	44	44					
	2017 2018	45 42	45 43			••	••	
	İ			••		••	••	••
Bonaire, St Eustatius, Saba	2015 2016	54 47	61 54			42		
	2017	48	58 58			39 36	27 27	
	2018	49	54			43	27	
British Virgin Islands	2015	53	54			24	11	
	2016	54	55			24	11	
	2017 2018	54 51	55 52			23 23	9 11	
Canada	2015	52	45	55	83	27	10	25
Janaua	2016	52	43	55	83	29	17	33
	2017	51 50	40	56	82	29	14	25 26
	2018		40	54	82	30	14	20
Cayman Islands	2015 2016	55 47	55 47			••		
	2017	48	48	••	••			••
	2018	47	47					
Costa Rica	2015	34	5 7	43		22	29	64
	2016	32		39		19	2	74
	2017 2018	36 36	4 6	43 40		39 50	12 14	62 53

	Autoprod	ducers			rs			
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
14	14			56	43	74		
70	70			56 39	36 32	44		
42	2 42			43	32	60		-
52	2 52			46	39	55		
49	57	71	18	47	44	39	94	30
45	5 54	62	17	46	43	41	94	31
45	5 56	64	17	45	41	43	94	32
44	1 56	63	16	46	43	42	95	31
				32 35	33 36			2
				35	36			5
				38	38			2 5 7 7
•				41	41			/
11	1 11			34 35 34	35			13
11	1 11			35	36 35			17
11	1 11			34	35			17
11	1 11			46	49			16
				37	35			53
				38	35			53 55 55 67
		•••	••	39	37	••		55
				39	36			67
22	2 22			41	41			
22	2 22	•••		40	40	•••		••
22	2 22			41	41			
23	3 23	••	••	47	47	••		
20	20			47	48		<u></u>	18
20	20			46	49			16
20	20			43	45			23
20	20	••		48	51			20
54	1 54			25	4	49		
44	44			29	4	58		
83	83			29	6	60		
87	7 87			29	10	56		
36	36			45	45			
36 36	36 36	···		45	45			
39 17	9 39 7 33	•••	••	45	45	••		
17	7 33			43	43			
				54	61			42
				47	54			37
				48	58			37 34 40
				49	54			40
				53	54			16
		**		54	55			17
		•••	••	53 54 54 51	55 55 52	••	**	17 15 17
		••	••	51	52	••		17
64	1 65	73	5	51	41	54	83	25
59	63	73 63	5 16	51 51	41 40	54	83 83 82	25 28 27 28
60 54	64	67 65	15 15	51	36	55 53	82	27
54	1 55	65	15	50	37	53	82	28
-				55	55			
				55 47	47			
				48	48			
-				47	47			
61	1 82	98	35	29	2	37		34
54 36 26	78	88	35 33 13 13	29 28	2 4	35 43 40		31 47 51
36	3 47	0	13	36	1	43		47
26	34	0	13	36	3	40		51

Table 31

0					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Cuba	2015 2016 2017 2018	3 3 3 3	6 37 6 37	9 11 14 26		17 15 11 14	17 15 11 14	  
Curaçao	2015 2016 2017 2018	3 3 4 3	3 32 0 40	  	  	47 49 41 57	22 14 21 20	  
Dominica	2015 2016 2017 2018	3 4 3 2	0 39 3 34	28 42 31 28	  	  	  	  
Dominican Republic	2015 2016 2017 2018	3 4 4 4	1 44 2 44	17 28 41 33	  	39 27 33 31	16 13 15 13	  
El Salvador	2015 2016 2017 2018	4 4 3 3	0 35 3 23	33 31 34 32	 	  	7 23 28 20	86 88 88 86
Greenland	2015 2016 2017 2018	3 3 3 3	0 11 2 15	53 50 49 50	  	  	 	  
Grenada	2015 2016 2017 2018	4 5 5 5	1 52 1 52	  	  	  	3 3 3 3	  
Guatemala	2015 2016 2017 2018	4 3 4 4	9 42 2 36	43 35 50 40	  	16 32 33 34	20 26 25 26	86 98 86 73
Haiti	2015 2016 2017 2018	3 3 3 3	7 42 5 38	16 13 24 37	  	  	 18 18	  
Honduras	2015 2016 2017 2018	4 4 4 4	3 52 1 44	42 40 53 54	  	50 37 29 47	12 25 23 22	 30 97
Jamaica	2015 2016 2017 2018	5 4 4 4	8 52 8 51	50 46 61 70	  	22 23 33 34	 6 13 13	  
Mexico	2015 2016 2017 2018	5 5 4 5	0 56 9 55	29 28 29 30	88 75 77 97	31 29 29 30	16 15 19 9	80 76 69 60
Montserrat	2015 2016 2017 2018	5 4 4 4	2 42 0 40	  	  	  	  	  
Nicaragua	2015 2016 2017 2018	3 3 3 3	8 34 5 31	24 34 38 33	  	53 45 39 49	17 17 11 20	50 52 55 59

	Autoproc	ducers		Main activity producers					
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other	
19	19			38	39	9		17 15	
22 21	2 21			38 37 38	38 38	11 14		15 11	
16	16			38	38	26		14	
16	3 16			50	53			41	
13 10	3 13		••	51 54	57 62	••		38	
15	5 15			49	49			38 38 50	
28	34			46	47	42			
28 28	34			48 37	43 33	63 47			
28	34			28	23	42		••	
15	5 15	49	15	49	56	17	**	39	
16 17	5 16 7 17	50 50	15 14	50 51	56 54	28 41	••	39 24 30 24	
18	3 18	50	14	51	57	33		24	
33	35	32	7	43	37	33		86	
33 32 34 28	31 32	42 43	23 39	42 33	37 20	30 33 32		86 88 72 72	
28	30	42	17	31	17	32		72	
	. <u></u>	**	**	35 33	14	53	**		
	. <u></u>			35	19	50 49			
-				35	19	50			
48	48			49	49			3	
52 51	51			51 51	52 52	••	·· 	3 3 3 3	
92	92			50	50		••	3	
14 15	14 5 15	73 52		48 45	56 57	42 35	••	30	
13	3 13	73 52 56 63	••	49	49	50		41 38 37	
18		63		50	67	40		37	
5 4	5 5 4			48 50	59 63	16 13			
3	3 2	 		48	56	24		 18 18	
				47	50	37			
60 30	60			45 44	61 56	42 40		23 28	
30 57 76	30 57 57 6 76	 		40	41	53		26 33	
				38	31	54		33	
59 55 55 55	68 68 65 65		23 23 32	45 44	45 46	50 46			
55	65		32	44	45	61			
			34	44	44	70			
43 37	48 40	45 44	27 26	55 54	61 62	29 28	88 75	63 59	
43	3 47	46	28 28	51	57	29	77	48 27	
43	3 49	52	28	52		29	97	21	
				50 42	42				
				40 41	40 41				
			••				••		
43 38	38	13 13		38 37 33	35 33	25 34		52 48	
46 47	6 46	0		33 34	27 26	38 33		48 45 52	

Table 31

-					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Panama	2015	36	34	41		19	4	
	2016 2017	37 37		42 47		26 21	9 12	 13
	2018	32		50		25	14	25
Puerto Rico	2015	40	41	6	••	22	12	
	2016 2017	38 30		8 6		18 17	10 11	
	2018	30	32	4		12	6	
Sint Maarten (Dutch part)	2015	43			••	**		
	2016 2017	44 43		••		••	••	
	2018	36						
St. Kitts-Nevis	2015	39				42	19	
	2016 2017	40 41			••	42 42	17 17	
	2018	37				46	17	
St. Lucia	2015	49	49					
	2016 2017	51 52						
	2018	50					19	
St. Pierre-Miquelon	2015	22	22					
	2016 2017	22 22	22 22					
	2018	22	22					
St. Vincent-Grenadines	2015	31	32	30			15	
	2016 2017	33 36		32 41			14 12	
	2018	38		48		••	11	
Trinidad and Tobago	2015	47				••	18	
	2016 2017	46 45					22 22	
	2018	49					22	
Turks and Caicos Islands	2015	33	33					
	2016 2017	35 33	33			••	••	
	2018	35	35					
United States	2015	46		30	96	30	17	73
	2016 2017	45 44	43	32 36	96 96	32 34	17 19	73 61
	2018	45		35	97	33	19	72
United States Virgin Is.	2015	27 27	28 28				16 15	
	2016 2017	21	21	••	··		12	
	2018	21	22				12	
America, South	2015 2016	47 44	45 40	49 47	67 73	31 36	23 25	0 23
	2017	42	37	46	67	38	17	30
	2018	42		46	67	37	20	60
Argentina	2015 2016	44 45	43 45	47 43	46 54	32 29	19 18	
	2017	42	42	42	40	31	23	
	2018	41		42	42	21	6	
Bolivia (Plur. State of)	2015 2016	43 43	39 45	57 40		46 15	11 13	
	2017	42	43	41		25	6	
	2018	41	41	43		25	20	

	Autopro	ducers		Main activity producers					
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other	
	2 2			39	40	43		17	
	2 2 2 2 2 2			39	39	44	••	22	
:	2 2 2 2 2 2 8 11			39 39 39 33	34	48		17 22 18	
	8 11			33	17	52		20	
4	7 47			39	41	6	••	18	
4	7 47			38	40	6 8 6		14 13 8	
3	9 39			30	31			13	
4:	2 42		••	30	32	4	••	8	
				43	43				
				44	44				
				43	43				
		••		36	36				
	3 3			41	42			33	
;	3			43	44			30	
	3 3 3 3 3 3	••		44	45			33 30 30 31	
;	3 3		••	39	40		••	31	
				49	49				
				51	51				
				52	52				
		••		50	52			19	
				22	22				
				22	22				
				22	22				
		••		22	22			••	
2	3		23	31	32	30	••	13 12 9 8	
2	5		25 23	33	34	32		12	
2: 2:	3	••	23 24	36 38	36 38	41 48	••	9	
		••	24			40	••		
1	0 10			48	49			18	
	9 9 9			47 47	47 47			22	
	8 8		••	51	51	••		18 22 22 22	
		••		33 35	33 35	••	••	••	
			···	33	33				
				35	33 35	••	••		
E	0 62	ΕΛ	16	46	43	20	06	21	
5	0 63	54 49	16 15	45		30	96 96	31 31	
4	5 64	53	14	44	41	36	96	32	
4 4 4	7 63 5 64 3 64	49 53 57	15 14 14	44 46	41 43	32 36 35	96 96 97	31 32 32	
1	5		15	27	28			17	
1	5		15	27	28		••	17	
1: 1:	0		15 15 10	27 21	21			17 17 17	
1	1		11	22	28 28 21 22	••	••	17	
4	6 46	49	24	47	45	49	67	31	
4	4 44	49 49	24 14	44	39	47	67 73	35	
4: 4:	2 42	44	10 11	42	36	47 46	67 67	31 35 34 33	
		46	71	42	34		67		
4	4 44	15		44	43	47 43 42 42	46	31 29 31 18	
4 4	7 47 7 47	26 26		44	45	43	54	29	
4	7 47 7 47	26 26		41 41	41 41	42	54 40 42	31 19	
							42		
2	0 20 7 17	46 46		44	41	57		23 15 20 22	
1 <sup>°</sup> 2	/ 17	46 46		46 44	48 45	40 41		15	
2:	1 20 2 22	53	••	44	43	43	••	20	
		ეე	••	42	43	43	••		

Table 31

_					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Brazil	2015 2016 2017 2018	47 44 43 42	41 43	45 45 42 43	91 90	32 38 39 38	11 9	  
Chile	2015 2016 2017 2018	40 37 34 34	37	42 40 37 40		27 27 31 27	27 24	 30 61
Colombia	2015 2016 2017 2018	51 50 51 51	53 33	48 48 60 58	 	43 32 2 27	4	  
Ecuador	2015 2016 2017 2018	45 36 38 37	32 24	59 40 49 45		53 45 40 43	17 17	  
Falkland Is. (Malvinas)	2015 2016 2017 2018	20 22 21 21	20 19	  	  	30 35 30 31		
Guyana	2015 2016 2017 2018	31 34 36 37	34	  	  	50 50 50 50	16 16	  
Paraguay	2015 2016 2017 2018	73 83 78 77	29	73 83 78 77		  		  
Peru	2015 2016 2017 2018	46 41 41 41	34 28	66 55 63 65		28 51 51 46	28 13	  
Suriname	2015 2016 2017 2018	47 46 48 52	46 44	42 47 56 60	 	  	10 10	  
Uruguay	2015 2016 2017 2018	39 41 36 34	31 26	61 58 56 49		28 28 29 36		  
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	46 41 36 35	35 28	56 47 46 44		33 38 38 16	48 27	23 23 23 
Asia	2015 2016 2017 2018	43 42 42 43	47	35 36 35 36	48 52	16 18 20 22	11 11	58 56 55 32
Afghanistan	2015 2016 2017 2018	29 31 31 28	13 15	35 37 37 32		  		  
Armenia	2015 2016 2017 2018	25 23 25 25	16 18	20 20 20 20	67 73	11 8 8 7	11 7	  

	Autopro	ducers	ucers Main activity producers					
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
48 46 45 45	6 46 5 46	49 49 42 44	48 11 14 13	47 43 42 41	37 41	45 45 42 43	85 91 90 90	32 38 37 36
53 32 22 18	2 32 2 23	63 51 63 62	34 0 0 1	39 37 36 37	38 38	42 40 37 40	  	26 27 28 26
62 64 65 71	68 69	15 16 18 20	4 4 4 4	50 48 49 49	48 22	49 49 60 59	  	9 32 3 6
48 50 62 65	) 48 2 58	62 66 82 87	  	45 34 35 33	27 15	59 39 48 44	  	33 30 27 28
11 11 11	11   11	  	  	22 25 23 23	22 21	  	  	29 34 29 30
13 17 19 19	7 17 9 19	  	  	34 37 39 41	38 40	  	  	17 17 17 17
		  		73 83 78 77	29 34	73 83 78 77	  	  
19 17 18 19	7 14 3 14	65 63 60 65	 12 13	50 44 43 44	37 31	66 54 63 65	  	28 44 32 39
48 53 53 62	62 3 49	42 47 56 60	  	46 35 40 35	36 41	  	  	10 10 10 10
40 39 39 42	42 9 42 9 43 2 46	  	4 3 4 5	39 41 36 33	18 23 16 11	61 58 56 49	  	27 28 27 34
24 23 22 21	3 22 2 21	  	  	47 41 36 35	36 28	56 47 46 44	  	17 22 21 0
36 37 42 42	7 42 2 51	16 10 8 6	17 18 18 16	44 42 42 43	47 48	36 36 36 36	47 48 52 56	16 17 17 18
18 19 19 17	) 1 ) 1	26 27 28 25	  	36 38 39 34	24 27	40 42 42 35	  	  
13 16	3	  	 13 16	25 23 25 25	18	20 20 20 20	78 67 73 58	11 9 5 7

Table 31

		Total producers								
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other		
Azerbaijan	2015 2016 2017 2018	36 36 35 37	39 38	17 20 18 18	  	16	7 16 6 15	  		
Bahrain	2015 2016 2017 2018	47 47 48 48	47 48	  	  	11	21 21	  		
Bangladesh	2015 2016 2017 2018	61 66 68 59	67 69	30 51 52 54	  	68 68	3 19 3 19	  		
Bhutan	2015 2016 2017 2018	55 56 54 49	0 0	55 56 55 49	  	14 21	63 63	  		
Brunei Darussalam	2015 2016 2017 2018	59 59 48 49	60 48	  	  		. 10 . 19	  		
Cambodia	2015 2016 2017 2018	30 38 43 43	45 55	25 32 32 41	  		. 17 . 6	  		
China	2015 2016 2017 2018	41 40 41 42	44 46	39 40 38 39	72 72 79 75	18 21	9 10	50 36 10 10		
China, Hong Kong SAR	2015 2016 2017 2018	34 34 34	34	  	  			  		
China, Macao SAR	2015 2016 2017 2018	21 22 33 17	22 33	  	  		 	  		
Cyprus	2015 2016 2017 2018	30 32 32 32		  	  	16 15	3 20			
Georgia	2015 2016 2017 2018	41 40 37 39	30	41 44 39 42	  	50 48	; )	  		
India	2015 2016 2017 2018	54 44 42 42	51 50	34 31 32 34	74 64 65 64	11 12	11 2 11	 49 54 		
Indonesia	2015 2016 2017 2018	41 45 53 52	42 44 5 54 5 53	32 50 41 39	  	10 10	) 19 ) 19	45 68 67 71		
Iran (Islamic Rep. of)	2015 2016 2017 2018	43 45 46 45	50 52	14 16 14 14	33 74 84 84	15 13	5 1 5 5	16 21 23 23		

	Autopro	ducers			Mai			
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
37	37			36	40	17		ç
35	35		 24	36 36 35	39	20		1/
31	31		24 28	35	39	18		14 13
28	28		0	38	42	18		14
		••	U	30	42	10	••	1-
42	42			50	50			17
43	43			50	50			19
42	42	**	••	52	52	••	••	19
44	44			52	52			19
77	77			56	57	30		18
86	86			61	62	51		1
82	82			65	66	52		19
75	75			55	56	54		2
					•			0.4
				55 56	0	55 56		60
••		••		54	0	56 55		21
				49	0	49	••	22 28 19
						73	••	
48	48			60	60			19
44	44			62	62		••	10
42	42			49	49			19
43	43			50	50			19
				30	38	25		17
		•••	••	38	45	32	••	17
••	••	•••		43	55	32		(
				43	46	41	••	18
		••						
39	44			41	45	40	72	15
37	41			40	44	41	72	15 16
75	97			39		40	79	16
79	92			41	47	40	75	17
				34	34		_	
				34	34			
				34	34			
				34 34	34		••	
00				40	40			
60 57	60 57			18 19	18 19			-
2/	37 E0	••		30	30			•
59 52	59 52		·· ·-	13	13		••	
							••	
15	12		18	30	32			17
17 17	14 14		20	32	35			17
17	14	••	20 20 20	32 33 33	35 35 35		••	17 16 17
18	16		20	33	35			17
				41	44	41	_	
				41 40	30	44		į
				37	30	39		50
				39	28	42		50 48
00		22	22				<del>-</del> -	
30 43	31	30 25	20 12	63 44	83 52	34 31	74 64	1; 1;
43	46	25	12	44	52	31	65	17
37 34	39 35	26 23	13 9	44	53 54	32 34	64	17 16
66 40 34 9	66 35 29 10	67	64 75 82	32 48 62	33	23		30 5 49 7
40	35	67 51	/5	48	48	44 37	••	5
34	29			62	48 65 74	37		49
9	10			73	/4	63		7
	12			46	52	14	33	1
13	13							
13 13	13			47	53	16	74	13
13 13 16 15	16			46 47 48 47	55	16 14 14	33 74 84 84	15 13 10 18

Table 31

	1				Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Iraq	2015 2016 2017 2018	25 28 37 34	30 38	12 15 14 12		  	18 18 18 20	  
Israel	2015 2016 2017 2018	43 43 43 44	45 45	39 0 0 0		13 0 76 60	20 18	  
Japan	2015 2016 2017 2018	37 36 36 35	51 50	21 20 21 20	3 5 10 19	23 22 21 24	12 13	88 87 89 83
Jordan	2015 2016 2017 2018	49 50 49 45	54 54	50 40 36 22		12 22 26 29	19 17	  
Kazakhstan	2015 2016 2017 2018	48 48 47 50	48 46	42 53 51 47		15 18 19 24	19	  
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	21 25 22 22	16 12	26 31 29 31	  	  	16 15 16 17	  
Korea, Republic of	2015 2016 2017 2018	61 58 53 53	58 53	10 12 12 13	80 75	18 18 20 20	13 14	42 39 44 43
Kuwait	2015 2016 2017 2018	43 42 44 45	42 44	  	  	  	 0 11 11	  
Kyrgyzstan	2015 2016 2017 2018	38 40 46 46	28 20	41 43 52 52		  	  	  
Lao People's Dem. Rep.	2015 2016 2017 2018	33 44 52 55	42 70	42 45 45 47		  	16 16 16 20	  
Lebanon	2015 2016 2017 2018	65 67 72 71	72 77	20 16 19 16		  	17 14 13 13	  
Malaysia	2015 2016 2017 2018	56 54 56 57	60 59	28 37 50 49		  	14 13 11 7	  
Maldives	2015 2016 2017 2018	26 28 30 32	28 30	  	  	23 23 23 23	16 16	  
Mongolia	2015 2016 2017 2018	54 54 51	59 61	  	  	 	  	  

	Autopro	ducers			ers			
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
18			18	25	26	12		
18		••	18 18	28 37	26 30	12 15	••	
18			18	37	38	14	••	-
20		••	20	34	36	12		-
35	61	51	17	43	43	34		13
35 33	55	0	20	44	44	0		(
31	44	0	20	45	45	0		
29	55	0	15	46	46	0		(
28	35	44	18	41	59	19	3	48
27	40	72	18	38	52	19	5	4: 1:
25	39	68	17	38	51	20	10	1
24	39	83	16	38	48	20	19	18
27	27	••		50	51	50		1:
11	11	••	••	52	56	40		20 20
11				51	56	36	••	2
8	8	••		47	55	22	••	18
11			11	48	49	42		14
11			11	48	48	53		19
11			11	47	46	51		19
11			11	50	50	47		24
			<del></del>	21	14	26		16
				25	16	31		1:
				22	12	29		10
				22	9	31		17
45	52		5	62	62	10	87	19
54	59		5 9 12	58 53	58	12	80	17
43	45		12	53	54	12	75	17
41	45		12	54	57	13	70	16
			<del></del>	43	43			
0			0	42	42			
1			11	44	44			
1			11	45	45		••	-
46	46			38	27	41		
49	49	···		40	28	43		
29 74	29 74			46	20	52		
74	74			46	21	52		-
				33	15	42		16
				44	42	45		10
				44 52 55	42 70	45 45		10 10 20
				55	75	47		20
91	92		17	54	58	20		
89	91		14	58	63	16		
90	92		13	65	70	19		
79	82		13	68	74	16		
19	26			61	70	28		
22	26 28 25		••	61 58	64	37		!
25	25	27	1	59 59	62	50		1
31	42		1	59	64	49		(
21	21			31	31			18
22	22			33	34			1
22 24	22 24			33 35 37	36			1 <sup>-</sup> 1 <sup>-</sup>
26	26			37	39			1
				EE	EO			
			••	55 56	58 59			
				55	61			
••				53	62			

Table 31

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Myanmar	2015 2016 2017 2018	38 38 39 52	3 43 9 42	34 34 38 49	  	  	  	  
Nepal	2015 2016 2017 2018	50 49 40 47	9 6 0	53 53 49 50	  	11 11 11 27	11 11 10 10	  
Oman	2015 2016 2017 2018	48 48 50 49	3 48 50 50	  	 	  	21 21 5 6	  
Other Asia	2015 2016 2017 2018	6° 6° 6°	1 67 3 73	18 24 21 19	81 70 50 70	19 17 20 19	11 10 11 11	  
Pakistan	2015 2016 2017 2018	5 <sup>-</sup> 49 49 44	9 48 5 43	53 55 52 44	88 70 72 79	21 27 21 23	 6 19 19	31 32 34 31
Philippines	2015 2016 2017 2018	50 48 47 48	3 53 7 51	27 26 30 29	 	20 26 29 31	10 16 15 16	66 66 61 61
Qatar	2015 2016 2017 2018	55 56 57 52	5 56 1 51	  	  	  	  	  
Saudi Arabia	2015 2016 2017 2018	50 50 50 51	3 53 ) 50	  	 	 14 14	17 16 14 23	  
Singapore	2015 2016 2017 2018	44 44 44 45	44 1 44	  	 	  	17 17 17 17	  
Sri Lanka	2015 2016 2017 2018	38 4 42 44	1 53 2 55	40 28 27 41	  	31 31 33 29	23 12 24 16	  
State of Palestine	2015 2016 2017 2018	34 33 33 24	35 3 36	  	  	  	9 19 17 17	  
Syrian Arab Republic	2015 2016 2017 2018	23 22 23 22	1 24 2 25	3 7 6 6	 	  	  	  
Tajikistan	2015 2016 2017 2018	3 <sup>2</sup> 30 3 <sup>2</sup> 3 <sup>4</sup>	) 10 1 16	33 32 33 36	  	  	 	  
Thailand	2015 2016 2017 2018	34 39 34 32	5 38 4 37	12 12 16 24	  	16 8 20 17	8 11 15 13	38 38 38 38

	Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other	
33 50 36 37	28 52 34 34	45 39 43 45	  	35 36 40 54	44	33 34 37 49	  	  	
18 6 3 3	 	18 6 3 3	  	54 67 81 86	  0	59 73	  	11 11 11 24	
  	 		  	48 48 50 49	48 48 50	  	 	21 21 5 6	
25 24 23 26	27 26	  	6 6 7 9	80 80 84 79	93 94 106	18 24 21 19	81 70 50 70	58 55 66 64	
47 38 37 39	41 40	  	31 32 34 31	51 50 45 44	48 43	53 55 52 44	88 70 72 79	15 15 20 22	
25 25 26 30	26 26	12 12 12 12	  	50 48 47 48	54 52	27 26 30 29	  	54 48 44 45	
61 62 57 59	57	  		22 23 21 11	23 21	  	  	  	
78 80 70 90	80 70	  	  	52 48 46 38	48 46	  	  	17 16 14 16	
88 96 80 95	96 80	  	  	43 42 42 42	42 43	  	  	17 17 17 17	
38 25 31 33		40 25 31 36	24 17 30 18	38 43 43 46		41 29 26 42	 	31 27 29 23	
68 62 50 39	86 89 75 61	  	9 19 17 17	28 27 29 20	29 28 30 21	  	 	9 19 17 17	
6 8 9 8	6 8 9 8	  	  	25 23 23 22	30 26 27 25	3 7 6 6	 	  	
  	  	  	  	31 30 31 34	8 10 16 21	33 32 33 36	  	  	
23 33 38 41	24 35 39 44	  	12 17 23 23	40 36 33 29	44 40 35 31	12 12		4 4 9 8	

Table 31

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Timor-Leste	2015 2016 2017 2018	14 17 17 18	' 17 ' 17	53 53 53 53			18 18	  
Turkey	2015 2016 2017 2018	41 40 40 39	48 52	30 29 24 24		31 31	14 10	62 66 65 65
Turkmenistan	2015 2016 2017 2018	58 55 49 49	55 49	  	  	  		  
United Arab Emirates	2015 2016 2017 2018	51 51 50	52 51	  	  		29 28	
Uzbekistan	2015 2016 2017 2018	50 47 48 50	48 48	41 42 49 35			2 3	  
Viet Nam	2015 2016 2017 2018	48 48 51 54	51 48	40 43 56 52		15 15		  
Yemen	2015 2016 2017 2018	45 33 28 23	37 31	  	  		7 8	  
Europe	2015 2016 2017 2018	40 39 39 38	40 40	33 34 31 34		23 25	12 12	
Albania	2015 2016 2017 2018	35 42 24 44	 	37 45 25 46		  		  
Andorra	2015 2016 2017 2018	22 22 23 30	32 39	21 21 22 29	  	 	17 16	  
Austria	2015 2016 2017 2018	30 31 33 31	30 37	34 35 34 32		22 26	11 11	0 0 
Belarus	2015 2016 2017 2018	40 38 39 43	39	36 22 45 35		14 13	7 13	
Belgium	2015 2016 2017 2018	38 45 45 38	5 44	11 12 11 11	50 84 81 55	26 27	11 10	31 31 31 26
Bosnia and Herzegovina	2015 2016 2017 2018	41 46 41 49	63 62	30 30 21 33			30 15	  

Total Total	Autoproducers Main activity producers						rs	
	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
				14	14	53		18
				17	17	53 53		18 18 18
				17	17	53		18
••		••	••	18	18	53		18
48	51	26	59	40	49	30		32
45	50	18	27	40	47	29		34
37	46	20	15	40	52	24	••	34 30 32
35	42	22	20	40	52	24		32
				58	58			
			••	55	58 55			
				49	49			
				49	49			
				51	51			27
	••	••	••	51	52	••	••	20
		••	···	51	51		··	28
				50	51			29 28 25
				50	51	41		0
	••	••		47 48	48 48	42 49		0 2 3
		••	••	50	53	35		ა 1
			••					
14	16	3	4	51	58	41		22 15
10	11	3	4	53	61	43	••	15
9 9	9	3	4 4	57 61	58 68	57 53		14 11
9	9	3	4	01	00	55	••	11
28	32		21	48	48			
13	27	••	7	38	38	••	••	••
14	26	••	8	31	31	••		
22	25	••	21	24	24	••		
37	44	40	13	40	39	33	80	21
37	45	37	13	40	39	34	78	20
35 35	43 43	35 37	13 13	39 39	40 38	31 34	78 78	21 21
33	43	31	13	39	30	34	70	21
				35		37		
		•						
				43		45		
				43 24		45 25		
 				43		45		
				43 24 44 22	   32	45 25 46 21		   11
			 	43 24 44 22	   32	45 25 46 21	 	  
  			 	43 24 44 22	   32	45 25 46 21	 	   11
  	   	  	  	43 24 44	 	45 25 46	 	
    	    			43 24 44 22 22 23 30	32 32 39 46	45 25 46 21 21 22 29	 	  11 17 16 7
	     49	      10		43 24 44 22 22 23 30	32 32 39 46	45 25 46 21 21 22 29	 	  11 17 16 7
     40 40 53	     49 49 66	      10 11 13		43 24 44 22 22 23 30 29 30 31	32 32 39 46	45 25 46 21 21 22 29 35 36 35	 	  11 17 16 7
	     49	      10	      	43 24 44 22 22 23 30	32 32 39 46	45 25 46 21	   	   11
40 40 53	    49 49 66 66	       10 11 13 13	       	43 24 44 22 22 23 30 29 30 31 29	32 32 39 46 22 24 29 27	45 25 46 21 21 22 29 35 36 35 33		 11 17 16 7 19 19 22
   40 40 53 53	    49 49 66 66	      10 11 13 13 13	       	43 24 44 22 22 23 30 29 30 31 29	32 32 39 46 22 24 29 27	45 25 46 21 21 22 29 35 36 35 33		 11 17 16 7 19 19 22 19
   40 40 53 53 53	    49 49 66 66 49	      10 11 13 13 13	        25 14	43 24 44 22 22 23 30 30 31 29 39 38 38	32 32 39 46 22 24 29 27	45 25 46 21 21 22 29 35 36 35 33 41 21		 11 17 16 7 19 19 22 19
   40 40 53 53	    49 49 66 66	       10 11 13 13	       	43 24 44 22 22 23 30 29 30 31 29	32 32 39 46 22 24 29 27	45 25 46 21 21 22 29 35 36 35 33		  11 17 16 7
40 40 43 53 53 48 46 50 50	49 49 66 66 49 46 53	      10 11 13 13 13 11 27 17 13	       25 14 13	43 24 44 22 22 23 30 29 30 31 29 39 38 38 43	32 32 39 46 22 24 29 27 39 38 38	45 25 46 21 21 22 29 35 36 35 33 41 21 47 37		 11 17 16 7 19 19 22 19 30 11 13 9
40 40 43 53 53 48 46 50 50	    49 49 66 66 49 46 53 55	      10 11 13 13 13	       25 14 13 10	43 24 44 22 22 23 30 29 30 31 29 39 38 38 43	32 32 39 46 22 24 29 27 39 38 38 43	45 25 46 21 21 22 29 35 36 35 33 41 21 47 37		 11 17 16 7 19 19 22 19 30 11 13 9
40 40 43 53 53 48 46 50 50	    49 49 66 66 49 46 53 55	      10 11 13 13 13 11 27 17 13	         25 14 13 10	43 24 44 22 22 23 30 30 31 29 39 38 38 43 41 51	32 32 39 46 22 24 29 27 39 38 38 43	45 25 46 21 21 22 29 35 36 35 33 41 21 47 37	        	 11 17 16 7 19 19 22 19 30 11 13 9
   40 40 53 53 53	49 49 66 66 49 46 53	      10 11 13 13 13 11 27 17 13	       25 14 13 10	43 24 44 22 22 23 30 29 30 31 29 39 38 38 43	32 32 39 46 22 24 29 27 39 38 38 43	45 25 46 21 21 22 29 35 36 35 33 41 21 47 37		 11 17 16 7 19 19 22 19
40 40 40 53 53 53 48 46 50 50 50	49 49 49 66 66 49 46 53 55 56 53	      10 11 13 13 13 11 27 17 13	         25 14 13 10	43 24 44 22 22 23 30 30 31 29 39 38 38 43 41 51 50 42	32 32 39 46 22 24 29 27 39 38 38 43 42 40 41 44	45 25 46 21 21 22 29 35 36 35 33 41 21 47 37	           	 11 17 16 7 19 19 22 19 30 11 13 9 29 26 27 26
40 40 40 53 53 53 48 46 50 50 26 25 26 25	49 49 49 66 66 49 46 53 55 56 53	        	        25 14 13 10 11 11 10 11	43 24 44 22 22 23 30 30 31 29 39 38 38 43 41 51 50 42	32 32 39 46 22 24 29 27 39 38 38 43 42 40 41 44	45 25 46 21 21 22 29 35 36 35 33 41 21 47 37 11 12 11	        50 84 81 55	 11 17 16 7 19 19 22 19 30 11 13 9 29 26 27 26
40 40 40 53 53 53 48 46 50 50 50		      10 11 13 13 13 11 27 17 13	        25 14 13 10 11 11	43 24 44 22 22 23 30 30 31 29 39 38 38 43 41 51 50 42	32 32 39 46 22 24 29 27 39 38 38 43 42 40 41 44 56 68	45 25 46 21 21 22 29 35 36 35 33 41 21 47 37	         50 84 81 55	 11 17 16 7 19 19 22 19 30 11 13 9

Table 31

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Bulgaria	2015 2016 2017 2018	51 47 47 47	7 66 7 71	22 16 12 18	92 90	24 23 25 22	15 15	
Croatia	2015 2016 2017 2018	27 31 27 31	, 26 28	34 37 29 40		24 24 24 26	14	  23
Czechia	2015 2016 2017 2018	44 43 45 45	46 45	16 16 15 14	64 75	23 20 22 22	12	  
Denmark	2015 2016 2017 2018	24 25 25 23	24 22	29 24 23 19		32 28 31 26	10 9	  
Estonia	2015 2016 2017 2018	42 54 58 50	59 63	51 67 42 24		27 22 26 23	11	  
Faeroe Islands	2015 2016 2017 2018	28 28 30 32	26 27	39 31 32 31		32 30 42 45	 	  
Finland	2015 2016 2017 2018	47 48 45 47	35 32	59 56 52 46	96 92	26 22 27 33	6 7	  
France	2015 2016 2017 2018	50 48 48 50	3 29 3 38	27 29 24 31		24 21 21 22	13 13	63 56 67 62
Germany	2015 2016 2017 2018	36 36 35 32	50 5 49	25 27 27 25	89 81	21 18 22 21	11 11	52 62 53 49
Gibraltar	2015 2016 2017 2018	59 57 48 57	57 48	  	  	  		 11 11 11
Greece	2015 2016 2017 2018	31 32 32 31	. 42 . 44	21 19 14 19		25 25 24 25	17 17	  
Guernsey	2015 2016 2017 2018	16 9 7 5	' 7	  	  	  		
Hungary	2015 2016 2017 2018	40 42 42 40	27 29	47 52 44 44	92 92	24 24 26 21	12 12	51 24 24 42
Iceland	2015 2016 2017 2018	77 76 78 76	0 0	79 77 80 75		42 34 46 23		86 87 83 91

Autoproducers Main activity producers								
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
18 16 18 19	3 28 3 32	  	  	52 48 48 48	68 74	22 16 12 18	89 92 90 94	19 19 19 18
22 23 30 26	30 30	34 40 25 25	  	28 31 27 31	26 28	34 37 29 40	  	22 23 23 25
56 57 54 52	7 59 \$ 55	34 36 38 31	  	43 42 44 44	45 44	14 14 13 12	71 64 75 80	14 13 13 14
23 22 21 22	2 38 I 38	  	9 10 9 11	24 25 25 23	23 21	29 24 23 19	  	32 28 31 26
58 88 57 52	3 103 I 55	  	27 25  11	41 54 58 50	58 63	51 67 42 24	  	27 21 26 22
		  	  	28 28 30 32	26	39 31 32 31	  	32 30 42 45
56 53 49 52	51 9 48	66 64 61 57	8 8 7 7	46 48 44 46	30 27	58 55 51 46	96 96 92 93	27 22 28 33
27 25 26 25	41 5 38 6 40 5 41	33 37 32 38	14 14 14 13	51 50 50 52	28 37	27 29 24 31	79 73 72 75	21 20 19 20
53 59 50 52	3     54       9     59       6     56       2     52	42 47 47 31	54 62 56 55	35 34 33 31	48	25 27 27 25	97 89 81 80	16 15 17 17
		  	  	59 57 48 57	57 48	  	  	 11 11 11
48 39 39 45	39 39	  	  	31 32 32 31	42 44	21 19 14 19	  	21 21 21 21
		  	  	16 9 7 5	7	  	  	  
24 25 24 24	37 4 39	  	14 13 13 12	41 43 44 42	27 28	47 52 44 44	90 92 92 89	23 23 24 18
	· · · · · · · · · · · · · · · · · · ·	  	  	77 76 78 76	0	79 77 80 75	  	86 87 83 91

Table 31

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Ireland	2015 2016 2017 2018	34 35 33 32	40 38	24 21 19 20		26		
Isle of Man	2015 2016 2017 2018	26 27 28 30	27 28	40 28 36 29				  
Italy	2015 2016 2017 2018	28 29 30 29	37	24 23 19 26		22 21 20	13 14	71 73 71 69
Jersey	2015 2016 2017 2018	7 10 7 7	10 7	  				  
Kosovo	2015 2016 2017 2018	73 68 48 48	72 51	38 33 25 39		10	 1	  
Latvia	2015 2016 2017 2018	22 25 29 26	33 26	13 18 32 18		25 21 22 18		  
Liechtenstein	2015 2016 2017 2018	50 64 66 63	27 26	56 77 78 71			45 50	
Lithuania	2015 2016 2017 2018	16 13 14 12	9 8	13 14 15 12		25 30	11 10	  
Luxembourg	2015 2016 2017 2018	16 15 15 15	39 40	13 13 12 11		10 22	9 10	
Malta	2015 2016 2017 2018	22 17 27 31	17 29	  		 7 7	16 16	  
Montenegro	2015 2016 2017 2018	39 41 30 42	68 68	26 32 18 37		 15		  
Netherlands	2015 2016 2017 2018	37 38 40 37	42	29 31 19 22	93 80	22 29	9	46 43 39 32
North Macedonia	2015 2016 2017 2018	36 35 35 35	45	32 33 19 30		34 34	16 16	58 82 84 88
Norway	2015 2016 2017 2018	49 50 50 47	34	50 51 51 49		27		  

	Autoprod	ducers	Ţ		ers			
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
69	72		23	32	33	24		31
69	73		17	32 33 32	38	21		25
66 62	5 71 2 69		11 10	32 31	36 35	19 20		31 25 26 27
			10				••	21
35 37	35 7 37			25 26	25 26	40 28		
36	36			28 28	28	36		••
49	49			29	29	29		
41	41	57	32	27	33	24		17
44	43	55	42	28	36	22	••	18
45	45	47	31	29	38	19	••	18
47	47	51	34	28	35	26	••	17
17	17			2	2			
18 18	3 18 3 18			6 1	6 1			
17	7 17	···		1	1	••	••	
				70				
				73 68	75 72	38 33		
				48	51	25	••	0
				48	50	39		9
70	70	23		21	30	13		24
55	5 58	23	11	25	32	18		21
65 62	69 2 71	46 11	11 8	29 26	25 37	32 18	••	22 18
02	. ,,		Ü					
-				50 64	25 27	56 77		43 45
				66	27 26	77 78		45 50
-				63	22	71		50 58
39	31			14	12	13		20
36	3 28			11	12 7 5	14	••	24
34 26	26 3 19			13 11	5 5	15 12		28 23
		••	••				••	
17	30 30 26	34	10	15	22	13		18
16 17	7 33	46 23	9 10	14 15	54 46	13 12	••	10 22
17	7 33	23 23	10	14	48	11		22 24
15	5 27		14	23	23			
16	5 20		16	17	17		••	••
16 17 17	20 7 25 7 23		16 16 17	29 34	29 34			
17	7 23		17	34	34			
				39	79	26		
				41 30	68 68	32 18		 15
				42	73	37		13
0-			40				20	
37 35	47 5 47		13 12	37 39	38 41	29 31	96 93	25 22
35	5 51		11	41	43	19	80	29
30	47		11	40	42	22	83	26
				36	38	32		32
				35 35	37	33		33
-				35 35	45 38	19 30	••	32 33 35 33
•								
57 56	54 5 54			49 50	7	50 51		33
57	7 53			50 50	14	51	••	27 27
57	7 53		1	47	13	49		26

Table 31

		Total producers									
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other			
Poland	2015 2016 2017 2018	50 50 45 45	58 51	12 13 14 11	  	30	8 7	51 57 46 57			
Portugal	2015 2016 2017 2018	30 33 32 32	43 55	18 28 12 22	  	27	19 20	93 79 85 91			
Republic of Moldova	2015 2016 2017 2018	10 10 9 10	22 21	36 28 34 31	  	17 9	11 11	  			
Romania	2015 2016 2017 2018	32 32 31 31	28 30	29 31 25 31	94 91 93 92	25 28	15 15				
Russian Federation	2015 2016 2017 2018	47 47 47 47	43 43	38 42 42 43	85 83 83 80	18 16	10 11	67 65 67 66			
Serbia	2015 2016 2017 2018	59 61 57 53	73 72	41 43 37 44	  	17 22	12 15				
Slovakia	2015 2016 2017 2018	39 40 41 40	30 32	19 21 21 18	89 87 89 87	23 17	11	38 46 57 43			
Slovenia	2015 2016 2017 2018	51 53 51 49	50 48	36 42 35 42	94 95 104 96	14 14	13	  			
Spain	2015 2016 2017 2018	28 28 28 28	23 28	18 22 12 21	88 90 93 89	24 24	22 23	27 13 11 11			
Sweden	2015 2016 2017 2018	45 43 47 45	20 24	53 43 45 43	66 74 83 90	27 30	11	  			
Switzerland	2015 2016 2017 2018	39 35 33 36	46 47	33 28 28 28	79 72 70 87	17 20	9	  			
Ukraine	2015 2016 2017 2018	33 33 34 35	21	14 17 19 22	72 67 71 70	25 24	. 11	  			
United Kingdom	2015 2016 2017 2018	40 40 35 35	44 36	22 20 21 19	85 86 86 80	26 29	10	3 0 3 5			
Oceania	2015 2016 2017 2018	43 45 44	52 53	32 35 35 35	 	33 30	11 13	94 94 94 93			

	Autopro	ducers		Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
50 57 49 46	62 54	34 34 46 34	7 8 7 7	50 49 45 45	58 50	12 13 14 11	  	25 25 30 25
46 46 43	5 50 5 51	29 38 21 36	20 17 18 16	29 32 31 31	41 56	18 28 12 21	  	27 28 27 28
3 4 5 7	3 4 4 5 5 7 7		  6 6	11 10 10 11	28 27	36 28 34 31	  	0 0 0
25 26 26 28	33 33	42 41 34 33	8 6 7 5	33 32 32 32	26 29	29 31 25 31	94 91 93 92	27 26 28 24
33 35 33 34	5 35 3 33	36 34 30 29	  	49 48 48 48	45 44	38 42 42 43	85 83 83 80	17 17 17 17
47 40 50 44	) 40 ) 50	  	  	60 61 57 53	74 72	41 43 37 44	  	14 15 20 7
31 32 33 36	2 47 3 45	36 36 38 40	11 13 13 19	41 41 43 41		19 21 21 17	89 87 89 87	16 17 14 11
20 22 21 21	2 66 66	15 22 19 22	13 13 13 12	55 57 55 52	49 47	38 44 37 43	94 95 104 96	13 13 13 12
52 53 56 58	54 5 58	43 46 27 52	28 17 15 21	26 26 26 26	19 24	17 22 12 20	88 90 93 89	24 24 24 24
55 54 55 48	5 56 4 55 5 56 3 49	16 10 8 7	  	45 43 47 45	14	53 43 45 43	66 74 83 90	32 27 30 25
30 26 26 25	3 49	64 43 41 44	9 9 10 10	41 36 35 38	36 29	32 28 27 27	79 72 70 87	21 17 20 19
9 19 20 14	9 9 19 0 20 4 14	39 53 7 5	8 34 10 2	35 34 34 36	23 23 21 24	14 17 19 22	72 67 71 70	21 19 16 16
32 30 24 25	2 62 0 62 4 33 5 33	50 44 48 46	14 13 15 16	42 42 39 39	39 41 37 38	20 18 18 17	85 86 86 80	30 25 26 27
28 27 30 31	7 44 ) 51	38 39 41 25	11 11 13 15	46 48 48 47	53 54	32 35 35 35	  	41 41 38 34

#### Table 31

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
American Samoa	2015 2016 2017 2018	40 39 38 38	41 40	  		  	11 9 13 11	  
Australia	2015 2016 2017 2018	42 44 44 43	53 54	19 21 22 21	  	31 32 30 30	10 11 13 13	11 0 11 0
Cook Islands	2015 2016 2017 2018	26 26 27 27	30 31		  	  	12 13 16 20	  
Fiji	2015 2016 2017 2018	34 33 32 33	29 30	34 44 41 47		6 2 1 1	15 15 15 11	  
French Polynesia	2015 2016 2017 2018	32 30 30 30	30 30	41 45 43 40	  	   9	13 12 12 12	  
Guam	2015 2016 2017 2018	39 39 45 44	40 46	  	  	 21 21 21	10 23 23 23	  
Kiribati	2015 2016 2017 2018	34 33 33 33	38 38		  	  	19 19 19 19	  
Marshall Islands	2015 2016 2017 2018	27 26 26 26	27 27	  	  	  	11 11 11 11	  
Micronesia (Fed. States of)	2015 2016 2017 2018	22 22 22 22 22	24	1 1 1	  	   16	16 16 16 16	  
Nauru	2015 2016 2017 2018	58 54 51 30	60 55		  	  	13 6 19 16	  
New Caledonia	2015 2016 2017 2018	33 36 36 38	37 36	50 34 53 46	  	19 14 10 10	11 13 25 16	  
New Zealand	2015 2016 2017 2018	53 54 54	39 46	52 55 53 56	  	39 39 35 34	11 12 12 13	94 95 95 93
Niue	2015 2016 2017 2018	16 16 18	18 18		  	  	2 2 2 16	  
Northern Mariana Islands	2015 2016 2017 2018	52 47 46 47	47 46	  	  	  	  	  

	Autoprod	lucers			rs			
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
				40	41			11
				40 39 38 38	41			g
	••	••	••	38	40	••		11 9 13
				38	41			11
0.5	40		40	4.5	F.4	40		0.4
25 24	43 42	••	10 10	45 47	51 54	19 21	••	31
28	50		12	48	55	22		20
28 29	51	••	14	46	54 54	21		31 29 26
	0.	•••	• • • • • • • • • • • • • • • • • • • •		0.		••	
				26	30			12
				26	30			13
				27	31			16 20
				27	31			20
•	0			20	40	24		,
6		••	••	39	48 37	34 44	••	5
5	3 5			37 37	40	44		5
3 5 9	9	••	••	37 37	35	41 47		Ę
9	9	••	••	37	33	71		
				32	32	41		13
				32 30	30	45		12
				30	30	43		12
				30	30	40		13 12 12 12
				÷-				
				39 39	41 40			23 23
				39 45	40 46			23
••				45	45	••	••	23 23
••	••	••	••	44	40	••	••	20
23	23			36	41			19
21	21			34 34	41			19 19 19
21	21			34	41			19
21	21			34	41			19
				0.7	07			44
	••	••	••	27	27	••		11
				26 26	27 27	••		11 11
		••		26 26	27	••		11
••	••	•••	••	20	21	••	••	
				22	24	1		16
				22 22	24	1		16 16
	••	••		22 22	24 23	1		16 16
				22	23	1		16
					==			
				58	59			13
••	••	••	••	54	60 Er	••		19 19
••				54 51 30	60 55 31	••		13
••	••	••	••	30		••	••	
			••	35	35	50		18
			••	38	40	34		18 14 13 13
				35 38 38 41	39	34 53 46		13
				41	35 40 39 43	46		13
58	66 63	15 15	30 27	53 54	43 36	52 55 53		7 <i>′</i> 7 <i>′</i>
53	63	15	27	54	36	55		/ ·
52 48	65 61	15 15	24 22	54 54	44 39	53 56		70 69
40	O I	13	22	54	Ja	50	••	
			••	16	18			:
			••	16	18			2
	••	••		16	18	••		2
	••	••	••	16 16 18	18 18 18 18			2 2 16
				52 47 46	52 47 46 47	••		
				47	47			-
				46	46			-
	••			47				

#### Table 31

-					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Palau	2015	33	34		_			
	2016	27					2	
	2017	27					2	
	2018	27	28				2	••
Papua New Guinea	2015	58	60	45			17	86
	2016	56		45			17	86
	2017	54		45	••		17	86
	2018	53	55	39			13	87
Samoa	2015	35	47	34		6	9	
	2016	33	50	34		4	10	
	2017	33		25		3	13	
	2018	33	44	41		3	13	
Solomon Islands	2015	30	30	30			15	
	2016	31	32	30			11	
	2017	32	33	30			15	
	2018	32	33	30			13	
Tonga	2015	38				11	23	
	2016	35				10	22	
	2017	30				10	8	
	2018	32	41			11	8	
Tuvalu	2015	15	23				5	
	2016	18					11	
	2017	18					11	
	2018	19	24				12	
Vanuatu	2015	25		67		26	16	
	2016	27		48		17	17	
	2017	28		64		17	19	
	2018	28	28	62		17	22	
Wallis and Futuna Is.	2015	24	24	16			10	
	2016	26	26	17			10	
	2017	25		19			10	
	2018	26	27	19			10	

	Autopro	ducers		Main activity producers						
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other		
35	35			33	34					
35	35	••	••	27	28	••	••	2 2 2		
40	40	••	••	26	27 27	••	••	2		
40			••	26 26	27	••	••	2		
40	40	••	••	20	21			2		
64	67	39	86	44	40	49		17		
66	70	40	86 86	40		48		17 17		
63	64	42	86	40		47		17		
61	65	25	87	40	34	47	••	13		
10		**	10	35	47	34		9 10		
10			10	33	50	34		10		
10			10	33	53	25		13		
10			10	33	44	41		13		
21	21			31	32	30		15		
21	21			33	34	30		11		
21	21			33 33	35	30		11 15		
21	21	••		34	35	30	••	13		
				38	40			23		
•••			••	38 35	36	••	••	23 22 8 8		
			••	30	37			8		
			••	32	41			8		
				15	23 22			5		
				18	22			5 11		
				18	23			11 12		
				19	24			12		
				25	23	67		26		
				27	28	48		17		
				28	28	64		18		
				28	28	62		19		
				24	24	16		10		
•••	••	••	••	26	26	17	••	10		
•••	••	••	••	25 25	26	19	••	10		
		••		26	27	19		10		

#### Production of electricity - by type

Gigawatt-hours

#### **Table Notes**

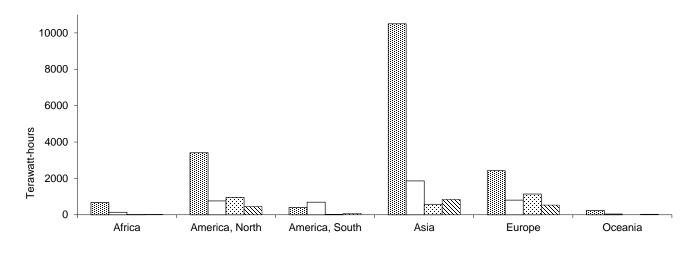
For this table, **Other** under total producers refers to geothermal, tide, wave, marine, electricity from chemical heat, and other non-specified sources. **Other** under autoproducers refers to nuclear (if any), wind, solar, tide, wave, marine, electricity from chemical heat, and other non-specified sources. **Other** under main activity producers refers to wind, solar, tide, wave, marine, electricity from chemical heat, and other non-specified sources.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Other **Terawatt-hours** Nuclear Hydro Combustible fuels '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18

Figure 75: World electricity generation by source, 1990-2018

Figure 76: World production of electricity by source and region, 2018



□ Combustible fuels □ Hydro □ Nuclear □ Other

Figure 77: Major countries producing electricity from combustible fuels, 2018

Figure 78: Major countries producing hydro electricity, 2018

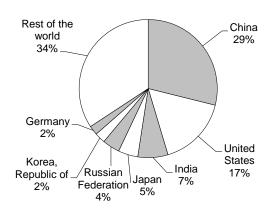


Figure 79: Major countries producing nuclear electricity, 2018

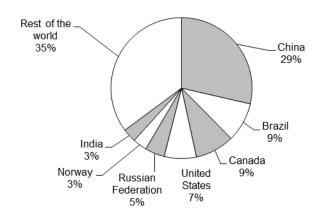
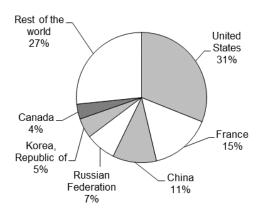
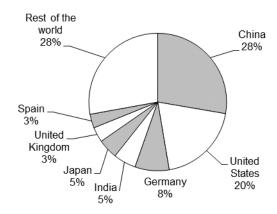


Figure 80: Major countries producing electricity from other sources, 2018





## Production of electricity - by type Gigawatt-hours

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
World	2015 2016 2017 2018	24,363,404 24,988,266 25,621,700 26,626,091	16,803,964 17,062,346	3,977,804 4,149,665 4,187,902 4,305,553	2,571,369 2,606,892 2,634,658 2,708,655	828,054 949,632 1,125,262 1,272,283	319,402 439,708	120,973 158,711 171,824 124,845
Africa	2015 2016 2017 2018	785,873 805,295 829,432 854,629	645,567 660,538	123,163 123,309 129,481 136,436	12,237 15,913 15,743 11,580	7,847 10,329 11,689 14,230	4,120 5,641	6,072 6,057 6,340 6,802
Algeria	2015 2016 2017 2018	68,798 70,839 76,018 76,664	70,661 75,383	145 145 *517 *638	  	19 19 *68 *84	14 *50	  
Angola	2015 2016 2017 2018	9,783 10,379 10,737 11,753	4,546 3,066	5,193 5,815 7,653 8,734		  	18 18	  
Benin	2015 2016 2017 2018	330 276 331 202	266 325	1 5 1		  	5 5	  
Botswana	2015 2016 2017 2018	*2,967 2,688 3,022 3,105	2,686 3,020	  		  	2 2 5	  
Burkina Faso	2015 2016 2017 2018	999 973 1,095 1,021	834 958	93 140 128 91	  	  	 9	  
Burundi	2015 2016 2017 2018	177 181 192 246	31 84	137 143 100 133	  	  	6 8	  
Cabo Verde	2015 2016 2017 2018	421 444 492 *497	361 409	  	  	78 77 76 *93	6 7	  
Cameroon	2015 2016 2017 2018	7,985 7,167 8,099 8,626	2,782 2,993	4,359 4,373 5,090 5,023	 	  	12 16	  
Central African Rep.	2015 2016 2017 2018	142 143 145 147	*1 *1	141 142 144 146	  	  	0	  
Chad	2015 2016 2017 2018	*228 *230 *230 *234	*230 *230	  	  	  	  	  
Comoros	2015 2016 2017 2018	*53 *58 *91 *98	*58 *91	  	  	  		  
Congo	2015 2016 2017 2018	2,770 2,953 3,473 3,509	1,825 2,269	1,098 1,127 1,203 1,239	  	 	1 1	  

## Production of electricity - by type Gigawatt-hours

	Autoproducers Main activity producers								
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total	
1,058,017 1,269,885 1,553,924 1,767,727	2,571,369 2,606,892 2,634,658 2,708,655	3,877,323 4,067,765 4,110,031 4,232,213	14,759,175 15,004,271 15,254,184 15,731,742	22,265,884 22,948,813 23,552,796 24,440,337	141,292 157,860 182,869 194,468	100,482 81,900 77,872 73,339	1,855,746 1,799,694 1,808,162 1,917,946	2,097,520 2,039,453 2,068,903 2,185,753	
10,619 12,249 13,057 15,769	12,237 15,913 15,743 11,580	122,507 122,735 128,468 135,418	594,362 590,108 619,628 632,281	739,724 741,006 776,897 795,047	6,284 8,257 10,612 12,171	656 574 1,013 1,018	39,208 55,460 40,910 46,393	46,149 64,290 52,535 59,582	
77 33 *118 *146	  	145 145 *517 *638	64,441 65,897 70,263 70,443	64,663 66,075 70,898 71,227	  	  	4,135 4,764 5,120 5,437	4,135 4,764 5,120 5,437	
18 18 18 18	  	5,193 5,815 7,653 8,734	4,010 3,950 2,636 2,580	9,221 9,783 10,307 11,332	  	  	562 596 430 421	562 596 430 421	
5 5 5	  	1 5 1	212 170 227 83	218 180 233 88	  	  	112 96 98 114	112 96 98 114	
1 2 2 5	  	  	*2,966 2,686 3,020 3,100	*2,967 2,688 3,022 3,105	  	  	  	  	
  9 54	  	93 140 128 91	906 834 958 875	999 973 1,095 1,021	  	  	  		
5 6 8 8	  	137 143 100 133	29 24 74 99	171 174 182 240	  	  	*6 *7 *10 *6	*6 *7 *10 *6	
85 83 83 *103	  	  	336 361 408 *393	420 443 491 *496	  	  	*1 *1 *1 *1	*1 *1 *1 *1	
10 12 16 19	  	4,359 4,373 5,090 5,023	379 278 286 293	4,748 4,663 5,392 5,335	  	  	3,237 2,504 2,707 3,291	3,237 2,504 2,707 3,291	
000000000000000000000000000000000000000	  	141 142 144 146	*1 *1 *1 *1	142 143 145 147	  	  	  	  	
  	  	  	*228 *230 *230 *234	*228 *230 *230 *234	  	  	  	  	
  	   	  	*53 *58 *91 *98	*53 *58 *91 *98	  	  	  	  	
1 1 1 1	   	1,098 1,127 1,203 1,239	   	1,099 1,128 1,204 1,240	  	  	1,671 1,825 2,269 2,269	1,671 1,825 2,269 2,269	

## Production of electricity - by type Gigawatt-hours

Country or area	Year		Combustible		otal producers	T	<u> </u>	
Country of area	icai	Total	fuels	Hydro	Nuclear	Wind	Solar	Other
Côte d'Ivoire	2015	8,711	7,359	1,352				
	2016 2017	10,253 10,121		1,529 2,047				
	2018	10,059		2,962				-
Dem. Rep. of the Congo	2015	8,953		8,916				•
	2016 2017	9,135 9,510		9,099 9,482	••			-
	2018	12,067		11,064			27	
Djibouti	2015	178						
	2016 2017	88 *59						
	2018	*58						
Egypt	2015	180,377		13,432		1,345	253	
	2016 2017	191,920 195,150		13,460 12,850		2,058 2,200	168 580	•
	2018	202,838		12,726		2,234	537	
Equatorial Guinea	2015	848		*200				
	2016 2017	*850 *850		*200 *200				•
	2018	*736		*200				
Eritrea	2015	356	352	••		2	2	
	2016 2017	363 391				2 2	2 11	
	2018	495				2	43	•
Eswatini	2015	*496		231				
	2016 2017	388 414		123 117			0	
	2018	519		208			0	
Ethiopia	2015	10,493		9,674		759	18	
	2016 2017	12,596 13,276		11,753 12,681		782 533	21 22	
	2018	13,612		13,018		533	20	
Gabon	2015	2,127		918			2	
	2016 2017	2,338 2,277		953 929			2 2	
	2018	2,614		1,057			*2	
Gambia	2015	286				0	*4	
	2016 2017	302 317				0 0	*4 *4	
	2018	*321				0	*4	
Shana	2015	11,672		5,845			3	
	2016 2017	13,203 14,248		5,561 5,616			27 28	
	2018	16,425	10,375	6,017			33	
Guinea	2015	1,118	238	881				
	2016 2017	1,596 1,753	512 541	1,084 1,212				
	2018	1,914	732	1,182				
Guinea-Bissau	2015	*58						
	2016 2017	*84 *86		**	**		*6 *7	•
	2018	*87					*7	•
Kenya	2015	9,515		*3,472		60	••	4,521
	2016 2017	9,971 10,129	1,471	3,960 2,777		56 61		4,484 4,756
	2017	11,163	2,534 1,673	3,986		376	••	5,128

	s	activity producer				ucers	Autoprod	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
		1,352	7,254	8,606			105	105
	••	1,529	8,551	10,080		••	173	173
		2,047	7,901	9,948			173	173
		2,962	7,036	9,998			61	61
		8,916	12	8,928		0	25	25
		9,099	12	9,111		Ö	24	24
		9,324	6	9,330		158	22	180
	••	10,724	5	10,756	••	340	971	1,311
			178	178	••			
			88	88			••	
			*59	*59				
	••		*58	*58	••			
1,		13,432	159,845	174,875			*5,502	*5,502
2,2		13,460	170,634	186,320			*5,600	*5,600
2,		12,850	173,920	189,550			*5,600	*5,600
2,		12,726	181,263	196,760			6,078	6,078
		*200	648	848	<del></del>	<del></del>		
		*200	*650	*850				
		*200	*650	*850		••	••	
	••	*200	*536	*736	••		••	••
			341	345			11	11
			348	352			11	11
			364	377			14	14
	••	••	436	481	••		14	14
		231	0	231			*265	*265
		123	0	123			265	265
		117		117	0	••	297	297
	••	208		208	0		311	311
-		9,674	4	10,455			38	38
8		11,753	4	12,560		••	36	36
		12,681	4	13,240			36	36
;	••	13,018	5	13,576		••	36	36
		918	989	1,907	2 2		218	220
		953	1,159	2,112	2		224	226
		924 1,052	1,115 1,392	2,039 2,443	2 *2	5 5	231 163	238 170
	••	1,002			_	Ü		
			246	250			*36	*36
		••	262	265		••	*37 *27	*37 *37
	••		277 *280	280 *284	••		*37 *37	*37
		5,845	5,644	11,492			*180	*180
	••	5,561 5,616	7,435 8,424	13,023 14,068	••	••	*180 *180	*180 *180
	••	6,017	10,195	16,245			*180	*180
		881 1,084	64 34	945 1,117		••	174 478	174 478
	••	1,212	76	1,288	••	••	465	465
	••	1,182	114	1,295			619	619
			*45	*45			*13	*13
		••	*60	*66	••	••	*18	*18
	••		*60	*67	••	••	*19	*19
			*61	*68	••		*19	*19
			4 400					
4, <del>!</del> 4,!		*3,472 3,960	1,462 1,471	9,515 9,971				
4,8		2,777	2,534	10,129				
5,		3,986	1,546	11,036			127	127

Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Lesotho	2015 2016 2017	532 508 502	0	532 508 501				
	2018	517		517				
-iberia	2015 2016 2017 2018	*350 *440 *440 *444	*400 *397	*40 *40 *40 *122	 	  	 *3 *4	  
Libya	2015 2016 2017 2018	37,511 31,420 33,282 34,171	37,503 31,412 33,274	  	 	  	8 8 8	  
Madagascar	2015 2016 2017 2018	1,712 1,867 1,971 2,072	980 1,182	935 887 789 968	  	  	0 0 0 0	  
Malawi	2015 2016 2017 2018	*2,136 *2,160 *1,991 *2,266	*183 *183	*1,953 *1,977 *1,809 *2,081	  	  	  	  
Mali	2015 2016 2017 2018	2,370 2,613 3,068 *3,261	1,509 *1,935	1,012 1,102 1,130 *1,130		  	2 2 3 *3	  
Mauritania	2015 2016 2017 2018	975 1,042 1,183 1,271	875 1,022	  	  	104 111 104 104	30 57 57 144	  
Mauritius	2015 2016 2017 2018	2,996 3,042 3,120 3,132	2,894 2,976	122 100 90 125	  	3 18 15 15	26 30 39 49	  
Morocco	2015 2016 2017 2018	31,217 32,141 33,192 35,839	25,776 26,875	2,282 1,662 1,565 1,998	  	2,519 3,000 3,035 3,841	6 401 415 950	1,302 1,302 1,302 1,302
Mozambique	2015 2016 2017 2018	19,641 18,697 16,992 16,659	2,930	17,093 15,592 14,060 13,921	  	  	1 2 2 2	  
Namibia	2015 2016 2017 2018	1,576 1,479 1,772 1,363	62 66	1,502 1,359 1,593 1,144	  	1 1 5 18	39 57 108 180	  
Niger	2015 2016 2017 2018	522 442 566 480	428 552	  	  	  	11 13 15 33	  
Nigeria	2015 2016 2017 2018	32,442 33,586 34,445 36,278	25,408 26,670	5,721 8,151 7,747 6,458		  	24 27 28 28	  
Rwanda	2015 2016 2017 2018	526 636 698 730	344 354	284 278 328 350		  	14 14 16 18	

	Autoproducers Main activity producers							
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
		532		532				
		508	0	508			••	
		501	*1	502				
		517	1	517				
		* 4.0	***				****	
		*40	*105	*145			*205 *205	*205
	••	*40 *40	*135 *117	*175 *160			*265 *280	*265 *280
		*122	*108	*234	••		*210	*210
	••	122	100	234	••	••	210	210
		<del></del>	37,503	37,511				
			31,412	31,420				
			33,274	33,282				
			34,163	34,171				
							* 4 = 0	*.4=0
		935	607	1,542			*170	*170
		887	765	1,652			*215	*215
	••	789	913	1,702	••	••	269 *275	269 *275
		968	829	1,797	••	••	*275	*275
		*1,948	*5	*1,953		*5	*178	*183
		*1,972	*5	*1,977		*5	*178	*183
	··	*1,804	*5	*1,809		*5	*178	*183
		*2,076	*5	*2,081		*5	*180	*185
	••	1,012	698	1,712	••	••	*658	*658
		1,102	801	1,905			*708	*708
		1,130	949	2,082			*986	*986
	••	*1,130	*950	*2,083	••	••	*1,178	*1,178
			528	662	••		313	313
		••	515	683			360	360
			680	841			342	342
			677	925			*346	*346
	••	122	1,133	1,258	26	••	1,712	1,738
		100	1,112	1,215	45		1,782	1,827
	••	90	1,184	1,277	51	••	1,792	1,843
		125	1,223	1,350	62		1,719	1,781
2	••	2,282	25,048	29,855	1,302		60	1,362
3		1,662	25,776	30,839	1,302			1,302
3		1,565	26,875	31,890	1,302			1,302
4		1,998	27,748	34,537	1,302			1,302
	••	16,978	2,493	19,471	1	114	54	170
	••	15,575	3,045	18,620	2	17	58	77
		13,778 13,904	2,891 2,736	16,669 16,640	2 2 2	282 17	39	323 19
	••	13,904	2,730	10,040	2	17		19
		1,502	34	1,576		<del></del>		
		1,359	62	1,479			••	
		1,593	66	1,772				
		1,144	21	1,363				
	••		496	496	11		15	26
			415	415	13		13	26
	••	••	541	541	15	••	10	25
			437	437	33		*11	43
		5,604	20,863	26,467	24	117	5,834	5,975
		7,984	19,856	27,840	27	167	5,552	5,746
		7,588	20,842	28,430	28	159	5,828	6,015
		6,326	23,282	29,608	28	132	6,510	6,670
	••	284	226	524			*2	*2
		278	342	634			*2	*2 *2
	••	328	352	696	••		*2	*2
		350	360	728			*2	*2

	Total producers											
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other				
Sao Tome and Principe	2015	*81	*75	7			0					
•	2016	86	79	*7			0					
	2017 2018	*91 *91		*7 6			0					
Ponogal		2 010	2 770				4					
Senegal	2015 2016	3,818 4,097	3,779 4,044		••	••	4 6	35 47				
	2017	4,418	4,270			••	99	49				
	2018	4,502	4,333	••	••	••	80	89				
Seychelles	2015	462			••	7	2					
	2016	496 513			••	7 7	2 3					
	2018	518				7	4					
Sierra Leone	2015	*261	*71	*189			1					
	2016	*303	*84	*219			1					
	2017 2018	*309 *164		*219 *78			6 *6					
				, 0	••		· ·					
Somalia	2015 2016	350 350			••	••						
	2017	*350	*350									
	2018	*350	*350									
South Africa	2015	249,655		3,720	12,237	2,500	2,373					
	2016	255,208		3,947 5,323	15,913 15,743	3,722	3,103					
	2017	257,702 256,064		5,323 5,694	11,580	5,132 6,467	3,869 4,241					
South Sudan	2015	578	576				2					
South Sudan	2016	447			···		2					
	2017	542			••	••	3					
	2018	583	580		••	••	3					
St. Helena and Depend.	2015 2016	11 12				2	1	••				
	2016	11		••		2 2	1 1					
	2018	12	8		••	3	2					
Sudan	2015	13,158	4,738	8,420								
	2016	14,540		8,051	••	••	••					
	2017 2018	15,659 16,374		9,347 9,657	••							
	2015			61								
ōgo	2015 2016	444 950		61 208	••	••	••					
	2017	690	485	205								
	2018	589	389	196			3					
Tunisia	2015	19,676		69	••	448	41	214				
	2016	19,808 20,589		45 17	••	474 449	63 133	224 232				
	2018	21,012		17	••	453	174	283				
Jganda	2015	3,300	247	3,052								
2ganda	2016	3,508	244	3,261			4					
	2017 2018	3,854 4,040		3,447 3,602			25 32					
=					••			••				
Inited Rep. of Tanzania	2015 2016	6,772 7,216	4,649 4,817	2,108 2,366			15 33					
	2017	7,250	4,861	2,350			39					
	2018	7,230	4,908	2,234			88					
Zambia	2015	13,440		13,035								
	2016	11,695	670	11,025		••	••					
	2017 2018	14,185 16,191	1,987 3,524	12,198 12,666			 1					

	Autoproducers Main activity producers							
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
	,	7	*75	*81		,		,
	••	*7	79 79	86	••		••	
		*7	*83	*91		··		
		6	*85	*91			···	
		••	3,105	3,105	39		674	713
			3,239	3,239	53		805	858
			3,449 3,368	3,449 3,368	148 169		821 965	969 1,134
	••	••	3,300	3,300	109	••	900	1,134
			369	378			*85	*85
			400	409			*86	*86
1			414	424			*89	*89
1			417	428			*90	*90
		*400	±0 <del>-</del>	+0==			**	
		*189	*67	*257			*4	*4
	••	*219 *219	*80 *80	*299 *305	••	••	*4 *4	*4 *4
,		*78	*76	*160		••	*4	*4
	••	70	70	100		••	4	4
			350	350			••	
			350	350				
			*350	*350	••		••	
			*350	*350				
0.0	40.007	0.007	0.47.000	202.204	4 000	440	44.540	10.001
26	12,237	3,607	217,282	233,391	4,608	113	11,543	16,264
33 34	15,913 15,743	3,856 5,183	201,654 216,379	221,756 237,648	6,492 8,658	91 140	26,869 11,256	33,452 20,054
68	11,580	5,163 5,619	214,919	232,803	10,023	75	13,163	23,261
00	11,500	3,013	214,515	202,000	10,023	73	13,103	20,201
			245	246	1		331	332
			188	189	1		257	258
			502	503	2		37	39
	••		540	541	2	••	40	42
			8	11				
			8	12	••			
			9	11			••	
			8	12				
		8,420	4,627	13,047			111	111
	••	8,051	6,378	14,429	••	••	111	111
		9,347	6,195	15,542			117	117
		9,657	6,599	16,256			118	118
		61	371	432			12	12
				937		••	13	13
		208 205	729 472	677			13	13
		196	385	582	3		4	7
					_			
44		69	18,174	18,691	255		730	985
47 44		45 17	18,115 18,936	18,634 19,402	287		887 822	1,174 1,187
44		17	19,075	19,402	365 457		1,010	1,167
40	••	17	19,073	19,545	437	••	1,010	1,407
		2,745	73	2,819		307	174	481
		2,967	66	3,037		294	178	471
2		3,183	231	3,440		264	150	414
3	••	3,158	199	3,389	••	444	207	651
		0.400	4.040	0.757	4-			4.5
	••	2,108	4,649 4,817	6,757 7,183	15	••	••	15 33
		2,366 2,350	4,817 4,861	7,183 7,211	33 39			33
	••	2,330 2,234	4,908	7,211 7,142	88		•••	88
	••	2,207	7,000	7,172	00	••		00
		13,035	405	13,440				
		11,025	670	11,695				
		12,198 12,666	1,987 3,524	14,185				
			0.504	16,191				

•	L			T	otal producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Zimbabwe	2015	9,522	4,583	4,939				
	2016	7,090	4,175	2,915				
	2017	7,544		3,969				
	2018	9,418	4,369	5,049		••	••	
America, North	2015 2016	5,423,268	3,464,167	708,431	943,674	232,823	39,598	34,575 34.420
	2017	5,445,802 5,407,538	3,258,977	733,513 782,053	951,914 951,043	275,135 303,618	56,351 77,729	34,118
	2018	5,583,985	3,408,483	765,350	955,735	327,740	93,239	33,438
Anguilla	2015	95	94			••	0	
	2016	104					*1	
	2017 2018	80 87	80 87		••	••	0 0	
Antigua and Barbuda	2015	*347	*340				7	
gaa ana barbada	2016	*353					9	
	2017	*353	*344				9	
	2018	362					13	
Aruba	2015	*932	*793			*138		
	2016	*947	*802			*145		
	2017	*978	*835 *808			*144 *175	••	
	2018	*983	*808		••	*175	••	
Bahamas	2015	1,998	1,998					
	2016 2017	1,966	1,966			••	••	
	2017	*1,987 *2,280	*1,987 *2,280	••	••			
					••			
Barbados	2015	1,043	1,029				14	
	2016 2017	1,064 1,047	1,037 1,009				27 38	
	2018	1,055	1,011				44	
Belize	2015	417	*181	236				
	2016	414		261				
	2017	*636		271				
	2018	*651	*401	250				
Bermuda	2015	674	674					
	2016	665				••	••	
	2017 2018	675 642	675 642					
Bonaire, St Eustatius, Saba	2015	127	87			40		
Bonaire, of Eustatius, Caba	2016	137	95			38	*5	
	2017	142	101			35	*5	
	2018	*143	*95			*43	*5	
British Virgin Islands	2015	*210	*208			*1	*1	
	2016	*212				*1	*1	
	2017 2018	*149 *146	*148 *145			*1 *1	0 0	
Canada	2015	657,944	143,856	382,266	101,809	26,964	2,895	154
Janada	2016	663,808	141,715	385,505	101,429	30,930	4,030	199
	2017	662,972		394,659	101,299	31,511	3,573	211
	2018	654,399	130,508	385,951	100,731	33,183	3,796	230
Cayman Islands	2015	640	640					
	2016	666	666					
	2017	671	671					
	2018	658	658					
Costa Rica	2015	10,812	287	8,067	••	1,080	3	1,376
	2016 2017	10,880 11,332		8,026 8,677	••	1,147 1,288	2 28	1,340 1,118
	2017	11,498		8,343		1,799	55	969

	<u>s</u>	ctivity producers				ıcers	Autoprod	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
		4,939	4,529	9,468			54	54
-		2,915	3,897	6,812			278	278
	••	3,969	3,408	7,377	••		167	167
		5,049	4,163	9,212			206	206
283,066	943,674	670,627	3,222,006	5,119,373	23,930	37,804	242,162	303,896
335,672	951,914	701,107	3,149,576	5,138,270	30,233	32,405	244,894	307,533
381,164	951,043	749,203	3,004,641	5,086,051	34,302	32,850	254,335	321,487
413,713	955,735	733,208	3,151,369	5,254,025	40,704	32,142	257,114	329,960
(			94	95				
**			103	104				
(			80	80				
(			87	87				
7			*339	*346			*1	*1
ç Ç			*343	*352			*1	*1
ę			*343	*352			*1	*1
13			348	361			*1	*1
*138			*793	*932				
*145			*802	*947				
*144			*835	*978				
*175			*808	*983				
			1,922	1,922			*76	*76
-			1,890	1,890			*76	*76
-			*1,912	*1,912			*75	*75
			*2,200	*2,200			*80	*80
14			1,012	1,026			17	17
27			1,020	1,046			18	18
38			992	1,030			17	17
44			994	1,038	••	••	17	17
		236	*24	260		••	*157	*157
-	••	261	*23	284	••		*130	*130
-	••	271	*39	309	••	••	*327	*327
-		250	*58	308			*343	*343
			662	662		••	*12	*12
-			653	653		••	*12	*12
-	••	••	662 629	662 629	••	••	*13 *13	*13 *13
-	••		029	029	••		13	13
40			87	127				
43	••	••	95	137	••	••		
4( *48			101 *95	142 *143				
								••
*2 *2			*208 *211	*210 *212			••	••
**	••	••	*148	*149		••	••	••
**		 	*145	*146				
20.62	101 900	340 505			206	22 674	22 507	66 644
29,627 33,580	101,809 101,429	348,595 357,230	111,269 110,323	591,300 602,562	386 1,579	33,671 28,275	32,587 31,392	66,644 61,246
33,44	101,299	364,520	100,447	599,707	1,854	30,139	31,272	63,265
35,143	100,731	356,398	103,022	595,294	2,066	29,553	27,486	59,105
			640	640				
•		••	666	666			••	
			671	671				
	••		658	658		••	••	
1,433		6,256	108	7,797	1,024	1,810	179	3,014
1,420		6,416	193	8,028	1,070	1,610	172	2,851
2,408		8,677	37	11,123	25	0	185	210
2,777		8,343	159	11,279	45	0	174	219

Table 32

				Т	otal producers				
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other	
Cuba	2015 2016 2017 2018	20,288 20,459 20,558 20,837	20,334 20,394	48 64 83 146	  	*21 *21 *21 *44	*29 *39 *60 *124	  	
Curaçao	2015 2016 2017 2018	878 884 891 866	735 703	  	  	124 130 169 234	17 19 19 19	  	
Dominica	2015 2016 2017 2018	151 156 130 110	103	24 36 27 24	  	  	  		
Dominican Republic	2015 2016 2017 2018	17,922 18,690 19,036 19,651	16,773	945 1,519 2,196 1,780	  	290 323 390 497	32 75 140 230	  	
El Salvador	2015 2016 2017 2018	6,065 6,083 5,615 5,402	3,139 2,077	1,423 1,344 1,704 1,631	  	  	7 24 265 289	1,540 1,576 1,569 1,545	
Greenland	2015 2016 2017 2018	520 490 518 *530	89 130	423 401 388 *400	  	  	  	  	
Grenada	2015 2016 2017 2018	207 218 227 *231	218 227	  	  	  	0 0 0 0	·· ·· ··	
Guatemala	2015 2016 2017 2018	11,157 11,789 12,272 13,568	7,122 5,816	3,880 3,971 5,787 5,218	  	107 215 218 320	149 192 198 208	252 289 253 250	
Haiti	2015 2016 2017 2018	1,038 1,084 1,056 1,046	1,013 928	83 71 127 197	  	  	  1		
Honduras	2015 2016 2017 2018	9,167 9,150 9,251 9,526	4,568	2,340 2,350 3,088 3,262	  	665 574 578 929	417 881 924 993	 93 297	
Jamaica	2015 2016 2017 2018	4,206 4,342 4,360 4,402	4,002 3,873	128 118 154 179	  	125 207 289 302	 15 44 46	  	
Mexico	2015 2016 2017 2018	310,712 320,565 322,063 335,581	262,310	30,815 30,698 31,982 32,636	11,577 10,567 10,883 13,675	8,745 10,378 10,442 12,875	239 464 1,085 1,856	6,331 6,148 5,945 5,283	
Montserrat	2015 2016 2017 2018	*24 *20 *19 *20	*20 *19	  	  	  	  	  	
Nicaragua	2015 2016 2017 2018	4,580 4,591 4,525 4,636	2,728 2,657	295 426 468 411	  	865 729 635 801	2 2 14 24	678 706 751 801	

Nuclear Other  *50 *60 *81 *168 141 149 188 253 1,540 1,576 1,664 1,675	Hydro	19,292 19,385 19,431 19,761 534 575 629 499 83 75 58 41 14,718 14,869 14,489 15,288 2,532 2,505	Total  19,390 19,509 19,595 20,074  675 724 817 752  107 112 86 65  15,948 16,728 17,117 17,640 5,425	Other	Hydro	898 949 963 763 203 160 74 114  *44 *44 *44 *1,936	898 949 963 763 203 160 74 114 *44 *44 *44 *44
*60 *81 *168 141 149 188 253 290 347 438 580 1,540 1,576 1,664 1,675	64 83 146  24 36 27 24 940 1,513 2,190 1,773 1,353 1,261 1,619 1,548	19,385 19,431 19,761 534 575 629 499 83 75 58 41 14,718 14,869 14,489 15,288 2,532 2,505	19,509 19,595 20,074 675 724 817 752 107 112 86 65 15,948 16,728 17,117 17,640	            	     5	949 963 763 203 160 74 114 *44 *44 *44 *44	949 963 763 203 160 74 114 *44 *44 *44 *44
*81 *168 141 149 188 253 290 347 438 580 1,540 1,576 1,664 1,675	83 146   24 36 27 24 940 1,513 2,190 1,773 1,353 1,261 1,619 1,548	19,431 19,761 534 575 629 499 83 75 58 41 14,718 14,869 14,489 15,288 2,532 2,505	19,595 20,074 675 724 817 752 107 112 86 65 15,948 16,728 17,117 17,640	            	     5	963 763 203 160 74 114 *44 *44 *44 *44	963 763 203 160 74 114 *44 *44 *44 *44
*168 141 149 188 253 290 347 438 580 1,540 1,675 1,664 1,675	146 24 36 27 24 940 1,513 2,190 1,773 1,353 1,261 1,619 1,548	19,761 534 575 629 499 83 75 58 41 14,718 14,869 14,489 15,288 2,532 2,505	20,074 675 724 817 752 107 112 86 65 15,948 16,728 17,117 17,640	            	     5	763 203 160 74 114 *44 *44 *44 *44 1,936	763 203 160 74 114 *44 *44 *44 *44
141 149 188 253 290 347 438 580 1,540 1,576 1,664 1,675	24 36 27 24 940 1,513 2,190 1,773 1,353 1,261 1,619 1,548	534 575 629 499 83 75 58 41 14,718 14,869 14,489 15,288 2,532 2,505	675 724 817 752 107 112 86 65 15,948 16,728 17,117 17,640	            	     5	203 160 74 114 *44 *44 *44 *44	203 160 74 114 *44 *44 *44 *44
149 188 253 290 347 438 580 1,540 1,576 1,664 1,675	24 36 27 24 940 1,513 2,190 1,773 1,353 1,261 1,619 1,548	575 629 499 83 75 58 41 14,718 14,869 14,489 15,288 2,532 2,505	724 817 752 107 112 86 65 15,948 16,728 17,117 17,640	      32 51 92	    5 6	160 74 114 *44 *44 *44 *44	160 74 114 *44 *44 *44
188 253	24 36 27 24 940 1,513 2,190 1,773 1,353 1,261 1,619 1,548	629 499 83 75 58 41 14,718 14,869 14,489 15,288 2,532 2,505	817 752 107 112 86 65 15,948 16,728 17,117 17,640	     32 51 92	    5 6	74 114 *44 *44 *44 *44	74 114 *44 *44 *44
253	24 36 27 24 940 1,513 2,190 1,773 1,353 1,261 1,619 1,548	499 83 75 58 41 14,718 14,869 14,489 15,288 2,532 2,505	752 107 112 86 65 15,948 16,728 17,117 17,640	    32 51 92	   5 6	*44 *44 *44 *44	*44 *44 *44
290 347 438 580 1,540 1,576 1,664 1,675	36 27 24 940 1,513 2,190 1,773 1,353 1,261 1,619 1,548	75 58 41 14,718 14,869 14,489 15,288 2,532 2,505	112 86 65 15,948 16,728 17,117 17,640	  32 51 92	5 6	*44 *44 *44	*44 *44 *44
290 347 438 580 1,540 1,576 1,664 1,675	27 24 940 1,513 2,190 1,773 1,353 1,261 1,619 1,548	58 41 14,718 14,869 14,489 15,288 2,532 2,505	86 65 15,948 16,728 17,117 17,640	 32 51 92	5 6	*44 *44 1,936	*44 *44
290 347 438 580 1,540 1,576 1,664 1,675	940 1,513 2,190 1,773 1,353 1,261 1,619 1,548	41 14,718 14,869 14,489 15,288 2,532 2,505	15,948 16,728 17,117 17,640	32 51 92	5 6	*44 1,936	*44
347 438 580 1,540 1,576 1,664 1,675	1,513 2,190 1,773 1,353 1,261 1,619 1,548	14,869 14,489 15,288 2,532 2,505	16,728 17,117 17,640	51 92	6		1 974
438 580 1,540 1,576 1,664 1,675	2,190 1,773 1,353 1,261 1,619 1,548	14,489 15,288 2,532 2,505	17,117 17,640	92		4 005	
580 1,540 1,576 1,664 1,675	1,773 1,353 1,261 1,619 1,548	15,288 2,532 2,505	17,640			1,905	1,962
1,576 1,664 1,675 	1,353 1,261 1,619 1,548	2,532 2,505			6 7	1,821 1,856	1,919 2,011
1,576 1,664 1,675 	1,261 1,619 1,548	2,505		7	70	563	640
1,675  	1,548		5,342	24	83	634	742
	•	1,399	4,682	170	85	678	933
0	423	1,200	4,422	160	83	737	980
0	401	97 89	520 490				
0	388	130	518				
0	*400	*130	*530			<del></del>	
		206	206			1	1
0		217	217			2	2
0 0		225 *228	225 *228	••		2 3	2 3
508	3,852	5,942	10,302		28	827	856
696	3,951	6,231	10,878		20	891	911
669 778	5,765 5,191	5,055 6,554	11,490 12,522	••	22 27	761 1,018	783 1,046
110				••	21		
	83 71	911 976	994 1,047	••	••	44 37	44 37
1	127	905	1,033			23	23
1	197	827	1,025			21	21
1,082	2,340	4,862	8,284			883	883
1,455	2,350	4,798	8,603			547	547
1,595 2,219	3,088 3,262	3,528 2,644	8,211 8,125			1,040 1,401	1,040 1,401
	128	2,400	2,528	125	••	1,553	1,678
	118	2,438	2,556	222		1,564	1,786
	154 179	2,379 2,382	2,533 2,561	333 348		1,494 1,493	1,827 1,841
11,577 8,708 10,567 8,598	30,051 29,805	212,385 217,231	262,721 266,201	6,607 8,392	764 893	40,620 45,079	47,991 54,364
10,883 7,995	31,040	209,160	259,078	9,477	942	52,566	62,985
13,675 7,967	31,581	214,880	268,103	12,047	1,055	54,376	67,478
		*24 *20	*24 *20				
		*20 *19	*20 *19		••		••
		*20	*20				
1,545	294	2,232	4,071		1	508	509
1,437	425	2,140	4,002		1	588	589
1,400 1,626	468 411	1,946 1,864	3,814 3,901	••	0 0	711 735	711 735

	Total producers										
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other			
Panama	2015 2016 2017 2018	10,295 10,885 11,054 11,353	3,666 3,141	6,257 6,523 7,256 7,858		. 625 . 491	5 71 156	 9 18			
Puerto Rico	2015 2016 2017 2018	21,160 20,887 16,571 *16,647	20,505 16,212	56 71 51 38		. 193 . 149	3 118 9 159	  			
Sint Maarten (Dutch part)	2015 2016 2017 2018	*369 *376 *332 *291	*376 *332	  	  			  			
St. Kitts-Nevis	2015 2016 2017 2018	*217 *228 232 *232	*217 221	  	  	. 8	3 3	  			
St. Lucia	2015 2016 2017 2018	381 391 400 404	391 400	  	  		 	  			
St. Pierre-Miquelon	2015 2016 2017 2018	49 48 49 51	48 49	  	  	. (		  			
St. Vincent-Grenadines	2015 2016 2017 2018	147 153 151 151	136 129	17 16 20 24			. 1	  			
Trinidad and Tobago	2015 2016 2017 2018	10,300 10,011 9,933 9,225	10,006 9,928	  	  		. 5 . 5	  			
Turks and Caicos Islands	2015 2016 2017 2018	*239 *250 *241 *257	*250 *241	  	  		  	  			
United States	2015 2016 2017 2018	4,317,159 4,322,038 4,286,423 4,455,439	2,886,040 2,770,050	271,129 292,113 325,114 317,004	839,918 838,861	229,471 257,249	50,334 70,980	24,245 24,162 24,169 24,046			
United States Virgin Is.	2015 2016 2017 2018	*799 *797 *610 *626	*765 *589	  	  		. *33 . *21	  			
America, South	2015 2016 2017 2018	1,165,307 1,169,697 1,165,211 1,186,977	432,454 410,886	652,537 669,002 675,333 692,646	24,149 21,827	40,887 51,664	7 3,204 5,436	1 1 65 214			
Argentina	2015 2016 2017 2018	145,363 146,353 145,618 152,224	99,479 97,257	41,451 38,028 41,645 41,430	6,088	547 612	7 14 2 16	  			
Bolivia (Plur. State of)	2015 2016 2017 2018	9,034 9,313 9,627 9,883	7,552 7,327	2,463 1,720 2,234 2,613		. 35	6 ) 6	 			

	3	ctivity producers				ucers	Autoprod	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
43		6,257	3,570	10,262			34	34
69	••	6,523	3,634	10,853		••	32	32
65		7,256	3,109	11,022	••		32	32
83		7,858	2,496	11,192	··	••	161	161
		.,	_,	,				
33	••	56	20,521	20,910			*250	*250
31		71	20,255	20,637			*250	*250
30	••	51	16,002	16,361	••	••	*210	*210
18		38	*16,200	*16,427			*220	*220
			*369	*369				
			*376	*376				
			*332	*332				
	**	••	*291	*291	**	••		
				****				
*1			*206	*216			*1	*1
1			*216	*227			*1	*1
1			220	231	••	••	*1	*1 *1
*1			*220	*231		••	*1	*1
			381	381				
			391	391				
			400	400				
			399	404				
			40	40				
	••	••	49	49	••	••	••	••
	••	••	48	48	••	••	••	••
			49 51	49 51			••	
	••	••	31	31	••	••	••	••
		17	129	146	0			0
		16	136	153	0			0
		20	129	150	1			1
		24	125	150	1			1
			10,211	10,215			85	85
	••	••	9,924	9,929		••	82	82
			9,846	9,851			82	82
		••	9,144	9,149		••	76	76
		••	*239	*239		••		
			*250	*250				
	••	••	*241 *257	*241 *257	••	••	••	
	••	••	257	257	••	••	••	
237,14	830,288	269,675	2,802,188	4,139,295	15,728	1,454	160,682	177,864
285,09	839,918	290,596	2,725,711	4,141,317	18,875	1,517	160,329	180,721
330,06	838,861	323,458	2,608,106	4,100,487	22,336	1,656	161,944	185,936
359,18	841,329	315,587	2,746,062	4,262,167	25,875	1,417	165,980	193,272
1			*766	*779	*20			*20
1	••	••	*765	*778	*19	••	••	*19
'	••		*589	*597	*14		••	*14
			*605	*612	*14			*14
28,87	21,873	629,283	347,733	1,027,760	144	23,254	114,149	137,547
43,93	24,149	645,087	314,393	1,027,564	157	23,915	118,061	142,133
56,81 69,66	21,827 22,127	653,808 669,920	290,063 278,112	1,022,517 1,039,827	348 719	21,524 22,726	120,822 123,705	142,695 147,149
				.,,			•	•
61	7,139	41,424	82,225	131,402		27	13,934	13,961
	*8,285	37,982	84,698	131,526		46	14,781	14,827
56			82,559	130,874		46	14,698	14,744
56 62	6,088	41,599	02,559	,			14 600	14,744
56		41,599 41,384	88,122	137,480		46	14,698	17,777
56 62 1,52	6,088 6,453	41,384	88,122	137,480				
56 62 1,52	6,088 6,453 	41,384 2,461	88,122 6,255	137,480 8,733		2	299	301
56 62 1,52	6,088 6,453	41,384	88,122	137,480				

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Brazil	2015 2016 2017 2018	581,228 578,897 589,326 601,396	148,549 159,476	359,743 380,911 370,906 388,971	15,864	21,626 33,488 42,373 48,475	85 832	  
Chile	2015 2016 2017 2018	75,387 79,308 79,416 82,313	50,602	23,881 23,274 21,315 23,367		2,115 2,449 3,521 3,588	2,639 3,914	0 0 64 214
Colombia	2015 2016 2017 2018	78,596 76,800 79,279 79,964	27,644 17,828	48,568 49,096 61,434 59,933		68 51 3 43	9 14	  
Ecuador	2015 2016 2017 2018	25,950 27,314 28,033 29,198	7,833	13,096 15,834 20,089 20,678		99 84 73 80	39 37	  
Falkland Is. (Malvinas)	2015 2016 2017 2018	19 21 20 19	15 14	  	  	5 6 5		  
Guyana	2015 2016 2017 2018	1,004 1,081 1,105 1,136	1,076 1,098	  	  	0 0 0	5 7	  
Paraguay	2015 2016 2017 2018	55,744 63,771 59,685 59,212	1 2	55,743 63,770 59,684 59,211			••	  
Peru	2015 2016 2017 2018	48,277 52,720 52,743 54,982	26,630 22,265	23,722 24,785 29,075 30,737		596 1,064 1,073 1,502	241 330	  
Suriname	2015 2016 2017 2018	2,084 2,027 2,117 2,288	1,239 1,187	702 783 926 1,000			*4 *4 *4	  
Uruguay	2015 2016 2017 2018	13,731 13,886 14,364 14,624	2,803	8,266 7,842 7,518 6,557		2,065 2,994 3,775 4,732	152 269	  
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	128,891 118,206 103,878 99,737	43,194	74,902 62,959 60,507 58,150		145 169 *169 71	10 7	1 1 *1 
Asia	2015 2016 2017 2018	11,865,703 12,389,955 13,019,294 13,775,576	9,603,363 9,996,816	1,686,307 1,781,339 1,813,080 1,860,758	476,522 507,232	238,781 301,300 377,255 469,727	135,628 220,204	54,189 91,802 104,707 57,374
Afghanistan	2015 2016 2017 2018	1,339 1,394 1,420 1,266	155 176	1,190 1,239 1,244 1,066				  
Armenia	2015 2016 2017 2018	7,799 7,315 7,765 7,791	2,581	2,206 2,350 2,269 2,318	2,381 2,620	3 2 2 2	1 3	  

	rs	activity produce	Main	,	<u> </u>	Autoproducers			
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total	
21,639 33,511 43,002 51,375	14,734 15,864 15,739 15,674	338,673 359,499 352,313 369,641	109,876 71,486 80,093 63,542	484,922 480,360 491,147 500,232	46 62 203 561	21,070 21,412 18,593 19,330	75,190 77,063 79,383 81,273	96,306 98,537 98,179 101,164	
3,373 5,088 7,497 9,014	  	23,837 23,113 21,271 23,307	41,956 44,131 43,264 43,017	69,166 72,332 72,032 75,338	3 0 2 5	44 161 44 60	6,174 6,815 7,338 6,910	6,221 6,976 7,384 6,975	
68 51 8 55	  	48,451 48,966 61,286 59,772	21,176 18,493 8,645 9,882	69,695 67,510 69,939 69,709	9 9 9	117 130 148 161	8,775 9,151 9,183 10,085	8,901 9,290 9,340 10,255	
135 123 111 118	  	12,399 15,104 19,008 19,304	9,223 7,316 3,772 4,191	21,756 22,543 22,891 23,613	  	697 730 1,082 1,374	3,496 4,041 4,061 4,211	4,194 4,771 5,142 5,585	
5 6 5 5	  	  	12 13 12 12	17 19 18 17	  	  	*2 *2 *2 *2	*2 *2 *2 *2	
5 5 7 11	  		935 994 1,015 1,043	941 999 1,022 1,054	  	  	63 82 82 82	63 82 82 82	
	  	55,743 63,770 59,684 59,211	1 1 2 2	55,744 63,771 59,685 59,212	  	  	  	  	
826 1,305 1,360 2,253	  	23,127 24,136 28,393 29,989	21,766 25,024 20,591 20,125	45,719 50,465 50,344 52,367	 43 46	595 649 682 748	1,963 1,606 1,674 1,821	2,558 2,255 2,399 2,615	
*4 *4 *4 *4	  	  	757 573 662 *579	762 577 666 *583	  	702 783 926 1,000	620 667 525 705	1,322 1,450 1,451 1,705	
2,104 3,137 4,028 5,123	  	8,266 7,842 7,518 6,557	1,756 1,295 1,167 1,177	12,126 12,274 12,713 12,857	10 10 15 23	  	1,595 1,602 1,636 1,745	1,604 1,612 1,651 1,768	
80 104 *101 2	  	74,902 62,959 60,507 58,150	51,794 53,099 41,302 39,692	126,777 116,161 101,910 97,844	76 76 76 75	  	2,038 1,969 1,892 1,818	2,114 2,045 1,968 1,893	
308,921 449,168 610,224 750,538	430,379 476,522 507,232 577,727	1,658,554 1,767,135 1,800,858 1,853,829	8,251,661 8,580,198 8,974,037 9,387,500	10,649,515 11,273,024 11,892,350 12,569,594	74,662 79,562 91,942 89,438	27,753 14,204 12,223 6,929	1,113,773 1,023,165 1,022,779 1,109,615	1,216,187 1,116,931 1,126,943 1,205,982	
  	  	890 927 930 786	144 150 168 193	1,034 1,076 1,098 979	  	*300 *313 *314 *280	*5 *5 *8 *7	*305 *318 *322 *287	
4 3 2 7	2,788 2,381 2,620 2,076	2,206 2,350 2,269 2,318	2,801 2,581 2,872 3,376	7,799 7,315 7,763 7,777	  2 14	  		 2 14	

			Total producers					
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Azerbaijan	2015 2016 2017 2018	24,688 24,953 24,320 25,229	22,936 22,515	1,637 1,959 1,746 1,768	  	5 23 22 83	5 35 37 39	  
Bahrain	2015 2016 2017 2018	28,461 28,479 29,193 29,517	28,469 29,183	  	  	 1 *1 *1	9 9 *9 *9	  
Bangladesh	2015 2016 2017 2018	59,103 68,909 73,249 78,612	67,650 71,934	600 1,020 1,041 1,086	  	6 6 6	210 233 268 291	  
Bhutan	2015 2016 2017 2018	7,748 7,954 7,730 6,960	0	7,747 7,953 7,728 6,959	  	 1 1 1	1 1 1 1	  
Brunei Darussalam	2015 2016 2017 2018	4,200 4,270 4,157 4,294	4,269 4,155	  	  	  	2 1 2 2	  
Cambodia	2015 2016 2017 2018	4,397 5,594 6,998 8,173	2,972 4,260	2,000 2,619 2,733 4,737	  	  	3 3 5 16	
China	2015 2016 2017 2018	5,814,573 6,145,886 6,530,689 7,166,133	4,437,068 4,662,739	1,130,270 1,193,374 1,194,700 1,231,787	170,789 213,287 248,100 294,359	185,766 237,071 304,600 365,971	38,776 61,586 117,800 177,517	4,784 *3,500 2,750 181
China, Hong Kong SAR	2015 2016 2017 2018	37,924 38,154 36,970 36,565	38,154 36,970	  	  	  	  	
China, Macao SAR	2015 2016 2017 2018	962 988 1,465 656	988 1,465			  	  	
Cyprus	2015 2016 2017 2018	4,533 4,887 5,004 5,061	4,515 4,621	  	  	221 226 211 221	126 146 172 200	
Georgia	2015 2016 2017 2018	10,833 11,574 11,531 12,149	2,236 2,233	8,454 9,329 9,210 9,949	  	 9 88 84	  	  
India	2015 2016 2017 2018	1,354,382 1,432,358 1,490,293 1,521,785	1,188,280 1,217,575	121,546 122,507 126,271 134,991	37,414 37,916 38,346 37,813	30,045 35,530 38,486 *64,294	7,039 12,578 24,613 *39,728	*35,547 *45,002
Indonesia	2015 2016 2017 2018	267,287 233,367 *283,647 293,203	201,209 *251,766	17,595 21,475 18,632 19,774	 	 6 *6 	5 21 29 7	8,989 10,656 13,214 13,211
Iran (Islamic Rep. of)	2015 2016 2017 2018	280,635 289,116 307,992 307,968	265,799 285,012	14,090 16,421 15,051 15,051	2,914 6,620 7,514 7,514	221 250 306 585	1 4 85 286	16 22 24 24

-	Autoproducers Main activity producers							
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
10		1,637	20,904	22,551			2,137	2,137
41	••	1,959	20,699	22,699	 17		2,237	2,254
40		1,746	20,445	22,231	20		2,070	2,089
122		1,768	21,243	23,133	0		2,096	2,096
9	••	••	17,183	17,192	••	••	11,269	11,269
10	••	••	17,046	17,056	••	••	11,423	11,423
*10 *10	**	••	17,939 17,824	17,949 17,834	••		11,244 11,683	11,244 11,683
10	••	••	17,024	17,034	••	••	11,003	11,003
216		600	42,178	42,994			16,109	16,109
239		1,020	50,386	51,645			17,264	17,264
274		1,041	54,697	56,012			17,237	17,237
297		1,086	59,985	61,368			17,244	17,244
1		7,747	0	7,748				
1 1	••	7,747 7,953	0	7,746	••	••		••
2		7,933 7,728	0	7,730	 		••	••
2 2	••	6,959	Ő	6,960		••	••	
		-,		•				
2			3,736	3,738			462	462
2 1 2 2			3,842	3,843		••	427	427
2			3,722	3,724			433	433
2		••	3,852	3,854			440	440
3		2,000	2,394	4,397				
3 3		2,619	2,972	5,594		•		
5		2,733	4,260	6,998				
16		4,737	3,420	8,173				
000 000	470 700	4 400 070	0.000.740	E 407 40E			0.47.440	0.47.440
229,326	170,789	1,130,270	3,936,740	5,467,125	••	••	347,448	347,448
302,157 425,150	213,287 248,100	1,193,374 1,194,700	4,077,222 4,284,591	5,786,040 6,152,541			359,846 378,148	359,846 378,148
543,669	294,359	1,231,787	4,683,007	6,752,822			413,311	413,311
0.10,000	201,000	1,201,101	1,000,007	0,702,022	••	••	110,011	110,011
			37,924	37,924	••			
			38,154	38,154				
			36,970	36,970				
	••		36,565	36,565				
			753	753			209	209
			787	787			201	201
			1,260	1,260			205	205
			474	474			182	182
205			4.440	4 4 4 7	40		4.4	00
305	**	••	4,142 4,469	4,447	42 53		44	86
320 322	••	••	4,469 4,574	4,789 4,896	52 61	••	46 47	98 108
350			4,589	4,939	71	••	51	122
000	••	••	1,000	1,000		••	0.	
		8,454	2,379	10,833				
9		9,329	2,236	11,574				
88		9,210	2,233	11,531	••	••	••	
84		9,949	2,115	12,149	••			
33,630	37,414	121,377	943,013	1,135,434	*3,454	*169	*215,325	*218,948
80,116	37,916	122,378	993,516	1,233,926	*3,539	129	194,764	198,432
104,301	38,346	126,123	1,037,184	1,305,954	*3,800	148	180,391	184,339
*101,304	37,813	134,894	1,072,314	1,346,325	*2,718	97	172,645	175,460
4 700		40.005	440.00	457.00	4 400	7 500	00 171	440.000
4,796		10,005	142,227	157,027	4,199 6,716	7,590	98,471	110,260
3,967 4,552		13,885 12,425	148,606 *207,769	166,458 *224,746	6,716 8,697	7,590 6,207	52,603 43,997	66,909 58,901
13,218		19,774	243,889	276,881	0,09 <i>1</i>	0,201	16,322	16,322
10,210		10,114	2-10,000	2,0,001			10,022	.0,022
238	2,914	14,090	256,953	274,195			6,440	6,440
276	6,620	16,421	259,317	282,634			6,482	6,482
415	7,514	15,051	277,107	300,087			7,905	7,905
895	7,514	15,051	276,603	300,063			7,905	7,905

					Total producers	roducers		
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Iraq	2015 2016 2017 2018	*68,745 80,087 83,947 82,507	76,659 81,714	*2,572 3,371 2,176 1,818	  	  	57 57 57 377	  
Israel	2015 2016 2017 2018	64,226 66,976 67,675 68,893	65,432 65,742	24 0 0 0	  	7 0 180 183	1,115 1,544 1,511 1,574	 242 159
Japan	2015 2016 2017 2018	1,058,748 1,061,874 1,071,200 1,057,755	883,161 862,526	91,270 85,666 91,060 88,348	9,437 18,060 32,912 64,929	5,580 6,166 6,490 7,481	34,802 45,761 55,068 62,668	23,283 23,060 23,144 21,592
Jordan	2015 2016 2017 2018	19,012 *19,627 19,432 18,859	*18,704 18,354	53 42 38 23	  	123 391 449 707	2 491 591 836	  
Kazakhstan	2015 2016 2017 2018	106,468 106,626 103,128 107,060	94,644 91,485	9,269 11,620 11,210 10,330	  	132 274 339 427	47 88 94 116	  
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	13,748 16,939 14,915 15,431	4,126 3,001	10,000 12,800 11,900 12,800	  	  	11 13 14 15	  
Korea, Republic of	2015 2016 2017 2018	552,697 562,603 566,881 590,108	385,386 400,148	5,796 6,634 7,006 7,270	164,762 161,995 148,427 133,505	1,342 1,683 2,169 2,465	3,975 5,123 7,057 9,208	1,712 1,782 2,074 2,370
Kuwait	2015 2016 2017 2018	68,288 70,085 72,790 74,107	70,085 72,788	  	  	  	 0 2 4	  
Kyrgyzstan	2015 2016 2017 2018	13,030 13,262 15,514 15,728	1,768 1,311	11,100 11,494 14,203 14,318	  	  	  	  
Lao People's Dem. Rep.	2015 2016 2017 2018	16,730 25,068 31,550 *34,410	7,120 *11,683	14,252 17,946 19,858 *21,844	  	  	2 2 9 *12	  
Lebanon	2015 2016 2017 2018	20,720 21,457 23,411 23,150	21,047 22,955	479 382 415 348	  	  	15 28 41 48	  
Malaysia	2015 2016 2017 2018	150,123 156,665 164,509 170,578	136,336 137,599	13,924 20,019 26,580 26,325	  	  	273 310 330 632	  
Maldives	2015 2016 2017 2018	619 672 725 772	660 709	  	  	2 2 2 2	6 10 14 14	  
Mongolia	2015 2016 2017 2018	5,513 5,667 6,027 6,535	5,667 6,027	  	  	  	  	  

	Autoproducers Main activity producers						Autoprod	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
  	  	*2,572 3,371 2,176 1,818	*66,116 76,659 81,714 80,312	*68,688 80,030 83,890 82,130	57 57 57 377	  	  	57 57 57 377
7 0 0 0	  	15 0 0 0	60,461 62,907 63,409 63,846	60,483 62,907 63,409 63,846	1,115 1,544 1,933 1,916	9 0 0	2,619 2,525 2,333 3,131	3,743 4,069 4,266 5,047
2,549 14,279 16,935 19,382	9,437 18,060 32,912 64,929	74,801 81,919 88,356 85,058	737,465 799,505 781,222 726,604	824,252 913,763 919,425 895,973	61,116 60,708 67,767 72,359	16,469 3,747 2,704 3,290	156,911 83,656 81,304 86,133	234,496 148,111 151,775 161,782
125 882 1,040 1,543	  	53 42 38 23	18,363 *18,504 18,154 17,154	18,540 *19,427 19,232 18,720	  	  	471 *200 *200 *139	471 *200 *200 *139
178 361 432 542	  	9,269 11,620 11,210 10,330	97,020 94,644 91,485 96,187	106,467 106,625 103,127 107,059	1 1 1 1	  	  	1 1 1
11 13 14 15	  	10,000 12,800 11,900 12,800	3,737 4,126 3,001 2,616	13,748 16,939 14,915 15,431	  	  	  	  
6,386 7,799 10,335 12,920	164,762 161,995 148,427 133,505	5,796 6,634 7,006 7,270	345,891 351,162 367,461 400,689	522,835 527,590 533,229 554,384	643 789 965 1,123	  	29,219 34,224 32,687 34,601	29,862 35,013 33,652 35,724
  	  	  	68,288 70,085 72,788 74,103	68,288 70,085 72,788 74,103	 0 2 4	  	  	 0 2 4
  	  	11,100 11,494 14,203 14,318	1,906 1,742 1,296 1,371	13,006 13,236 15,499 15,689	  	  	24 26 15 39	24 26 15 39
2 2 9 *12	  	14,252 17,946 19,858 *21,844	2,476 7,120 *11,683 *12,555	16,730 25,068 31,550 *34,410	  	  	  	
  	  	479 382 415 348	11,774 12,678 14,083 14,886	12,253 13,060 14,498 15,234	15 28 41 48	  	8,452 8,369 8,872 7,868	8,467 8,397 8,913 7,916
273 310 330 573	  	13,924 20,019 26,575 26,325	130,940 130,113 132,352 136,517	145,137 150,442 159,257 163,415	 0 59	  5 0	4,986 6,223 5,247 7,104	4,986 6,223 5,252 7,163
8 12 16 16	  	  	386 420 449 476	394 432 465 492	  	  	*225 *240 *260 *280	*225 *240 *260 *280
  	  	  	5,513 5,667 6,027 6,535	5,513 5,667 6,027 6,535		  	  	

		Total producers						
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Myanmar	2015 2016 2017 2018	15,970 17,867 20,056 26,714	6,463 8,123 8,865 11,878	9,507 9,744 11,191 14,826	  	  	10	  
Nepal	2015 2016 2017 2018	3,460 4,244 4,639 4,913	  0 0	3,453 4,237 4,632 4,898	  	6 6 6 14	1 1	  
Oman	2015 2016 2017 2018	32,762 34,232 36,130 37,671	32,758 34,228 36,126 37,667	 	  	 	4 4	  
Other Asia	2015 2016 2017 2018	258,173 264,137 270,288 275,577	211,796 220,031 235,648 235,631	7,505 9,856 8,780 7,839	36,471 31,661 22,446 27,682	1,526 1,457 1,722 1,686	1,132 1,692	  
Pakistan	2015 2016 2017 2018	110,128 115,502 123,533 134,981	70,556 74,697 81,447 93,545	32,867 34,573 32,132 27,729	5,804 4,602 6,867 9,849	461 791 1,422 2,124	654	440 632 1,011 1,020
Philippines	2015 2016 2017 2018	82,905 91,789 95,747 100,123	62,292 70,519 73,554 77,885	8,682 8,128 9,628 9,401	  	748 975 1,094 1,153	1,097 1,201	11,044 11,070 10,270 10,435
Qatar	2015 2016 2017 2018	41,499 42,307 45,555 47,913	41,499 42,307 45,555 47,913	  	  	  		  
Saudi Arabia	2015 2016 2017 2018	338,331 345,104 355,079 343,778	338,330 345,103 355,075 343,773	  	  	  4 *4	1 1	  
Singapore	2015 2016 2017 2018	50,341 51,733 52,394 53,074	50,272 51,587 52,225 52,905	  	  	  	146 169	  
Sri Lanka	2015 2016 2017 2018	13,227 14,363 15,004 15,985	6,854 9,721 10,381 9,072	5,969 4,221 4,039 6,401	  	344 347 367 326	75 217	  
State of Palestine	2015 2016 2017 2018	515 537 546 420	495	  	  	  	43 45	  
Syrian Arab Republic	2015 2016 2017 2018	17,982 18,202 18,412 18,210	17,658	413 929 754 754		  		  
Tajikistan	2015 2016 2017 2018	17,162 17,232 18,144 19,742	608 1,011	16,860 16,624 17,133 18,394	  	  	  	  
Thailand	2015 2016 2017 2018	176,488 187,554 181,713 182,296	171,366	3,752 3,527 4,694 7,565	  	329 345 1,109 1,641	3,377	1 1 1 1

	Autoprod	ucers			Main activity producers			
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
*1,814 3,477 1,878 *2,159	*1,136 2,888 1,218 *1,459	*678 589 *661 *700	  	14,156 14,390 18,178 24,555	5,327 5,235 7,647 10,419	8,829 9,155 10,531 14,126	  	  10
154 155 156 160	  	154 155 156 160		3,306 4,089 4,483 4,753	  0 0	3,299 4,082 4,476 4,738	  	7 7 7 15
	  	  		32,762 34,232 36,130 37,671	32,758 34,228 36,126 37,667	  	  	4 4 4 4
37,331 36,650 35,742 43,295	36,501 35,570 34,141 40,659	  	830 1,080 1,601 2,636	220,842 227,487 234,546 232,282	175,295 184,461 201,507 194,972	7,505 9,856 8,780 7,839	36,471 31,661 22,446 27,682	1,571 1,509 1,813 1,789
2,614 2,313 2,726 2,982	2,174 1,681 1,715 1,962	  	440 632 1,011 1,020	107,514 113,189 120,807 131,999	68,382 73,016 79,732 91,583	32,867 34,573 32,132 27,729	5,804 4,602 6,867 9,849	461 998 2,076 2,838
*492 *991 *1,376 *358	*475 *974 *1,359 *341	*17 *17 *17 *17	  	82,413 90,798 94,371 99,765	61,818 69,544 72,195 77,544	8,665 8,111 9,611 9,384	  	11,931 13,143 12,565 12,837
38,998 39,757 42,813 46,380	38,998 39,757 42,813 46,380	  	  	2,501 2,550 2,742 1,533	2,501 2,550 2,742 1,533	  	  	  
74,821 84,490 90,143 151,161	74,821 84,490 90,143 151,161	  	  	263,510 260,614 264,936 192,617	263,509 260,613 264,932 192,612	  	  	1 1 4 *5
3,240 3,520 3,990 4,732	3,240 3,520 3,990 4,732	  	  	47,100 48,212 48,404 48,341	47,031 48,066 48,235 48,172	  	  	69 146 169 169
1,181 902 1,184 1,409	57 91 86 87	1,065 739 964 1,232	59 73 134 89	12,046 13,461 13,821 14,577	6,796 9,630 10,296 8,985	4,904 3,482 3,075 5,169	  	345 349 450 423
155 177 154 137	151 156 132 107	  	5 21 23 30	360 360 392 284	355 339 369 254	  	  	5 21 23 30
599 646 717 672	599 646 717 672	  	  	17,383 17,556 17,695 17,538	16,970 16,627 16,941 16,784	413 929 754 754	  	  
	  	  	  	17,162 17,232 18,144 19,742	302 608 1,011 1,348	16,860 16,624 17,133 18,394	  	  
35,773 51,856 55,722 64,083	33,704 48,882 51,715 60,081	  	2,069 2,974 4,007 4,002	140,715 135,698 125,991 118,213	136,324 131,422 119,651 108,471	3,752 3,527 4,694 7,565	  	639 749 1,646 2,177

				٦	otal producers					
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other		
Timor-Leste	2015	353	350	2			1			
	2016	415	413	2			1			
	2017	430	427	2			1			
	2018	453	450	2			1			
Turkey	2015	261,783	178,871	67,146	••	11,652	194	3,920		
	2016	274,408	185,085	67,231		15,517	1,043	5,532		
	2017 2018	297,277 304,801	211,291 208,733	58,219 59,938		17,903 19,949	2,889 7,800	6,975 8,381		
T	i i	•	•	,		,	,,,,,,,	-,		
Turkmenistan	2015 2016	22,534 22,534	22,534 22,534							
	2017	22,534	22,534	••			••			
	2018	22,534	22,534			 				
United Arab Emirates	2015	127,366	127,075				291			
Stilled flub Ethilates	2016	129,596	129,287				309			
	2017	134,553	133,761				792			
	2018	135,997	134,694				1,303			
Uzbekistan	2015	57,414	50,589	6,825	••	••	0			
	2016	58,634	51,773	6,860		••	0			
	2017	60,323	52,393	7,930			1			
	2018	62,408	56,510	5,897			0			
Viet Nam	2015	163,494	105,979	57,254	••	*261				
	2016	181,653	116,244	65,188		221				
	2017 2018	198,499 213,121	109,354 128,576	88,875 84,205		270 317	23			
	i i	•		04,200	••	317				
Yemen	2015 2016	6,288 5,105	6,178 4,958				110 147			
	2017	4,309	4,936 4,126		···		183			
	2018	3,609	3,151			 	458			
Europe	2015	4,815,525	2,449,465	767,429	1,163,206	307,367	110,253	17,806		
•	2016	4,864,648	2,487,776	799,310	1,138,394	307,397	113,686	18,085		
	2017	4,885,379	2,495,267	744,413	1,138,813	366,300	122,369	18,217		
	2018	4,906,761	2,425,683	806,079	1,141,486	383,330	131,605	18,577		
Albania	2015	5,895		5,895				••		
	2016	7,136		7,136						
	2017 2018	4,526 8,552		4,526 8,552		•• ••				
A al	2045	100	4.4	00			0			
Andorra	2015 2016	100 99	14 14	86 84			0 0			
	2017	*106	17	*88		••	1			
	2018	*139	20	*118			*1			
Austria	2015	65,299	18,916	40,591		4,840	937	15		
taotila	2016	68,308	18,953	43,009		5,235	1,096	15		
	2017	71,325	21,296	42,175		6,572	1,269	13		
	2018	68,597	19,900	41,216		6,030	1,438	13		
Belarus	2015	34,082	33,941	107		26	8			
	2016	33,566	33,321	142		75	28			
	2017	34,515	33,924	405		97	89			
	2018	38,927	38,386	324	••	99	118			
Belgium	2015	69,829	33,208	1,418	26,103	5,574	3,056	470		
	2016	85,813 86,775	31,744 32,781	1,489	43,523	5,438 6,513	3,095 3,307	524 550		
	2017 2018	86,775 75,095	32,781 33,315	1,397 1,329	42,227 28,597	6,513 7,465	3,307 3,902	550 487		
Roonia and Horzagovica					•					
Bosnia and Herzegovina	2015 2016	15,629 17,767	10,078 12,102	5,551 5,641		••	 24			
	2017	16,439	12,431	3,987			21			
	2018	19,160	12,517	6,519		103	21	==		

		activity producers	Main a		1	cers	Autoprodu	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
,		2	350	353				
		2	413	415				
•		2	427	430				
•		2	450	453				
4= 004		0= 00.	404.0=0	0.40.400			10.000	40.000
15,260		65,924	161,979	243,163	506	1,222	16,892	18,620
20,910 26,132	••	66,386 57,252	166,450 193,608	253,746 276,992	1,182 1,635	845 967	18,635 17,683	20,662 20,285
33,620		57,252 58,865	193,606	276,992	2,510	1,073	16,334	20,265 19,917
33,020		30,003	192,399	204,004	2,510	1,073	10,554	19,917
			22,534	22,534			<u></u>	
-	••		22,534	22,534	••			
-			22,534	22,534				
-		••	22,534	22,534			••	••
20.4			407.075	407 000				
29 <sup>2</sup> 309			127,075 129,287	127,366 129,596				
792	••	••	133,761	134,553		••	••	••
1,303	••	••	134,694	135,997		••	••	••
1,500	••	••	134,094	155,991	••	••	••	••
(		6,825	50,589	57,414				
(		6,860	51,773	58,634				
•		7,930	52,393	60,323				
(		5,897	56,510	62,408	**			••
***			400.40=		***			
*259		57,174	102,107	159,540	*2	*80	3,872	3,954
219	••	65,108	111,412	176,739	*2	*80	4,832	4,914
268	••	88,795	105,154	194,217	*2 *2	*80	4,200	4,282
338		84,125	124,376	208,839	*2	*80	*4,200	*4,282
			5,851	5,851	110		327	437
-	••	••	4,676	4,676	147		282	429
			3,861	3,861	183		265	448
			2,893	2,893	458		258	716
404.04	4 400 000		0.400 == 4	4 454 400		40.000	202.004	
404,647 405,867	1,163,206 1,138,394	756,769 788,867	2,126,574 2,151,992	4,451,196 4,485,120	30,779 33,300	10,660 10,443	322,891 335,784	364,330 379,527
469,271	1,138,813	734,507	2,151,992	4,493,880	37,615	9,906	343,977	391,499
491,730	1,141,486	795,768	2,071,334	4,500,318	41,783	10,311	354,349	406,443
,.	.,,	,	_,,	,,,,,,,,,,	,	,	,	,
-		5,895		5,895				
-	••	7,136		7,136	••			
-	••	4,526		4,526	••			
-		8,552		8,552				••
(		86	14	100				
(		84	14	99	••	••		
,	••	*88	17	*106	••	••		
**		*118	20	*139				
5,777		40,102	11,576	57,455	15	489	7,340	7,844
6,331	••	42,482	11,619	60,432	15	527	7,334	7,876
7,841		41,697	13,576	63,114	13	478	7,720	8,211
7,468		40,742	12,400	60,610	13	474	7,500	7,987
0.4		404	00.554	00.070	40	0	0.007	0.400
2′	••	101 128	30,554	30,676	13	6	3,387	3,406
92			29,912 30,207	30,132 30,742	11 47	14	3,409	3,434 3,773
139 14 <i>1</i>	••	396 316	30,207 34,510	30,742 34,967	47 76	9 8	3,717 3,876	3,773 3,960
	••	0.10	3-7,010	54,501	, ,	3	0,070	3,000
5,573	26,103	1,418	26,697	59,791	3,527		6,511	10,038
5,437	43,523	1,489	24,885	75,334	3,620		6,859	10,479
6,51	42,227	1,397	25,166	75,301	3,859		7,615	11,474
7,438	28,597	1,329	25,567	62,931	4,416	••	7,748	12,164
							_	
		5,551	9,653	15,204			425	425
24		5,641	11,708	17,373			394	394
21		3,987 6,519	11,990 12,079	15,998 18,722		••	441	441
124		h h i u	12 079	18 /22			438	438

				٦	otal producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Bulgaria	2015	49,228	24,840	6,147	15,383	1,452	1,383	23
3	2016	45,277	22,088	4,568	15,776	1,425	1,386	34
	2017	45,612	23,633	3,493	15,545	1,504	1,403	34
	2018	46,837	22,606	5,423	16,125	1,318	1,343	22
Croatia	2015	11,403	3,994	6,556	••	796	57	••
	2016 2017	12,820 11,986	4,682 5,195	7,058 5,508		1,014 1,204	66 79	
	2018	13,632	4,435	7,785		1,335	75	2
Szechia	2015	83,892	51,063	3,071	26,841	573	2,264	80
	2016	83,309	53,279	3,202	24,104	497	2,131	96
	2017 2018	87,049 88,032	52,782 52,339	3,040 2,679	28,340	591 609	2,193	103 125
		•	•	·	29,921		2,359	123
enmark	2015 2016	28,942 30,541	14,187 16,996	18 19		14,133 12,782	604 744	
	2017	31,042	15,493	18		14,780	751	
	2018	30,377	15,510	15		13,899	953	
Estonia	2015	10,398	9,656	27		715		••
	2016	12,186	11,547	35	••	594	10	
	2017 2018	12,918 12,360	12,155 11,678	26 15		723 636	14 31	
aeroe Islands	2015	314	126	133		56		
aeroe isianus	2015	314	159	106	••	50 52	••	
	2017	334	163	111		60		
	2018	352	180	108		64		
inland	2015	68,599	25,999	16,769	23,245	2,327	11	248
	2016	68,757	26,399	15,799	23,203	3,068	22	266
	2017 2018	67,523 70,263	25,030 27,959	14,772 13,301	22,477 22,793	4,795 5,839	48 90	401 281
rance	2015	579,542	51,131	60,514	437,428	21,421	7,754	1,294
	2016	564,181	64,098	65,685	403,195	21,381	8,660	1,162
	2017	561,935	72,871	55,135	398,359	24,609	9,585	1,376
	2018	581,943	57,967	70,590	412,942	28,600	10,569	1,275
Sermany	2015	648,310	410,318	24,898	91,786	80,624	38,726	1,958
	2016 2017	650,450 653,723	419,596 404,286	26,135 26,155	84,634 76,324	79,924 105,693	38,098 39,401	2,063 1,864
	2018	643,159	385,531	24,143	76,005	109,951	45,784	1,745
Sibraltar	2015	224	224					
	2016	214	214					0
	2017 2018	180 215	180 215					0
<b>.</b>								·
Greece	2015 2016	51,874 54,439	37,203 39,798	6,150 5,565		4,621 5,146	3,900 3,930	
	2017	55,266	41,698	4,040		5,537	3,991	••
	2018	53,263	37,412	5,760	••	6,300	3,791	••
Guernsey	2015	157	157	**		**		••
	2016	87	87					
	2017 2018	77 54	77 54					
lungary	2015	30,360	13,395	234	15,834	693	141	63
rungar y	2016	31,902	14,583	259	16,054	684	244	78
	2017	32,885	15,377	220	16,098	758	349	83
	2018	32,004	14,671	222	15,733	607	620	151
celand	2015	18,799	4	13,781		11		5,003
	2016 2017	18,550 19,239	3 2	13,470 14,059	••	9 8		5,068 5,170
	2017	19,830	2	13,814		4		6,010

	ducers Main activity producers				Main activity producers			Main activity pr			Autoprodu	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total				
2,835 2,81 2,90 2,66	15,383 15,776 15,545 16,125	6,147 4,568 3,493 5,423	24,475 21,631 22,980 21,921	48,840 44,786 44,925 46,130	23 34 34 22	  	365 457 653 685	388 491 687 707				
853 1,080 1,283 1,412	  	6,550 7,051 5,502 7,779	3,684 4,351 4,781 4,068	11,087 12,482 11,566 13,259	  	6 7 6 6	310 331 414 367	316 338 420 373				
2,864 2,653 2,809 2,994	26,841 24,104 28,340 29,921	2,505 2,604 2,429 2,185	42,427 44,503 44,361 44,147	74,637 73,864 77,939 79,247	53 71 78 99	566 598 611 494	8,636 8,776 8,421 8,192	9,255 9,445 9,110 8,785				
14,133 12,782 14,780 13,899	  	18 19 18 15	11,997 14,961 13,405 13,362	26,148 27,762 28,203 27,276	604 744 751 953	  	2,190 2,035 2,088 2,148	2,794 2,779 2,839 3,101				
70° 59° 73° 666	  	27 35 26 15	9,513 11,321 12,035 11,560	10,241 11,947 12,798 12,241	14 13  1	0  	143 226 120 118	157 239 120 119				
56 52 60 64	  	133 106 111 108	126 159 163 180	314 317 334 352	  	  	  	  				
2,414 3,150 4,985 5,918	23,245 23,203 22,477 22,793	15,690 14,764 13,769 12,357	17,226 18,122 16,459 18,484	58,575 59,239 57,690 59,552	172 206 259 292	1,079 1,035 1,003 944	8,773 8,277 8,571 9,475	10,024 9,518 9,833 10,711				
25,429 26,07 29,759 34,17	437,428 403,195 398,359 412,942	59,977 65,091 54,608 69,983	37,726 51,290 59,798 44,752	560,560 545,647 542,524 561,848	5,040 5,132 5,811 6,273	537 594 527 607	13,405 12,808 13,073 13,215	18,982 18,534 19,411 20,095				
120,084 118,799 145,842 156,399	91,786 84,634 76,324 76,005	24,741 25,959 25,983 24,056	361,485 366,199 348,797 331,746	598,096 595,587 596,946 588,202	1,224 1,290 1,116 1,085	157 176 172 87	48,833 53,397 55,489 53,785	50,214 54,863 56,777 54,957				
( (	  	  	224 214 180 215	224 214 180 215	  	  	  	  				
8,52 <sup>7</sup> 9,076 9,528 10,09 <sup>7</sup>	  	6,150 5,565 4,040 5,760	34,863 37,851 39,765 35,197	49,534 52,492 53,333 51,048	  	  	2,340 1,947 1,933 2,215	2,340 1,947 1,933 2,215				
- - -	  	  	157 87 77 54	157 87 77 54	  	  	  	  				
694 717 796 688	15,834 16,054 16,098 15,733	234 259 220 222	12,792 13,863 14,502 13,722	29,554 30,893 31,616 30,362	203 289 394 693	  	603 720 875 949	806 1,009 1,269 1,642				
5,014 5,077 5,178 6,014	  	13,781 13,470 14,059 13,814	4 3 2 2	18,799 18,550 19,239 19,830	  	  	  	  				

				Total producers					
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other	
Ireland	2015 2016 2017 2018	28,420 30,539 30,898 31,118	23,385 22,522	1,095 973 895 932	  	0.640		  	
Isle of Man	2015 2016 2017 2018	435 433 467 493	430 463	4 3 4 *3	  	• ••		  	
Italy	2015 2016 2017 2018	282,994 289,768 295,833 289,710	198,693 208,826	46,970 44,257 38,025 50,503	  	. 17,689 . 17,742	22,104 24,378	6,780 7,025 6,862 6,706	
Jersey	2015 2016 2017 2018	48 70 49 *45	70 49	  	  			  	
Kosovo	2015 2016 2017 2018	6,119 5,981 5,919 5,917	5,736 5,739	140 245 179 273	  	. 0			
Latvia	2015 2016 2017 2018	5,533 6,425 7,531 6,725	3,767 3,000	1,860 2,530 4,381 2,432	  	. 128 . 150	 !	  	
Liechtenstein	2015 2016 2017 2018	70 90 93 89	2 2	49 68 69 62	  	· ·	. 22	  	
Lithuania	2015 2016 2017 2018	4,933 4,266 4,187 3,514	1,750 1,324	1,024 1,044 1,181 960	  	. 1,136 . 1,364	66 68	265 270 250 232	
Luxembourg	2015 2016 2017 2018	2,766 2,196 2,235 2,201	467	1,530 1,528 1,422 1,336	  	. 101 . 235	100 108	  	
Malta	2015 2016 2017 2018	1,305 857 1,652 1,962	729 1,490	  	  		. 128 162	  	
Montenegro	2015 2016 2017 2018	3,003 3,141 2,483 3,679	1,298 1,348	1,491 1,843 1,040 2,092	  	. 95		  	
Netherlands	2015 2016 2017 2018	110,389 115,211 117,264 114,466	101,241 100,899	93 100 61 72	4,077 3,960 3,402 3,515	8,170 2 10,569	1,602 2,207	150 138 126 103	
North Macedonia	2015 2016 2017 2018	5,646 5,630 5,600 5,607	3,563 4,304	1,865 1,897 1,110 1,791	  	. 109 . 110	24 24	20 36 52 54	
Norway	2015 2016 2017 2018	144,546 149,042 149,480 146,889	3,201 3,190	138,450 143,417 143,112 139,509	  	2,054		334 308 324 334	

	rs	activity produce				lucers	Autoproc	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
6,57		1,095	18,559	26,227	36		2,157	2,193
6,14		973	21,186	28,308	32	••	2,199	2,231
7,44		895	20,333	28,673	36		2,189	2,225
8,60		932	19,393	28,925	40		2,153	2,193
		4	407	411			24	24
		3	405	408	••		25	25
		4 *3	439 457	443 460		·· ·-	24 *33	24 *33
44,30	_	46,361	173,249	263,912	264	609	18,209	19,082
46,60		43,695	181,006	271,301	218	562	17,687	18,467
48,83		37,536	189,676	276,051	143	489	19,150	19,782
46,87	••	50,037	170,015	266,924	204	466	22,116	22,786
			7	7			41	41
•			24 4	24 4			45 44	45 44
			*4	*4			*41	*41
		140	5,979	6,119				
		245	5,736	5,981				
		179	5,739	5,919				
33	••	273	5,612	5,917	••			
14		1,858	3,273	5,276	2 2 2 2	2 2	253	257
120 148		2,528	3,560	6,214 7,337	2	4	207 188	211 194
12		4,377 2,430	2,812 3,984	6,535	2	2	186	194
19		49	2	70				
20	**	68	2	90		••	÷÷	
2:	••	69	2	93		••	••	
2		62	2	89	••	**	**	
88		1,024	2,095	4,002	265		666	931
1,20 1,43		1,044 1,181	1,132 748	3,378 3,361	270 250		618 576	888 826
1,43		960	674	2,865	232		417	649
10:		1,524	866	2,492	104	6	164	274
10		1,520	290	1,911	100	8	177	285
23	**	1,418	304	1,957	108	4	166	278
25		1,332	331	1,918	120	4	159	283
			1,203	1,203	95		7	102
			721	721	128		8	136
			1,480 1,763	1,480 1,763	162 190	·· ·-	10 9	172 199
	_	1,491	1,512	3,003				
		1,843	1,298	3,141				
9		1,040	1,348	2,483				
14:		2,092	1,444	3,679				
6,41	4,077	93	76,914	87,496	2,396		20,497	22,893 22,735
7,318 9,688	3,960 3,402	100 61	81,098 79,075	92,476 92,220	2,592 3,220		20,143 21,824	25,044
9,88	3,515	72	74,284	87,753	4,477	 	22,236	26,713
164		1,865	3,617	5,646		**	0	0
169		1,897	3,563	5,630			0	0
180 174	••	1,110 1,791	4,304 3,642	5,600 5,607	••	••	0	0
	••					••		
2,51 2,11		138,450 143,417	651 603	141,616 146,136	334 308		2,596 2,598	2,930 2,906
2,85		143,112	669	146,635	324		2,521	2,845
3,87	••	139,509	582	143,967	336		2,586	2,922

Table 32

	Total producers								
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other	
Poland	2015	164,944	151,478	2,435		10,858	57	116	
	2016	166,635	151,234	2,622		12,588	124	67	
	2017	170,467 170,038	152,297 154,427	3,034 2,387	••	14,909 12,799	165 300	62 125	
			•	•	-	•			
ortugal	2015 2016	52,420 60,328	30,005 29,903	9,799 16,909		11,608 12,474	796 870	212 172	
	2017	59,434		7,632		12,247	992	217	
	2018	59,635	32,154	13,629		12,616	1,006	230	
Republic of Moldova	2015	939	885	50		2	2		
	2016	906	862	39	••	3	2	••	
	2017 2018	896 952	839 884	48 44		7 23	2 1		
Romania	2015	66,296 65,103	28,604 26,871	17,007 18,536	11,640 11,286	7,063 6,590	1,982 1,820		
	2017	64,296	28,673	14,853	11,509	7,406	1,855		
	2018	64,874	27,307	18,097	11,377	6,322	1,771		
Russian Federation	2015	1,067,544	701,220	169,914	195,470	148	335	457	
	2016	1,090,973	706,663	186,640	196,614	148	462	446	
	2017	1,094,289 1,115,093	702,882 716,119	187,131 193,027	203,143 204,569	140 232	558 720	435 426	
No aleka			•	•	,,,,,,,				
Serbia	2015 2016	38,298 39,342	27,504 27,784	10,783 11,520		 26	11 12		
	2017	37,045	27,232	9,752		48	13		
	2018	37,426	25,870	11,393		150	13		
lovakia	2015	26,903	7,008	4,137	15,146	6	506	100	
	2016	27,064	7,015	4,606	14,774	6	533	130	
	2017	27,738 26,971	7,367 7,542	4,623 3,879	15,081 14,843	6 6	506 585	155 116	
lovenie	2015		•	•	•	6	274		
lovenia	2015 2016	15,100 16,500	5,081 5,730	4,091 4,782	5,648 5,715	6 6	274 267		
	2017	16,326	5,610	4,141	6,285	6	284		
	2018	16,330	5,400	4,893	5,776	6	255	••	
Spain	2015	280,911	128,947	31,368	57,196	49,325	13,859	216	
	2016	274,772	113,618 133.002	39,865	58,633	48,905 40,137	13,643	108	
	2017	275,726 274,452	118,149	21,070 36,803	58,039 55,766	49,127 50,896	14,397 12,744	91 94	
`wodon	2015	160 110	13.906	75.439	EG 249	16.322	97		
Sweden	2015	162,112 156,010	15,906	62,137	56,348 63,101	15,479	143	••	
	2017	164,250	15,547	65,168	65,696	17,609	230	••	
	2018	163,400	15,571	62,250	68,549	16,623	407	••	
Switzerland	2015	67,720	3,521	39,881	23,089	110	1,119		
	2016	63,175		36,689	21,146	109	1,333	••	
	2017 2018	63,089 69,107	3,864 3,725	37,033 37,803	20,376 25,513	133 122	1,683 1,944		
Umain a				·			·		
Jkraine	2015 2016	163,682 164,573	67,523 72,795	6,971 9,304	87,627 80,950	1,084 954	477 491	 79	
	2017	156,037	58,173	10,520	85,576	984	739	45	
	2018	159,852	61,115	12,007	84,398	1,188	1,107	37	
Jnited Kingdom	2015	339,573	212,381	9,037	70,345	40,275	7,533	2	
	2016	339,899	212,258	8,353 9,774	71,726	37,154	10,408	0	
	2017 2018	338,640 333,424	198,418 190,601	8,774 7,988	70,336 65,064	49,633 56,904	11,475 12,858	4 9	
Doggania			•	·		•	·	0 220	
Oceania	2015 2016	307,728 312,869	240,403 240,333	39,938 43,192		13,907 14,584	5,151 6,414	8,330 8,345	
	2017	314,845	239,862	43,542		14,736	8,328	8,377	
	2018	318,162	237,917	44,283	••	17,286	10,237	8,439	

1	rs	activity produce	Main		ſ	lucers	Autoproc	
Other	Nuclear	Hydro	Combustible fuels	Total	Other	Hydro	Combustible fuels	Total
10,858 12,588 14,909 12,799	  	2,432 2,619 3,030 2,384	142,272 140,971 140,614 140,009	155,562 156,178 158,553 155,192	173 191 227 425	3 3 4 3	9,206 10,263 11,683 14,418	9,382 10,457 11,914 14,846
12,266 13,130 12,983 13,361	  	9,784 16,889 7,621 13,610	22,076 22,104 30,392 24,340	44,126 52,123 50,996 51,311	350 386 473 491	15 20 11 19	7,929 7,799 7,954 7,814	8,294 8,205 8,438 8,324
4 5 7 11	  	50 39 48 44	845 820 786 827	899 864 841 882	 2 13	  	40 42 53 57	40 42 55 70
8,431 7,918 8,790 7,736	11,640 11,286 11,509 11,377	16,603 18,213 14,609 17,859	22,215 20,561 22,374 20,509	58,889 57,978 57,282 57,481	614 492 471 357	404 323 244 238	6,389 6,310 6,299 6,798	7,407 7,125 7,014 7,393
940 1,056 1,133 1,378	195,470 196,614 203,143 204,569	168,419 185,310 185,904 191,873	630,719 633,211 631,728 641,826	995,548 1,016,191 1,021,908 1,039,647	  	1,495 1,330 1,227 1,154	70,501 73,452 71,153 74,293	71,996 74,782 72,381 75,447
11 38 62 163	  	10,783 11,520 9,752 11,393	27,186 27,331 26,705 25,327	37,980 38,889 36,519 36,883		  	318 453 526 543	318 453 526 543
148 156 180 195	15,146 14,774 15,081 14,843	4,052 4,508 4,523 3,768	4,489 4,542 4,862 4,650	23,835 23,980 24,646 23,456	464 513 487 512	85 98 100 111	2,519 2,473 2,505 2,892	3,068 3,084 3,092 3,515
14 13 14 13	5,648 5,715 6,285 5,776	3,937 4,555 3,952 4,672	4,813 5,463 5,345 5,141	14,412 15,746 15,596 15,602	266 260 276 248	154 227 189 221	268 267 265 259	688 754 730 728
63,141 62,505 63,479 63,445	57,196 58,633 58,039 55,766	30,620 39,062 20,593 35,894	96,474 80,530 97,587 81,760	247,431 240,730 239,698 236,865	259 151 136 289	748 803 477 909	32,473 33,088 35,415 36,389	33,480 34,042 36,028 37,587
16,419 15,622 17,839 17,030	56,348 63,101 65,696 68,549	75,428 62,126 65,156 62,239	8,090 9,423 9,344 9,443	156,285 150,272 158,035 157,261	  	11 11 12 11	5,816 5,727 6,203 6,128	5,827 5,738 6,215 6,139
110 109 133 122	23,089 21,146 20,376 25,513	37,001 34,050 34,421 34,915	425 681 662 596	60,625 55,986 55,592 61,146	1,119 1,333 1,683 1,944	2,880 2,639 2,612 2,888	3,096 3,217 3,202 3,129	7,095 7,189 7,497 7,961
1,559 1,439 1,695 2,287	87,627 80,950 85,576 84,398	6,954 9,281 10,516 12,005	65,328 67,136 54,274 58,504	158,806	2 85 73 45	17 23 4 2	2,195 5,659 3,899 2,611	2,214 5,767 3,976 2,658
34,662 32,748 43,932 51,836	70,345 71,726 70,336 65,064	7,646 6,910 7,051 6,325	178,115 175,901 161,421 152,229	290,768 287,285 282,740 275,454	13,148 14,814 17,180 17,935	1,391 1,443 1,723 1,663	34,266 36,357 36,997 38,372	48,805 52,614 55,900 57,970
21,895 22,992 23,390 26,309	  	39,583 42,833 43,187 44,070	216,839 218,003 214,524 211,147	278,317 283,829 281,101 281,526	5,493 6,351 8,051 9,653	355 359 355 213	23,563 22,330 25,338 26,770	29,411 29,040 33,744 36,636

					otal producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
American Samoa	2015	161					2	
	2016 2017	170 167					3 5	
	2017	*168				··	5	
Australia	2015	251,415	221,479	13,445		11,467	5,023	1
Australia	2016	256,563		15,318	••	12,199	6,209	0
	2017	258,019		16,285		12,597	8,071	1
	2018	260,998	219,884	16,021		15,164	9,929	0
Cook Islands	2015	33	29				3	
	2016 2017	34 37			••		5 6	
	2018	41	31				11	
=iji	2015	919	503	406		6	4	
·J·	2016	941	435	495		4	7	
	2017 2018	1,017 1,042		491 567		2 3	9 10	
	2010	1,042	404	307		3	10	
French Polynesia	2015	697		166	••	••	32	••
	2016 2017	700 698		183 175	••		33 36	
	2018	696		164		0	37	
Guam	2015	1,702	1,681				22	
	2016	1,720	1,668			*1	52	
	2017 2018	1,760 1,715		••	••	*1 *1	52 52	••
	i i		•	**	**	'		
Kiribati	2015 2016	*29 *31					4 5	
	2017	*31					5	
	2018	*31	*27				*5	
Marshall Islands	2015	*87	*86				1	
	2016	*88		••	••		2	
	2017 2018	*89 *90		••			2 2	
Niemenesia (Fod Ctatas of)		0.7	00	0				
Micronesia (Fed. States of)	2015 2016	67 *68		0	••		1 2	
	2017	*67		0			2	
	2018	*69	*65	0		*1	*3	
Nauru	2015	31	31				0	
	2016 2017	32 35	31 34				0 1	
	2018	36	35				1	
New Caledonia	2015	2,903	2,494	340		62	7	
vew Galedonia	2016	3,130	2,842	232		45	11	
	2017 2018	3,228 3,486	2,794 3,077	361 317		45 45	28 47	
	i i					43		••
New Zealand	2015 2016	44,224 43,698		24,528		2,364	36 57	7,907
	2010	44,192		25,920 25,177	••	2,330 2,086	76	7,925 7,956
	2018	44,380	7,912	26,287		2,068	99	8,014
Niue	2015	3					0	
	2016	*3	*3				0	
	2017 2018	*3 *4					0 0	
						<del></del>	· ·	
Northern Mariana Islands	2015 2016	*430 *387						
	2017	*380	*380	••				
	2018	*390	*390					

Main activity producers			ucers	Autoproc	
Combustible Hydro Nuclear	Total	Other	Hydro	Combustible fuels	Total
61 159	161				
	170				
37 162	167				
	*168				
96 201,872 13,445	226,896	4,912		19,607	24,519
79 204.501 15.318	232.479	5,748		18,336	24,084
78 199,558 16,285	229,078	7,434		21,507	28,941
	229,024	9,005		22,969	31,974
29	33				
35 29 34 30	34				••
37 31	37			••	
14 04	41	••			
31	71	••	••		••
96 480 406	896	••		22	22
31 425 495	931		••	11	11
	994			23	23
3 424 567	1,003			40	40
97 499 166	697				
00 484 183	700		••	••	••
98 487 175	698	••		••	
96 494 164	696	••			
96 494 164	090	••	••	••	
02 1,681	1,702				
20 1,668	1,720	••		••	
60 1,708	1,760				
1,663	1,715				
*24	*27			*2	*2
29 *24	*29		••	*2	*2
29 *24	*29			*2	*2
29 *24	*29	••	••	*2	*2
*86	*87				
*86	*88	••	••	••	
89 *87	*89				
*88	*90		••		••
66 0	67				
88 *66 0	*68				
	*67			••	
69 *65 0	*69				
		••	••		
	31				
31	32				
34	35				
36 35	36				
03 2,494 340	2,903				
	2,303	••	••		••
30 2,434 340 30 2,842 232	3 130	••	••		••
30 2,842 232	3,130 3,228				••
30 2,842 232 28 2,794 361	3,228				
30 2,842 232 28 2,794 361 36 3,077 317	3,228 3,486				••
30 2,842 232 28 2,794 361 36 3,077 317 78 8,106 24,524	3,228 3,486 42,778	 159	4	1,283	1,446
30 2,842 232 28 2,794 361 36 3,077 317 78 8,106 24,524 90 6,245 25,916	3,228 3,486 42,778 42,290	 159 183	 4 4	1,221	1,408
30     2,842     232       28     2,794     361       36     3,077     317       78     8,106     24,524       30     6,245     25,916       35     7,641     25,173	3,228 3,486 42,778 42,290 42,735	159 183 197	 4 4 4	1,221 1,256	1,408 1,457
30     2,842     232       28     2,794     361       36     3,077     317       78     8,106     24,524       90     6,245     25,916       35     7,641     25,173       38     6,727     26,283	3,228 3,486 42,778 42,290 42,735 42,968	 159 183	 4 4	1,221	1,408
30     2,842     232       28     2,794     361       36     3,077     317       78     8,106     24,524       90     6,245     25,916       35     7,641     25,173       38     6,727     26,283       3     3	3,228 3,486 42,778 42,290 42,735 42,968	159 183 197	 4 4 4	1,221 1,256	1,408 1,457
30       2,842       232         28       2,794       361         36       3,077       317         78       8,106       24,524         90       6,245       25,916         35       7,641       25,173         68       6,727       26,283         3       3          *3       *3	3,228 3,486 42,778 42,290 42,735 42,968 3 *3	159 183 197 223	 4 4 4	1,221 1,256	1,408 1,457
30	3,228 3,486 42,778 42,290 42,735 42,968 3 *3 *3	159 183 197 223	 4 4 4 4	1,221 1,256	1,408 1,457
30     2,842     232       28     2,794     361       36     3,077     317       78     8,106     24,524       30     6,245     25,916       35     7,641     25,173       58     6,727     26,283       3     3        *3     *3        *3     *3        *3     *3        *3     *3	3,228 3,486 42,778 42,290 42,735 42,968 3 *3	 159 183 197 223	 4 4 4 	1,221 1,256 1,185 	1,408 1,457
30       2,842       232         28       2,794       361         36       3,077       317         78       8,106       24,524         400       6,245       25,916         35       7,641       25,173         68       6,727       26,283         3       3          *3       *3          *3       *3          *4       *3	3,228 3,486 42,778 42,290 42,735 42,968 3 *3 *3 *3	 159 183 197 223 	 4 4 4 	1,221 1,256 1,185	1,408 1,457
30       2,842       232         28       2,794       361         36       3,077       317         78       8,106       24,524         90       6,245       25,916         35       7,641       25,173         68       6,727       26,283         3       3          *3       *3          *3       *3          *4       *3          30       *430	3,228 3,486 42,778 42,290 42,735 42,968 3 *3 *3 *4	 159 183 197 223 		1,221 1,256 1,185 	1,408 1,457 1,412 
30       2,842       232         28       2,794       361         36       3,077       317         78       8,106       24,524         90       6,245       25,916         35       7,641       25,173         68       6,727       26,283         3       3          *3       *3          *3       *3          *4       *3          30       *430          37       *387	3,228 3,486 42,778 42,290 42,735 42,968 3 *3 *3 *3	 159 183 197 223 	 4 4 4 	1,221 1,256 1,185	1,408 1,457

#### Table 32

					Total producers			
Country or area	Year	Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Palau	2015 2016 2017 2018	*90 *95 *95 *95	*95 *95	 	  		 0 0 0	
Papua New Guinea	2015 2016 2017 2018	4,560 4,794 4,595 *4,482	3,367 3,155	1,012 1,005 1,018 876	  	  	1 2 2 1	422 420 420 *425
Samoa	2015 2016 2017 2018	134 149 154 154	101 108	33 33 26 43	  	0 0 0 0	8 16 20 21	  
Solomon Islands	2015 2016 2017 2018	97 105 108 110	102 104	0 1 1 1	  	  	2 2 3 3	  
Tonga	2015 2016 2017 2018	55 60 62 68	55 58	  	  	0 0 0 0	3 5 4 4	  
Tuvalu	2015 2016 2017 2018	6 7 8 *8	5 6	  	  	  	1 2 2 2	  
Vanuatu	2015 2016 2017 2018	66 74 80 *80	62 63	7 5 *7 7	  	8 5 5 5	0 2 4 5	  
Wallis and Futuna Is.	2015 2016 2017 2018	*18 *20 *20 *20	*20 *19	0 0 0	 		0 0 0 0	

Cigawatt-Hours								
-	Autoprod	ucers	T		Main	activity produce	rs	
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
*6	*6			*84	*84			
*6	*6			*89	*89			0
*7	*7			*88	*88			0
*7	*7			*88	*88			0
3,407	2,634	351	422	1,153	491	661		1
3,520	2,745	355	420	1,274	622	650		2
3,304	2,533	351	420	1,291	622	667		2
*3,192	*2,558	209	*425	1,290	*622	667		2 2 1
0			0	134	93	33		8
0			0	149	101	33		16
0			0	154	108	26		20
0			0	154	90	43		21
*9	*9			88	86	0		2 2 3 3
*9	*9			96	93	1		2
*9	*9			99	95	1		3
*9	*9			101	97	1		3
				55	52			3 5 4
				60	55			5
	••			62	58			4
		••	••	68	64	••		4
				6	6	••		1 2 2 2
	••			7	5			2
	••			8	6			2
		••	••	*8	*6	••		2
				66	51	7		9 8 9
				74	62	5		8
				80	63	*7		9
				*80	*62	7		10
				*18	*18	0		0
				*20	*20	0		0
				*20	*19	0		0
				*20	*20	0		0

#### **Electricity supply and consumption**

Gigawatt-hours and kilowatt-hours per capita

#### **Table Notes**

**Supply** is calculated as **Production** plus **Imports** minus **Exports**.

**EIOU and losses** refers to energy industries own use of electricity, including for pumped storage, and losses.

**Total Final Consumption** (TFC) refers to final energy consumption of electricity.

Figures may not add up due to statistical differences, or for some countries quantities transformed into heat in heat pumps and/or electric boilers

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

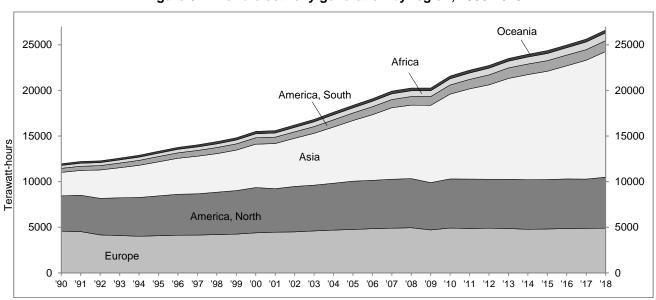


Figure 81: World electricity generation by region, 1990-2018

Figure 82: Major electricity producing countries, 2018

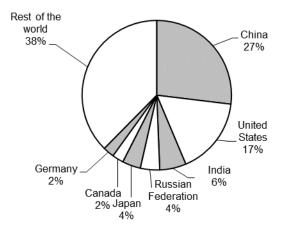
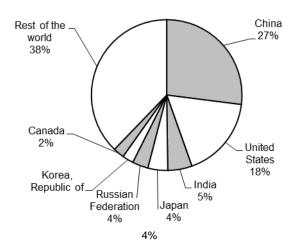


Figure 83: Major electricity consuming countries, 2018



### **Electricity supply and consumption**Gigawatt-hours and kilowatt-hours per capita

0 1					Sup	ply	Consun	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
World	2015 2016 2017 2018	24,363,404 24,988,266 25,621,700 26,626,091	765,760 737,023 745,138 738,448	734,683 726,876 736,196 724,243	24,998,413 25,630,642	3,306 3,349 3,396 3,491	4,156,517 4,339,110	20,222,259 20,758,773 21,257,406 22,217,495
Africa	2015 2016 2017 2018	785,873 805,295 829,432 854,629	42,510 43,324 44,287 39,526	35,753 38,361 33,785 32,592	810,259 839,934	671 669 676	158,230 182,954	619,789 645,208 651,296 683,624
Algeria	2015 2016 2017 2018	68,798 70,839 76,018 76,664	610 257 537 506	641 507 880 597	70,589 75,675	1,731 1,741 1,828 1,813	18,301 19,299	50,153 52,288 56,376 58,153
Angola	2015 2016 2017 2018	9,783 10,379 10,737 11,753		  	10,379 10,737	351 360 360 381	1,441 1,490	8,424 8,938 9,247 10,124
Benin	2015 2016 2017 2018	330 276 331 202	1,048 1,089 1,111 1,293	  	1,365 1,442	130 126 129 130	288 297	1,099 1,071 1,139 1,181
Botswana	2015 2016 2017 2018	*2,967 2,688 3,022 3,105	1,468 1,650 1,288 277	  	4,338 4,310	*2,091 2,008 1,955 1,500	871 5 1,016	3,495 3,479 3,280 3,209
Burkina Faso	2015 2016 2017 2018	999 973 1,095 1,021	443 630 645 837	  	1,603 1,741	80 86 91 94	*242 *289	*1,200 *1,361 *1,452 *1,568
Burundi	2015 2016 2017 2018	177 181 192 246	*96 *128 *94 *100	  	309 286	27 29 26 31	*61 *67	*214 *216 *225 *276
Cabo Verde	2015 2016 2017 2018	421 444 492 *497	  	  	444 492 *407	802 836 915 *914	*128 *142	*305 *316 *343 *356
Cameroon	2015 2016 2017 2018	7,985 7,167 8,099 8,626	18 16 18 19	  	8,003 7,183 8,117 8,645	344 300 330 343	1,499 1,772	6,107 5,482 6,195 6,598
Central African Rep.	2015 2016 2017 2018	142 143 145 147	  	  	143 145	32 32 32 32	2 *10 2 *10	*132 *133 *135 *137
Chad	2015 2016 2017 2018	*228 *230 *230 *234	  	  	*230 *230 *334	*16 *16 *15 *15	*12 *12	*215 *218 *218 *221
Comoros	2015 2016 2017 2018	*53 *58 *91 *98	  	  	*04	*68 *73 *112 *118	*23 *36	*32 *35 *55 *59

### **Electricity supply and consumption**Gigawatt-hours and kilowatt-hours per capita

					Sup	ply	Consun	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Congo	2015 2016 2017 2018	2,770 2,953 3,473 3,509	13 21 22 19	33 22 22 26	2,952 3,473	566 593 680 668	1,692 1,712	1,318 1,439 1,555 1,582
Côte d'Ivoire	2015 2016 2017 2018	8,711 10,253 10,121 10,059	23 19 37 102	872 1,877 1,247 1,156	8,395 8,911	338 352 365 359	2,140 2,617	6,023 6,615 6,318 6,926
Dem. Rep. of the Congo	2015 2016 2017 2018	8,953 9,135 9,510 12,067	20 20 668 799	422 420 62 70	8,735 10,116	112 111 124 152	1,876 2,147	7,266 7,001 7,223 9,965
Djibouti	2015 2016 2017 2018	178 88 *59 *58	314 450 508 526	  	537 567	538 578 600 609	*107 *113	*397 *423 *461 *469
Egypt	2015 2016 2017 2018	180,377 191,920 195,150 202,838	43 54 65 81	1,158 747 333 425	191,227 194,882	1,939 2,025 2,021 2,057	27,105 *43,276	154,205 162,275 151,606 165,610
Equatorial Guinea	2015 2016 2017 2018	848 *850 *850 *736	  	  	*850 *850 *736	726 *699 *674 *562	*131 *131	*718 *719 *719 *626
Eritrea	2015 2016 2017 2018	356 363 391 495	 	  	363 391	106 108 115 143	62 66	303 308 318 404
Eswatini	2015 2016 2017 2018	*496 388 414 519	980 1,077 1,048 1,020	  	1,465 1,462	1,337 1,315 1,300 1,355	203	1,296 1,262 1,387 1,323
Ethiopia	2015 2016 2017 2018	10,493 12,596 13,276 13,612	  	700 1,303 1,432 1,470	11,293 11,844	97 109 111 111	2,683 3,001	7,470 8,586 8,854 9,090
Gabon	2015 2016 2017 2018	2,127 2,338 2,277 2,614	337 344 346 349	  	2,682 2,623	1,265 1,336 1,270 1,398	665	1,852 2,017 2,155 2,474
Gambia	2015 2016 2017 2018	286 302 317 *321	  	  	302 317	137 141 143 *141	*69 *80	*220 *233 *237 *239
Ghana	2015 2016 2017 2018	11,672 13,203 14,248 16,425	223 745 320 140	587 187 268 740	13,761 14,300	406 483 491 532	1,916 2,171	9,778 11,523 12,120 13,185
Guinea	2015 2016 2017 2018	1,118 1,596 1,753 1,914	  	  	1,596	98 136 145 154	*271 *298	*928 *1,324 *1,455 *1,588

### **Electricity supply and consumption**Gigawatt-hours and kilowatt-hours per capita

					Sup	pply	Consur	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Guinea-Bissau	2015 2016 2017 2018	*58 *84 *86 *87			*84 *86	*33 *47 *47 *46	0 0	*58 *84 *86 *87
Kenya	2015 2016 2017 2018	9,515 9,971 10,129 11,163	59 86 230 130	46 39 12 69	10,019 10,346	199 204 206 218	2,015 2,015	7,732 8,346 8,741 8,702
Lesotho	2015 2016 2017 2018	532 508 502 517	261 373 387 397	4 3 1 3	878 888	383 423 424 432	3 154 4 117	*694 *765 700 807
Liberia	2015 2016 2017 2018	*350 *440 *440 *444	  	  	*440 *440	*96	*165 *154	*265 *275 *285 *300
Libya	2015 2016 2017 2018	37,511 31,420 33,282 34,171	376 302 465	  	31,796 33,584	5,844 4,898 5,103 5,186	7,331 7,682	15,282 13,988 14,132 17,605
Madagascar	2015 2016 2017 2018	1,712 1,867 1,971 2,072	  	  	1,867 1,971	75 77	5 143 7 154	*1,577 1,738 1,802 1,917
Malawi	2015 2016 2017 2018	*2,136 *2,160 *1,991 *2,266		22 24 20 82	*2,135 *1,971	*126 *124 *112 *120	*281 *642	1,559 1,855 1,329 *1,513
Mali	2015 2016 2017 2018	2,370 2,613 3,068 *3,261	317 113 *117 *198	*486 *529 *535 *550	2,197 2,650	126 122 143 *152	*322 *330	*1,903 *1,875 *2,320 *2,540
Mauritania	2015 2016 2017 2018	975 1,042 1,183 1,271	183 221 *185 198	 57  	1,206 1,368	286 290 319 333	*255 *305	932 951 1,063 1,148
Mauritius	2015 2016 2017 2018	2,996 3,042 3,120 3,132	  	  	3,042 3,120	2,411 2,467	477 497	2,506 2,555 2,614 2,650
Morocco	2015 2016 2017 2018	31,217 32,141 33,192 35,839	5,138 5,289 6,058 3,725	165 135 161 350	37,295 39,089	1,046 1,082	6,233 6,636	29,939 31,063 32,453 32,587
Mozambique	2015 2016 2017 2018	19,641 18,697 16,992 16,659	10,547 9,928 9,935 9,899	12,876 14,269 9,945 10,446	14,355 16,982	516 593	2,538 2,538	12,180 11,383 14,443 12,722
Namibia	2015 2016 2017 2018	1,576 1,479 1,772 1,363	2,678 3,085 2,939 3,449	88 99 100 114	4,465 4,611	1,893 1,919	505 527	3,782 3,909 4,057 4,171

2					Sup	pply	Consun	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Niger	2015 2016 2017 2018	522 442 566 480	782 779 845 1,253	000000000000000000000000000000000000000	1,221 1,412	59 65	*276 *290	916 *968 *1,014 *1,379
Nigeria	2015 2016 2017 2018	32,442 33,586 34,445 36,278	  		33,586 34,445	181 180	6,206 6,390	24,847 25,034 25,676 26,316
Rwanda	2015 2016 2017 2018	526 636 698 730	83 78 86 94	3 4 4 4	710 779	61 65	147 5 174	419 *560 596 668
Sao Tome and Principe	2015 2016 2017 2018	*81 86 *91 *91			. 86 . *91	*407 424 *438 *433	18 3 *19	*64 *69 *72 *73
Senegal	2015 2016 2017 2018	3,818 4,097 4,418 4,502	333 360 360 360	• • •	4,457 4,778	297 310	724 726	3,466 3,734 3,472 3,998
Seychelles	2015 2016 2017 2018	462 496 513 518	  		. 496 . 513	5,179 5,320	*44 *42	*409 *452 *470 *476
Sierra Leone	2015 2016 2017 2018	*261 *303 *309 *164	 		. *303 . *309	*41	*93 *98	*177 *210 *210 *84
Somalia	2015 2016 2017 2018	350 350 *350 *350			. 350 . *350	25 *24	*35 *35	315 315 315 350
South Africa	2015 2016 2017 2018	249,655 255,208 257,702 256,064	13,059 10,555 10,555 9,687	14,609 16,549 16,549 14,386	249,214 251,708	4,434 4,415	55,154 59,370	193,862 202,741 202,673 205,423
South Sudan	2015 2016 2017 2018	578 447 542 583	 		. 447 . 542	41 50	35 39	529 409 498 446
St. Helena and Depend.	2015 2016 2017 2018	11 12 11 12			. 12	1,946 1,885	*2 5 *2	9 9 9 11
Sudan	2015 2016 2017 2018	13,158 14,540 15,659 16,374	129 439 891 808	5 6	14,973 16,550	376 405	3,194 3,381	10,580 11,799 12,961 13,700
Togo	2015 2016 2017 2018	444 950 690 589	857 448 747 882		. 1,398	186 187	215 134	1,138 1,185 1,313 1,239

0	V	Des des elles	l	F a set a	Sup	ply	Consun	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Tunisia	2015 2016 2017 2018	19,676 19,808 20,589 21,012	403 134 450 382	500 255 483 484	19,687 20,556	1,751 1,742 1,798 1,808	3,976 4,364	15,437 15,569 16,113 16,504
Uganda	2015 2016 2017 2018	3,300 3,508 3,854 4,040	49 54 65 84	122 165 317 233	3,398 3,602	84 86 88 91	765 755	2,487 2,594 2,802 3,067
United Rep. of Tanzania	2015 2016 2017 2018	6,772 7,216 7,250 7,230	71 102 106 118	  	7,318 7,356	133 138 135 130	1,337 1,305	5,250 5,370 5,933 6,372
Zambia	2015 2016 2017 2018	13,440 11,695 14,185 16,191	785 2,185 753 152	1,176 794 1,063 1,226	13,086 13,875	822 800 823 871	2,228 1,683	11,450 10,858 12,192 12,898
Zimbabwe	2015 2016 2017 2018	9,522 7,090 7,544 9,418	1,139 2,220 2,569 1,177	1,239 369 351 161	8,941 9,762	682 637 686 723	1,568 1,872	6,876 7,282 7,880 8,506
America, North	2015 2016 2017 2018	5,423,268 5,445,802 5,407,538 5,583,985	89,216 84,841 81,750 79,254	82,199 87,438 86,247 81,193	5,443,206 5,403,040	9,564 9,505 9,357 9,589	750,040 782,705	4,650,858 4,688,132 4,636,274 4,822,364
Anguilla	2015 2016 2017 2018	95 104 80 87	  	  	104 80	6,618 7,170 5,477 5,903	12 *12	*81 *91 *68 74
Antigua and Barbuda	2015 2016 2017 2018	*347 *353 *353 362	  	  	*353 *353	*3,708 *3,735 *3,699 3,760	*100 *98	*250 *253 *255 *287
Aruba	2015 2016 2017 2018	*932 *947 *978 *983	  	  	*947 *978	*8,929 *9,029 *9,286 *9,285	*158 *165	*778 *789 *813 *817
Bahamas	2015 2016 2017 2018	1,998 1,966 *1,987 *2,280	  	  	*0.000	5,339 5,202 *5,205 *5,912	*86 *96	1,930 1,965 *1,841 *2,209
Barbados	2015 2016 2017 2018	1,043 1,064 1,047 1,055	 	  	1,004	3,656 3,722 3,658 3,682	86 75	*947 978 974 943
Belize	2015 2016 2017 2018	417 414 *636 *651	255 243 230 235	  	*006	1,862 1,784 *2,305 *2,314	68 105	603 589 761 779
Bermuda	2015 2016 2017 2018	674 665 675 642	  	  	CZE	10,586 10,502 10,711 10,235	*80 91	591 586 585 568

	,	<b>.</b>			Sup	ply	Consum	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Bonaire, St Eustatius, Saba	2015 2016 2017 2018	127 137 142 *143	  	  	127 137 142 *143	5,156 5,480 5,575 *5,562	*36 *38	*96 *101 *104 *105
British Virgin Islands	2015 2016 2017 2018	*210 *212 *149 *146	  	  	*210 *212 *149 *146	*7,211 *7,232 *5,026 *4,897	*29 *24	*181 *183 *124 *117
Canada	2015 2016 2017 2018	657,944 663,808 662,972 654,399	8,726 9,303 9,904 13,195	68,287 73,103 72,040 61,401	598,383 600,008 600,836 606,193	16,609 16,491 16,357 16,351	89,945 92,625	498,325 494,129 513,726 524,370
Cayman Islands	2015 2016 2017 2018	640 666 671 658	  	  	640 666 671 658	10,369 10,645 10,579 10,249	40 29	601 627 642 649
Costa Rica	2015 2016 2017 2018	10,812 10,880 11,332 11,498	537 807 551 572	643 657 741 813	10,705 11,030 11,142 11,257	2,208 2,251 2,251 2,252	1,253 1,225	9,428 9,785 9,901 9,989
Cuba	2015 2016 2017 2018	20,288 20,459 20,558 20,837	  	  	20,288 20,459 20,558 20,837	1,791 1,805 1,813 1,838	4,175 5,068	16,160 16,283 15,490 15,589
Curaçao	2015 2016 2017 2018	878 884 891 866		  	878 884 891 866	5,493 5,489 5,500 5,321	169 156	691 715 736 716
Dominica	2015 2016 2017 2018	151 156 130 110	  	  	151 156 130 110	2,123 2,186 1,816 1,529	13 9	*139 *143 *121 *100
Dominican Republic	2015 2016 2017 2018	17,922 18,690 19,036 19,651	  	  	17,922 18,690 19,036 19,651	1,743 1,798 1,811 1,849	3,099 3,138	14,952 15,591 15,887 16,409
El Salvador	2015 2016 2017 2018	6,065 6,083 5,615 5,402	963 1,066 1,675 1,824	64 77 90 65	6,964 7,071 7,200 7,161	1,101 1,113 1,127 1,115	*932 *1,006	5,999 6,073 6,153 6,221
Greenland	2015 2016 2017 2018	520 490 518 *530		  	520 490 518 *530	9,227 8,691 9,174 *9,370	27 29	331 320 328 *334
Grenada	2015 2016 2017 2018	207 218 227 *231	  	  	207 218 227 *231	1,888 1,981 2,044 *2,072	29	184 189 196 208
Guatemala	2015 2016 2017 2018	11,157 11,789 12,272 13,568	585 747 891 825	1,087 1,335 1,858 2,500	10,655 11,201 11,306 11,893	656 675 668 690	1,251 1,259	9,466 9,907 10,115 10,220

		D:			Sup	ply	Consun	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Haiti	2015 2016 2017 2018	1,038 1,084 1,056 1,046			1,038 1,084 1,056 1,046	97 100 96 94	634 641	411 417 422 429
Honduras	2015 2016 2017 2018	9,167 9,150 9,251 9,526	679 607 329 368	536 553 25 8	9,310 9,204 9,555 9,886	1,022 993 1,013 1,031	3,160 3,007	6,291 6,044 6,641 6,886
Jamaica	2015 2016 2017 2018	4,206 4,342 4,360 4,402	·· ·· ··	  	4,206 4,342 4,360 4,402	1,455 1,494 1,493 1,500	1,173 1,170	3,073 3,184 3,191 3,299
Mexico	2015 2016 2017 2018	310,712 320,565 322,063 335,581	1,650 2,232 2,151 3,759	2,320 1,968 1,804 2,276	310,042 320,829 322,410 337,064	2,544 2,601 2,584 2,671	61,534 60,983	257,450 270,367 271,921 283,408
Montserrat	2015 2016 2017 2018	*24 *20 *19 *20	  	  	*24 *20 *19 *20	*4,833 *4,018 *3,808 *3,905	8 *1 8 *1	20 *18 *18 *19
Nicaragua	2015 2016 2017 2018	4,580 4,591 4,525 4,636	34 205 327 201	22 18 1 0	4,592 4,778 4,851 4,837	738 758 760 748	1,157 1,403	3,396 3,665 3,451 3,594
Panama	2015 2016 2017 2018	10,295 10,885 11,054 11,353	17 30 7 13	139 398 318 326	10,173 10,518 10,743 11,040	2,563 2,605 2,616 2,643	1,719 1,689	8,549 8,761 9,095 9,296
Puerto Rico	2015 2016 2017 2018	21,160 20,887 16,571 *16,647		  	21,160 20,887 16,571 *16,647	6,257 6,362 5,238 *5,477	2 *3,575 3 *3,013	17,485 17,312 13,557 *13,667
Sint Maarten (Dutch part)	2015 2016 2017 2018	*369 *376 *332 *291		  	*369 *376 *332 *291	*9,233 *9,211 *8,018 *6,949	*34 *51	336 342 *282 *236
St. Kitts-Nevis	2015 2016 2017 2018	*217 *228 232 *232		  	*217 *228 232 *232	*4,246 *4,414 4,458 *4,424	*39 *45	*184 *189 *182 *187
St. Lucia	2015 2016 2017 2018	381 391 400 404		  	381 391 400 404	2,128 2,174 2,212 2,222	43 41	338 348 360 362
St. Pierre-Miquelon	2015 2016 2017 2018	49 48 49 51	·· ·· ··	  	49 48 49 51	8,119 8,170 8,272 8,703	) *4 2 *3	*44 *45 *46 *47
St. Vincent-Grenadines	2015 2016 2017 2018	147 153 151 151	 	 	147 153 151 151	1,343 1,401 1,372 1,368	15 2 14	133 138 137 135

					Sup	ply	Consum	ption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Trinidad and Tobago	2015 2016 2017 2018	10,300 10,011 9,933 9,225	  		10,300 10,011 9,933 9,225	7,516 7,267 7,177 6,637	596 614	9,703 9,415 9,318 8,463
Turks and Caicos Islands	2015 2016 2017 2018	*239 *250 *241 *257	  	  	*239 *250 *241 *257	*6,643 *6,838 *6,482 *6,823	*20 *22	*220 230 219 *237
United States	2015 2016 2017 2018	4,317,159 4,322,038 4,286,423 4,455,439	75,770 69,601 65,685 58,261	9,100 9,329 9,371 13,804	4,383,829 4,382,310 4,342,737 4,499,896	13,662 13,567 13,359 13,757	574,599 604,620	3,780,836 3,807,711 3,738,117 3,900,875
United States Virgin Is.	2015 2016 2017 2018	*799 *797 *610 *626	  	  	*799 *797 *610 *626	*7,613 *7,604 *5,826 *5,983	*148 *111	*656 *649 *499 *521
America, South	2015 2016 2017 2018	1,165,307 1,169,697 1,165,211 1,186,977	45,521 52,897 47,156 45,167	44,257 51,633 46,645 44,721	1,166,572 1,170,961 1,165,722 1,187,423	2,831 2,816 2,778 2,805	233,307 228,159	932,805 933,634 931,503 944,458
Argentina	2015 2016 2017 2018	145,363 146,353 145,618 152,224	10,320 11,078 10,529 10,030	55 327 69 280	155,628 157,104 156,078 161,974	3,613 3,611 3,552 3,651	28,324 27,078	129,122 128,781 129,001 128,744
Bolivia (Plur. State of)	2015 2016 2017 2018	9,034 9,313 9,627 9,883	  	  	9,034 9,313 9,627 9,883	831 844 860 871	1,102 1,223	7,875 8,201 8,375 8,450
Brazil	2015 2016 2017 2018	581,228 578,897 589,326 601,396	34,642 41,313 36,511 34,980	219 518 156 1	615,651 619,692 625,681 636,375	3,011 3,006 3,010 3,038	128,089 127,259	492,687 491,605 498,420 506,939
Chile	2015 2016 2017 2018	75,387 79,308 79,416 82,313	0 0 0	 2 39 	75,387 79,306 79,377 82,313	4,195 4,355 4,298 4,395	6,386 7,289	67,007 70,171 69,622 73,034
Colombia	2015 2016 2017 2018	78,596 76,800 79,279 79,964	45 378 78 122	460 45 9 16	78,181 77,133 79,348 80,070	1,645 1,601 1,622 1,612	14,629 13,464	59,858 60,149 61,575 61,842
Ecuador	2015 2016 2017 2018	25,950 27,314 28,033 29,198	512 82 19	46 402 212 		1,629 1,637 1,659 1,709	3,955 3,899	22,549 23,038 23,972 24,908
Falkland Is. (Malvinas)	2015 2016 2017 2018	19 21 20 19	  	  	19 21 20 19	6,638 7,083 6,347 5,924	*3 *2	*18 *18 *18 *18
Guyana	2015 2016 2017 2018	1,004 1,081 1,105 1,136	  	  	1,004 1,081 1,105 1,136	1,308 1,402 1,425 1,459	255 245	789 826 859 868

Occupation on the con-	V	Dan desette a	lassa sata	Formanta	Sup	ply	Consun	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Paraguay	2015 2016 2017 2018	55,744 63,771 59,685 59,212	  	41,127 48,415 43,635 42,205	14,618 15,356 16,051 17,007	2,185 2,266 2,337 2,445	4,344 4,496	10,576 11,012 11,555 12,504
Peru	2015 2016 2017 2018	48,277 52,720 52,743 54,982	1 22 17 21	55 38 0	48,223 52,704 52,760 55,003	1,583 1,704 1,678 1,719	7,315 6,295	42,334 45,390 46,464 48,293
Suriname	2015 2016 2017 2018	2,084 2,027 2,117 2,288	  	  	2,084 2,027 2,117 2,288	3,727 3,588 3,712 3,972	250 2 310	1,772 1,772 1,773 1,783
Uruguay	2015 2016 2017 2018	13,731 13,886 14,364 14,624	2 25 3 14	1,321 779 1,462 1,195	12,411 13,131 12,905 13,443	3,638 3,835 3,755 3,897	2,118 2,088	10,537 11,113 10,873 11,489
Venezuela (Bolivar. Rep.)	2015 2016 2017 2018	128,891 118,206 103,878 99,737	0 0 0	974 1,107 1,064 1,023	127,917 117,099 102,814 98,714	4,252 3,923 3,497 3,417	36,536 34,510	87,680 81,558 68,995 65,586
Asia	2015 2016 2017 2018	11,865,703 12,389,955 13,019,294 13,775,576	99,651 104,975 109,126 113,419	78,420 90,213 104,505 102,831	11,886,935 12,404,717 13,023,915 13,786,164	2,681 2,771 2,882 3,023	2,050,057 2,189,493	9,873,312 10,303,513 10,809,296 11,529,920
Afghanistan	2015 2016 2017 2018	1,339 1,394 1,420 1,266	3,779 4,333 4,611 4,986	  	5,118 5,726 6,031 6,252	149 162 166 168	*1,058 *1,120	*3,888 *4,386 *4,515 *4,740
Armenia	2015 2016 2017 2018	7,799 7,315 7,765 7,791	174 275 319 204	1,424 1,229 1,440 1,627	6,549 6,361 6,645 6,368	2,239 2,166 2,257 2,157	1,033 1,022	5,372 5,334 5,623 5,403
Azerbaijan	2015 2016 2017 2018	24,688 24,953 24,320 25,229	108 114 108 131	265 1,096 1,283 1,445	24,531 23,971 23,146 23,915	2,549 2,462 2,351 2,404	6,310 6,029	17,619 17,618 17,085 17,812
Bahrain	2015 2016 2017 2018	28,461 28,479 29,193 29,517	109 137 263 448	95 151 260 182	28,475 28,465 29,196 29,783	20,757 19,964 19,541 18,977	636 672	27,815 27,749 27,765 28,987
Bangladesh	2015 2016 2017 2018	59,103 68,909 73,249 78,612	3,583 4,051 4,935 5,070	  	62,686 72,960 78,185 83,682	401 462 490 519	11,059 11,832	51,757 59,180 65,861 70,409
Bhutan	2015 2016 2017 2018	7,748 7,954 7,730 6,960	125 84 92 134	5,721 5,763 5,701 4,581	2,151 2,275 2,121 2,514	2,955 3,088 2,845 3,332	*266 59	2,057 2,009 2,186 2,186
Brunei Darussalam	2015 2016 2017 2018	4,200 4,270 4,157 4,294	  	  	4,200 4,270 4,157 4,294	10,123 10,172 9,793 10,010	1,043 1,043	3,391 3,227 3,112 3,250

		<b>5</b> :			Sup	ply	Consur	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Cambodia	2015 2016 2017 2018	4,397 5,594 6,998 8,173	1,526 1,583 1,480 1,567		5,923 7,177 8,478 9,740	382 455 530 599	1,122 1,704	4,984 6,053 6,774 8,215
China	2015 2016 2017 2018	5,814,573 6,145,886 6,530,689 7,166,133	6,210 6,185 6,423 5,688	18,654 18,907 19,470 20,906	5,802,129 6,133,164 6,517,642 7,150,915	4,124 4,337 4,587 5,009	1,031,448 1,111,236	4,831,403 5,101,661 5,406,407 6,000,960
China, Hong Kong SAR	2015 2016 2017 2018	37,924 38,154 36,970 36,565	11,742 11,621 12,576 12,599	1,187 1,205 1,341 556	48,479 48,570 48,205 48,608	6,746 6,705 6,598 6,594	4,542 4,373	43,912 44,028 43,832 44,305
China, Macao SAR	2015 2016 2017 2018	962 988 1,465 656	4,054 4,306 3,952 4,911	  	5,294 5,417	8,331 8,639 8,701 8,814	218 207	4,831 5,076 5,209 5,567
Cyprus	2015 2016 2017 2018	4,533 4,887 5,004 5,061	  	  	4,533 4,887 5,004 5,061	3,904 4,176 4,242 4,256	487 459	4,091 4,399 4,541 4,664
Georgia	2015 2016 2017 2018	10,833 11,574 11,531 12,149	699 1,329 1,751 1,522	660 1,409 940 602	10,872 11,494 12,343 13,069	2,702 2,862 3,079 3,265	1,007 1,134	9,907 10,487 11,208 11,937
India	2015 2016 2017 2018	1,354,382 1,432,358 1,490,293 1,521,785	5,244 5,617 5,611 4,657	5,150 6,710 7,203 8,494	1,354,476 1,431,265 1,488,701 1,517,948	1,034 1,081 1,112 1,122	349,710 365,645	1,029,080 1,066,268 1,130,328 1,158,311
Indonesia	2015 2016 2017 2018	267,287 233,367 *283,647 293,203	13 1 1,120 	  	267,300 233,368 *284,767 293,203	1,035 892 *1,076 1,095	32,618 38,955	212,767 215,781 244,637 251,796
Iran (Islamic Rep. of)	2015 2016 2017 2018	280,635 289,116 307,992 307,968	4,148 4,221 3,852 2,587	6,822 6,688 8,172 6,295	277,961 286,649 303,672 304,260	3,541 3,603 3,764 3,720	44,734 45,780	232,640 240,452 251,717 259,753
Iraq	2015 2016 2017 2018	*68,745 80,087 83,947 82,507	13,104 11,965 11,787 21,793	  	*81,849 92,052 95,734 104,300	*2,301 2,514 2,549 2,714	51,038 56,714	42,035 38,733 38,377 39,594
Israel	2015 2016 2017 2018	64,226 66,976 67,675 68,893	  	5,197 5,553 5,649 5,863	59,029 61,423 62,026 63,030	7,399 7,575 7,524 7,520	5,731 5,442	54,022 55,688 56,293 57,481
Japan	2015 2016 2017 2018	1,058,748 1,061,874 1,071,200 1,057,755	·· ·· ··	  	1,058,748 1,061,874 1,071,200 1,057,755	8,272 8,311 8,401 8,316	99,780 96,592	949,492 949,785 964,732 945,534
Jordan	2015 2016 2017 2018	19,012 *19,627 19,432 18,859	604 334 51 188	50 46 57 94	19,566 *19,915 19,426 18,953	2,111 *2,084 1,985 1,902	2,791 2,730	16,177 16,700 17,504 17,494

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Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Kazakhstan	2015 2016 2017 2018	106,468 106,626 103,128 107,060	1,618 1,319 1,327 1,561	1,614 2,572 5,692 5,042	105,373 98,763	6,059 5,910 5,463 5,654	39,483 37,214	68,198 65,898 69,576 80,328
Korea, Dem.Ppl's.Rep.	2015 2016 2017 2018	13,748 16,939 14,915 15,431	  	  	16,939 14,915	546 669 587 604	4,282 3,770	10,272 12,657 11,146 11,530
Korea, Republic of	2015 2016 2017 2018	552,697 562,603 566,881 590,108		  	562,603 566,881	10,875 11,035 11,094 11,532	58,581 60,499	495,311 517,271 523,238 531,373
Kuwait	2015 2016 2017 2018	68,288 70,085 72,790 74,107	133 171 553 202	175 213 390 535	70,043 72,953	17,793 17,702 17,986 17,831	29,622 30,470	39,436 40,421 42,483 42,761
Kyrgyzstan	2015 2016 2017 2018	13,030 13,262 15,514 15,728	729 330 	184 199 1,215 755	13,393 14,299	2,278 2,205 2,310 2,375	3,105 3,162	10,587 10,160 11,008 11,864
Lao People's Dem. Rep.	2015 2016 2017 2018	16,730 25,068 31,550 *34,410	2,050 787 500 302	11,559 19,650 24,901 27,216	6,206 7,149	1,071 906 1,028 *1,062	1,675 2,119	4,239 4,660 *5,030 *5,142
Lebanon	2015 2016 2017 2018	20,720 21,457 23,411 23,150	268 69 534 11	  	21,526 23,945	3,213 3,206 3,511 3,377	*1,963 *2,192	*19,085 *19,563 *21,753 *21,033
Malaysia	2015 2016 2017 2018	150,123 156,665 164,509 170,578	13 33 7 20	3 694 1,124 1,509	156,004 163,392	4,960 5,084 5,253 5,363	11,419 16,876	132,199 144,024 146,520 152,866
Maldives	2015 2016 2017 2018	619 672 725 772	  	  	672 725	1,362 1,413 1,461 1,497	*41 *41	*582 *631 *684 *730
Mongolia	2015 2016 2017 2018	5,513 5,667 6,027 6,535	1,417 1,446 1,574 1,666	51 36 26 27	7,077 7,576	2,294 2,316 2,433 2,578	1,566 1,627	5,284 5,446 5,949 6,450
Myanmar	2015 2016 2017 2018	15,970 17,867 20,056 26,714	  	  2,356	17,867 20,056	303 337 376 454	2,385 2,803	13,397 15,355 17,115 18,544
Nepal	2015 2016 2017 2018	3,460 4,244 4,639 4,913	1,778 2,175 2,582 2,813	3 3 3 35	6,416 7,218	194 235 261 274	1,481 1,498	3,867 4,926 5,710 6,503
Oman	2015 2016 2017 2018	32,762 34,232 36,130 37,671	  	  	34,232	7,677 7,642 7,743 7,800	3,873 3,780	28,912 30,359 32,350 33,548

Occupation on the con-	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Dan desette a	lanca a sta	F	Sup	pply	Consur	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Other Asia	2015 2016 2017 2018	258,173 264,137 270,288 275,577		  	004407		27,600 28,680	231,030 236,504 241,543 247,406
Pakistan	2015 2016 2017 2018	110,128 115,502 123,533 134,981	552 655 433 297	  	123,966	570 596	22,325 24,408	90,429 95,530 103,273 *107,267
Philippines	2015 2016 2017 2018	82,905 91,789 95,747 100,123	  	  	95,747		17,601 17,917	67,808 74,154 77,793 82,384
Qatar	2015 2016 2017 2018	41,499 42,307 45,555 47,913	  	  	40.00-	16,719	5,174 5,526	36,378 37,134 40,030 41,868
Saudi Arabia	2015 2016 2017 2018	338,331 345,104 355,079 343,778	461 343 3 2	512 1,062 38 36	344,384 355,044	10,615 10,726	47,655 64,286	273,212 270,946 264,347 265,652
Singapore	2015 2016 2017 2018	50,341 51,733 52,394 53,074		  	51,733 52,394	9,179	2,577 2,585	47,514 48,626 49,578 50,449
Sri Lanka	2015 2016 2017 2018	13,227 14,363 15,004 15,985	  	  	13,227 14,363 15,004 15,985	710	1,631 1,516	11,741 12,715 13,489 14,119
State of Palestine	2015 2016 2017 2018	515 537 546 420	5,413 5,473 5,577 5,916	  	6,010 6,123	1,297 1,290	721 735	5,216 5,289 5,388 5,576
Syrian Arab Republic	2015 2016 2017 2018	17,982 18,202 18,412 18,210	 	262 67 543 543	18,135 17,869	985 1,038 1,045 1,043	4,937 4,519	13,038 13,198 13,351 13,205
Tajikistan	2015 2016 2017 2018	17,162 17,232 18,144 19,742	63 103 110 559	1,400 1,427 1,421 2,945	15,908 16,833	1,836 1,896	2,846 *3,170	12,446 12,922 13,774 13,890
Thailand	2015 2016 2017 2018	176,488 187,554 181,713 182,296	14,441 19,853 24,455 26,665	2,267 1,385 1,106 997	206,022 205,062	2,987 2,963	15,525 14,970	174,053 184,960 185,371 188,048
Timor-Leste	2015 2016 2017 2018	353 415 430 453	  	  	415 430	340 345	*102 *108	254 313 *321 335
Turkey	2015 2016 2017 2018	261,783 274,408 297,277 304,801	7,136 6,330 2,728 2,477	3,195 1,452 3,304 3,112	279,286 296,701	3,499 3,658	51,116 50,946	214,501 228,170 245,755 254,934

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Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Turkmenistan	2015 2016 2017 2018	22,534 22,534 22,534 22,534	  	3,201 3,201 3,201 3,201	19,333 19,333 19,333 19,333	3,474 3,414 3,358 3,304	6,860 6,860	12,473 12,473 12,473 12,473
United Arab Emirates	2015 2016 2017 2018	127,366 129,596 134,553 135,997	234 1,141 514 488	249 506 617 517	130,231 134,450	13,749 13,912 14,172 14,118	12,089 19,205	111,076 *113,929 115,245 122,836
Uzbekistan	2015 2016 2017 2018	57,414 58,634 60,323 62,408	5,520 5,278 6,945 2,233	6,810 6,774 7,585 2,627	57,138 59,684	1,815 1,817 1,867 1,910	*4,192 *4,344	47,350 48,503 50,350 53,515
Viet Nam	2015 2016 2017 2018	163,494 181,653 198,499 213,121	2,604 3,313 2,352 1,722	1,711 2,215 1,825 733	199,026	1,774 1,952 2,104 2,241	*19,001 19,267	143,683 159,791 174,653 192,701
Yemen	2015 2016 2017 2018	6,288 5,105 4,309 3,609		  	5,105 4,309	237 188 155 127	1,999 1,651	2,500 2,371 2,293 2,192
Europe	2015 2016 2017 2018	4,815,525 4,864,648 4,885,379 4,906,761	488,861 450,986 462,819 461,083	494,054 459,231 465,013 462,907	4,856,402 4,883,185	6,455 6,506 6,532 6,552	913,653 902,612	3,883,709 3,926,401 3,967,657 3,973,359
Albania	2015 2016 2017 2018	5,895 7,136 4,526 8,552	2,355 1,827 2,915 850	956 1,869 0 1,764	7,094 7,441	2,523 2,458 2,580 2,650	2,127 1,483	5,897 5,095 5,956 6,085
Andorra	2015 2016 2017 2018	100 99 *106 *139	471 485 470 439	0 0 0 0	584 576	7,307 7,553 7,476 7,512	68 67	484 491 490 492
Austria	2015 2016 2017 2018	65,299 68,308 71,325 68,597	29,389 26,366 29,362 28,076	19,328 19,207 22,817 19,129	75,467 77,870	8,683 8,627 8,829 8,721	13,428 14,982	61,185 62,038 62,892 63,074
Belarus	2015 2016 2017 2018	34,082 33,566 34,515 38,927	6,104 6,319 5,992 3,257	3,482 3,298 3,407 4,248	36,587 37,100	3,888 3,873 3,926 4,013	7,211 7,148	29,288 29,376 29,952 30,661
Belgium	2015 2016 2017 2018	69,829 85,813 86,775 75,095	23,714 14,648 14,189 21,636	2,715 8,465 8,168 4,308	91,996 92,796	8,046 8,102 8,126 8,049	10,147 10,579	81,668 82,246 82,278 82,755
Bosnia and Herzegovina	2015 2016 2017 2018	15,629 17,767 16,439 19,160	3,872 3,084 3,346 3,092	6,007 6,841 5,187 7,698	14,010 14,598	3,935 4,137 4,356 4,379	2,922 3,187	10,675 11,088 11,398 11,456
Bulgaria	2015 2016 2017 2018	49,228 45,277 45,612 46,837	4,251 4,568 3,705 2,223	14,826 10,940 9,186 10,030	38,905 40,131	5,369 5,440 5,650 5,535	10,063 10,177	28,326 28,898 29,907 29,895

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Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Croatia	2015 2016 2017 2018	11,403 12,820 11,986 13,632	13,158 12,398 12,158 12,693	6,369 6,867 5,204 7,306	18,351 18,940	4,298 4,360 4,528 4,576	3,051 2,961	15,343 15,300 15,982 16,174
Czechia	2015 2016 2017 2018	83,892 83,309 87,049 88,032	16,146 13,817 15,072 11,573	28,661 24,791 28,109 25,481	71,377 72,335 74,012 74,124	6,733 6,812 6,955 6,950	14,339 14,793	54,477 55,852 57,377 58,004
Denmark	2015 2016 2017 2018	28,942 30,541 31,042 30,377	15,645 14,976 15,218 15,634	9,733 9,919 10,655 10,409	35,598 35,605	6,127 6,233 6,211 6,189	4,283 4,013	30,809 31,095 31,288 31,084
Estonia	2015 2016 2017 2018	10,398 12,186 12,918 12,360	5,452 3,577 2,281 3,053	6,377 5,614 5,015 4,950	10,149 10,184	7,202 7,709 7,719 7,909	3,000 2,952	6,852 7,299 7,232 7,491
Faeroe Islands	2015 2016 2017 2018	314 317 334 352	  	  	317 334	6,543 6,588 6,918 7,258	*26 *28	288 291 306 321
Finland	2015 2016 2017 2018	68,599 68,757 67,523 70,263	21,459 22,110 22,204 22,548	5,122 3,159 1,779 2,612	87,708 87,948	15,496 15,954 15,958 16,333	6,367 6,484	78,497 80,953 81,039 82,769
France	2015 2016 2017 2018	579,542 564,181 561,935 581,943	9,961 19,903 21,119 13,562	74,024 61,404 61,248 76,534	522,680 521,806	7,736 7,817 7,781 7,719	75,573 76,653	438,193 445,979 442,702 440,286
Germany	2015 2016 2017 2018	648,310 650,450 653,723 643,159	37,008 28,338 27,842 31,727	85,290 78,863 80,301 80,463	599,925 601,264	7,336 7,299 7,274 7,151	82,970 82,311	514,948 516,955 518,953 512,934
Gibraltar	2015 2016 2017 2018	224 214 180 215	  	  	224 214 180 215	6,639 6,346 5,341 6,380	10 10	213 204 171 204
Greece	2015 2016 2017 2018	51,874 54,439 55,266 53,263	11,081 9,833 8,696 8,550	1,473 1,037 2,459 2,272	63,235 61,503	5,768 5,957 5,819 5,659	9,872 7,534	50,787 53,363 53,971 49,470
Guernsey	2015 2016 2017 2018	157 87 77 54	218 285 294 319	  	375 372 371 372	6,023 5,985 5,983 5,979	23 17	347 349 354 348
Hungary	2015 2016 2017 2018	30,360 31,902 32,885 32,004	19,935 17,951 19,803 18,613	6,249 5,240 6,925 4,265	44,613 45,763	4,505 4,574 4,703 4,775	7,030 6,796	36,291 37,152 38,493 39,426
Iceland	2015 2016 2017 2018	18,799 18,550 19,239 19,830	  	  	18,550	56,926 55,838 57,534 58,893	1,043 1,152	17,470 17,303 17,893 18,487

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Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Ireland	2015 2016 2017 2018	28,420 30,539 30,898 31,118	1,752 871 1,116 1,622	1,079 1,583 1,795 1,649	29,827 30,219	6,253 6,352 6,358 6,452	3,631 3,504	25,073 25,574 25,851 27,145
Isle of Man	2015 2016 2017 2018	435 433 467 493	63 65 41 *65	87 105 95 131	393	4,938 4,718 4,936 5,084	*30 *30	367 362 363 362
Italy	2015 2016 2017 2018	282,994 289,768 295,833 289,710	50,849 43,181 42,895 47,170	4,471 6,154 5,134 3,271		5,434 5,384 5,495 5,500	40,768 41,628	287,483 286,027 291,966 293,080
Jersey	2015 2016 2017 2018	48 70 49 *45	625 614 626 637	  	684	6,525 6,530 6,325 6,296	47 5 53	622 637 620 633
Kosovo	2015 2016 2017 2018	6,119 5,981 5,919 5,917	684 557 1,242 825	553 1,064 880 677		3,495 3,080 3,507 3,375	1,604 1,935	4,622 3,871 4,337 4,398
Latvia	2015 2016 2017 2018	5,533 6,425 7,531 6,725	5,246 4,828 4,073 5,174	3,425 3,795 4,137 4,265	7,458 7,467	3,681 3,778 3,827 3,959	974 980	6,461 6,482 6,485 6,661
Liechtenstein	2015 2016 2017 2018	70 90 93 89	325 309 314 321	  	399 407	10,566 10,593 10,722	0 0	395 399 407 410
Lithuania	2015 2016 2017 2018	4,933 4,266 4,187 3,514	7,938 11,106 11,926 12,848	730 2,831 3,249 3,215	12,541 12,864	4,141 4,340 4,521 4,693	2,788 2,802	9,342 9,750 10,058 10,403
Luxembourg	2015 2016 2017 2018	2,766 2,196 2,235 2,201	7,519 7,718 7,567 7,553	1,919 1,420 1,389 1,392	8,366 8,494 8,413 8,362	14,762 14,663 14,213 13,839	2,129 2,020	6,224 6,366 6,394 6,424
Malta	2015 2016 2017 2018	1,305 857 1,652 1,962	1,054 1,525 897 631	  36 11		5,441 5,462 5,738 5,878	266	2,114 2,116 2,319 2,391
Montenegro	2015 2016 2017 2018	3,003 3,141 2,483 3,679	1,040 1,210 1,537 780	517 906 417 976	3,445 3,603	5,624 5,492 5,741 5,548	659 631	2,679 2,671 2,855 2,847
Netherlands	2015 2016 2017 2018	110,389 115,211 117,264 114,466	30,760 24,258 22,458 26,755	22,012 19,343 18,952 18,785	120,126 120,770	7,034 7,074 7,095 7,177	15,597 14,961	103,833 105,461 106,519 107,967
North Macedonia	2015 2016 2017 2018	5,646 5,630 5,600 5,607	2,656 2,191 2,294 2,297	143 160 311 377	7,660 7,583	3,924 3,681 3,642 3,614	1,467 1,481	6,635 6,193 6,102 6,105

Country	V	Due di cati a c	lman c =t =	From a set a	Sup	pply	Consum	ption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
Norway	2015 2016 2017 2018	144,546 149,042 149,480 146,889	7,371 5,740 6,111 8,340	22,016 22,151 21,276 18,489	132,631 134,315		18,205 19,197	111,077 113,645 113,696 115,906
Poland	2015 2016 2017 2018	164,944 166,635 170,467 170,038	14,459 14,017 13,271 13,816	14,793 12,018 10,984 8,121	168,634 172,754	4,439 4,552	35,795 36,965	127,819 132,839 135,788 140,471
Portugal	2015 2016 2017 2018	52,420 60,328 59,434 59,635	8,077 4,616 5,506 5,668	5,811 9,701 8,190 8,325	55,243 56,750	5,350 5,516	8,852 10,109	45,812 46,395 46,642 47,960
Republic of Moldova	2015 2016 2017 2018	939 906 896 952	3,315 3,325 3,412 3,500	  	4,231 4,308	1,041 1,061	609 604	3,686 3,622 3,704 3,841
Romania	2015 2016 2017 2018	66,296 65,103 64,296 64,874	4,492 4,177 4,842 3,697	11,220 9,194 7,735 6,241	60,086 61,403	3,035 3,124	16,517 16,562	43,030 43,257 44,701 45,568
Russian Federation	2015 2016 2017 2018	1,067,544 1,090,973 1,094,289 1,115,093	6,586 3,194 6,410 5,177	18,244 17,694 17,006 17,779	1,076,473 1,083,693	7,410 7,447	329,125 319,156	732,339 743,971 760,885 759,582
Serbia	2015 2016 2017 2018	38,298 39,342 37,045 37,426	6,303 5,068 6,549 6,400	7,221 6,990 5,724 6,284	37,420 37,870	5,288 5,380	9,818 9,746	27,189 27,602 28,124 28,049
Slovakia	2015 2016 2017 2018	26,903 27,064 27,738 26,971	14,999 13,249 15,563 12,428	12,611 10,598 12,535 8,746	29,715 30,766	5,460 5,647	4,712 4,940	24,371 24,987 25,803 25,935
Slovenia	2015 2016 2017 2018	15,100 16,500 16,326 16,330	9,045 8,359 9,133 8,930	9,093 9,535 9,648 9,432	15,324 15,811	7,388 7,615	2,298 2,280	12,788 13,025 13,529 13,717
Spain	2015 2016 2017 2018	280,911 274,772 275,726 274,452	14,956 21,845 23,762 24,018	15,089 14,178 14,593 12,916	282,439 284,895	6,056 6,107	49,273 45,679	232,038 232,515 239,101 238,465
Sweden	2015 2016 2017 2018	162,112 156,010 164,250 163,400	9,294 14,287 11,896 12,202	31,894 26,022 30,888 29,425	144,275 145,258	14,668 14,665	15,336 16,460	124,859 127,496 127,254 127,562
Switzerland	2015 2016 2017 2018	67,720 63,175 63,089 69,107	34,033 34,096 36,496 31,020	35,068 30,173 30,946 32,607	67,098 68,639	7,971 8,081	8,859 10,155	58,239 58,230 58,470 57,645
Ukraine	2015 2016 2017 2018	163,682 164,573 156,037 159,852	2,241 77 50 32	3,591 3,830 5,226 6,099	160,820 150,861	3,597 3,391	37,127 33,495	118,989 117,440 117,366 118,657

O construction of the cons	V	Des des effects	l	F	Sup	ply	Consun	nption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
United Kingdom	2015 2016 2017 2018	339,573 339,899 338,640 333,424	22,961 20,018 18,167 21,332	1,855 2,273 3,407 2,225	357,644 353,400	5,476 5,394 5,296 5,251	53,614 53,719	303,585 304,140 299,683 299,760
Oceania	2015 2016 2017 2018	307,728 312,869 314,845 318,162	  	  	312,869 314,845	7,721 7,738 7,678 7,654	51,230 53,187	261,786 261,886 261,380 263,772
American Samoa	2015 2016 2017 2018	161 170 167 *168		  	170 167	2,887 3,043 2,998 *3,030	23 19	141 147 *148 *149
Australia	2015 2016 2017 2018	251,415 256,563 258,019 260,998	  	  	256,563 258,019	10,505 10,574 10,495 10,483	44,899 46,940	211,317 211,664 211,079 213,343
Cook Islands	2015 2016 2017 2018	33 34 37 41	  	  	34 37	1,860 1,952 2,097 2,363	0 0	33 34 37 41
Fiji	2015 2016 2017 2018	919 941 1,017 1,042	  	  	941 1,017	1,058 1,079 1,159 1,180	*95 *115	826 842 902 *907
French Polynesia	2015 2016 2017 2018	697 700 698 696	  	  	700 698	2,552 2,550 2,529 2,505	77 77	*600 *623 *621 *608
Guam	2015 2016 2017 2018	1,702 1,720 1,760 1,715	  	  	1,720 1,760	10,516 10,554 10,713 10,344	146 150	1,540 1,574 1,610 1,567
Kiribati	2015 2016 2017 2018	*29 *31 *31 *31	  	  	*31 *31 *31	*265 *275 *272 *271	*6 *6	*23 *25 *25 *24
Marshall Islands	2015 2016 2017 2018	*87 *88 *89 *90	  	  	*88 *89	*1,506 *1,516 *1,535 *1,532	*11 *12	*75 *76 *78 *78
Micronesia (Fed. States of)	2015 2016 2017 2018	67 *68 *67 *69	  	  	*68 *67 *60	613 *613 *603 *609	*22 *22	46 *46 *46 *46
Nauru	2015 2016 2017 2018	31 32 35 36		  	32 35	3,022 3,030 3,277 3,388	11 9	19 21 26 28
New Caledonia	2015 2016 2017 2018	2,903 3,130 3,228 3,486	 	 	3,130	10,709 11,415 11,647 12,450	90 68	2,842 3,040 3,160 3,421

0 1				<b>.</b> .	Sup	pply	Consum	ption
Country or area	Year	Production	Imports	Exports	Total	Per capita	EIOU+losses	TFC
New Zealand	2015 2016 2017 2018	44,224 43,698 44,192 44,380	  	  	. 43,698 . 44,192	9,379 9,398	4,889 5,007	39,708 39,063 38,908 38,847
Niue	2015 2016 2017 2018	3 *3 *3 *4	  	  	. *3 . *3	*2,110 *2,109	0 0	3 *3 *3 *3
Northern Mariana Islands	2015 2016 2017 2018	*430 *387 *380 *390	  	  	. *387 . *380	*6,884 *6,719	*86 *85	*334 *301 *295 *304
Palau	2015 2016 2017 2018	*90 *95 *95 *95	  	  	. *95 . *95	*5,363 *5,347	*21 *21	*67 *71 *74 *73
Papua New Guinea	2015 2016 2017 2018	4,560 4,794 4,595 *4,482	  	  	4,794 4,595	580 545	802 5 *597	3,882 3,991 *3,998 *3,951
Samoa	2015 2016 2017 2018	134 149 154 154	  	  	. 149 . 154	768 790	19 19	115 130 *134 134
Solomon Islands	2015 2016 2017 2018	97 105 108 110	  	  	. 105 . 108	169 170	*15 *18	*83 *90 *90 *93
Tonga	2015 2016 2017 2018	55 60 62 68	  	  	. 60 . 62	594 608	. 7 8 8	*49 *53 *55 *58
Tuvalu	2015 2016 2017 2018	6 7 8 *8		  	. 7 . 8	658 695	1 1	6 7 7 *7
Vanuatu	2015 2016 2017 2018	66 74 80 *80	  	  	. 80	267 280	*6 *11	61 69 *68 *70
Wallis and Futuna Is.	2015 2016 2017 2018	*18 *20 *20 *20	 	  	. *20 *20	*1,661 *1,648	*3 *3	*16 *17 *17 *17

#### Production of heat - by type

Terajoules

#### **Table Notes**

**Direct use geothermal** represents heat used directly for district heating, agriculture etc. without a commercial transaction taking place.

**Direct use solar thermal** represents heat used for the production of domestic hot water or for the seasonal heating of swimming pools (e.g. flat plate collectors, mainly of the thermosyphon type) without a commercial transaction taking place.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Figure 84: Heat production by region, 1990-2018

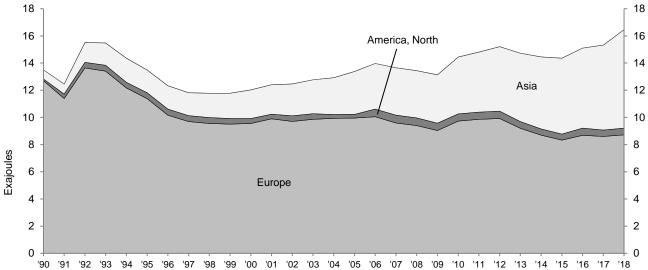


Figure 85: Major heat producing countries, 2018

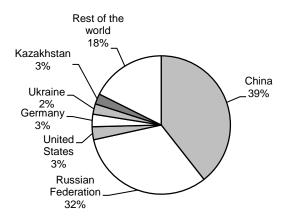
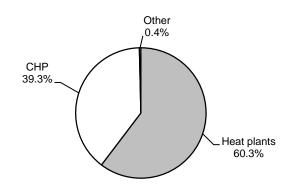


Figure 86: World heat production by type, 2018



Country or area	Year	Combust- ible fuels	Geo- thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
World	2015 2016 2017 2018	13,838,830 14,532,923 14,718,122 15,827,297	34,251 37,293 39,898 44,411	6,492 7,016 7,541 8,085	25,818 26,625 26,579 25,956	63,034 68,901	49,001 50,305	370,439 403,977 422,022 438,192	138,675 138,926	283,851 285,599
Africa	2015 2016 2017 2018	9,403 9,403  			 	3,730 3,880		 		7,124 8,900
Eswatini	2015 2016 2017 2018	*9,403 *9,403 		  	  	••		  		  
Namibia	2015 2016 2017 2018	  	  	  	  			  	· · ·	126 126
Senegal	2015 2016 2017 2018	  	  	  	  	513 533		  		  
South Africa	2015 2016 2017 2018	  	  	  	  	••				6,564
Tunisia	2015 2016 2017 2018	  	  			3,217 3,347	·	  		2,091 2,210
America, North	2015 2016 2017 2018	442,577 528,363 470,247 497,839			  		340 576	 	11,828 11,108	94,420 90,135
Canada	2015 2016 2017 2018	23,734 19,628 19,294 19,892	  	  	  			  		1,760 1,797
Greenland	2015 2016 2017 2018	*656 *735 *625 *625	  	  	  		. *340 . *576 . *576	  		
Mexico	2015 2016 2017 2018	  	  	  	 	 		 		10,888
United States	2015 2016 2017 2018	418,187 508,000 450,328 477,322	  	  	  			  	11,828 11,108	82,480 77,450
America, South	2015 2016 2017 2018	  		  	 	0		 	102 102	2,531 3,128 3,464

Country or area	Year	Combust- ible fuels	Geo- thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Chile	2015 2016 2017 2018			  		. (	) 			2,082
Ecuador	2015 2016 2017 2018	   	  			 			. *102 . *102	! !
Peru	2015 2016 2017 2018	 	  							1,389 1,382
Asia	2015 2016 2017 2018	5,560,170 5,866,924 6,224,915 7,206,917	0 0 	5,485 5,632		. 2,159 . 2,187	6,167 6,451	16,724 16,870	91,988 91,669	71,153 71,866
Armenia	2015 2016 2017 2018	28 34 31 24	  			 	 			. 186 . 223
Azerbaijan	2015 2016 2017 2018	6,501 7,282 6,580 12,236		  		·			  	 
China	2015 2016 2017 2018	4,610,572 4,967,022 5,300,081 6,205,618					 			
Cyprus	2015 2016 2017 2018	51 50 54 54	  			 			. 65 . 65	2,887 2,940
Georgia	2015 2016 2017 2018	0 0 	0 0 			 	  		. 642 . 658	127 128
Israel	2015 2016 2017 2018	  	  			 	 			16,135 16,135
Japan	2015 2016 2017 2018	13,075 13,864 13,901 13,901	  	  			. 6,167 . 6,451		5,366 5,366	10,387 9,677
Kazakhstan	2015 2016 2017 2018	408,147 361,022 371,187 383,651	  							 
Korea, Republic of	2015 2016 2017 2018	202,291 219,624 237,715 250,495	  	  		. 2,159	) 7		. 6,785	1,193 1,665

Country or area	Year	Combust- ible fuels	Geo- thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Kyrgyzstan	2015 2016 2017 2018	16,745 9,904 7,966 13,798	  	  					· .	
Lebanon	2015 2016 2017 2018		  	  			  			. 1,017 . *1,060
Mongolia	2015 2016 2017 2018	44,713 45,213 47,296 52,355	  	  			  			 
Other Asia	2015 2016 2017 2018	69,185 66,800 64,131 97,291	  				  		 	. 4,315 . 4,355
State of Palestine	2015 2016 2017 2018	  	  	5,485			  			
Tajikistan	2015 2016 2017 2018	1,499 1,648 1,793 *3,499		  			  			
Thailand	2015 2016 2017 2018	  	  		· ·		  			. 281
Turkey	2015 2016 2017 2018	41,496 38,839 43,302 41,613	  	  			  	44.45	79,130 7 77,875	34,625 35,295
Turkmenistan	2015 2016 2017 2018	9,846 9,846 9,846 10,876	  	  			 			
Uzbekistan	2015 2016 2017 2018	136,022 125,776 121,032 121,507	  			 	  	•	 	
Europe	2015 2016 2017 2018	7,826,680 8,128,234 8,022,959 8,122,541	34,251 37,293 39,898 44,411	1,909	26,625 26,579	5 57,145 9 62,834	5 42,494 4 43,278	385,944 403,959	26,470 27,864	92,631 95,012
Albania	2015 2016 2017 2018	*225 *113 113 122	  		•		  	•	 	. 504 . 553
Austria	2015 2016 2017 2018	81,996 84,528 87,885 82,344	578 587 591 573	90 93		. 106 . 110 . 89	) 9		. 300 . 527	7,573 7,537

Country or area	Year	Combust- ible fuels	Geo- thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Belarus	2015 2016 2017 2018	241,857 249,665 253,365 261,356		  		 				
Belgium	2015 2016 2017 2018	26,541 25,336 22,110 22,229	50 52 51 53	  		. 11,320 . 11,272	) 2			1,027 1,062
Bosnia and Herzegovina	2015 2016 2017 2018	5,621 5,657 5,793 5,759		  	•		 		·	
Bulgaria	2015 2016 2017 2018	48,062 45,663 41,624 35,433		  	000	2 1,92 <del>7</del> 3 1,844	, 		. 1,400 . 1,450 . 1,450 . 1,450	937 982
Croatia	2015 2016 2017 2018	11,106 11,411 12,431 12,699	  	  	•	 	 		. 373 . 379 . 345 . 320	484 5 539
Czechia	2015 2016 2017 2018	118,467 124,778 120,551 115,419		  	908	325 322	67 2 101	1,533 1,070	3 )	. 787 . 827
Denmark	2015 2016 2017 2018	124,732 129,150 128,936 127,331	112	956 1,392 1,766 2,161			. 1,141 . 822 . 1,132 . 1,356	3,457 3,762	7 2	. 589 . 597
Estonia	2015 2016 2017 2018	21,204 23,940 24,261 24,260	  	  			 			
Finland	2015 2016 2017 2018	168,501 185,583 173,685 170,696			-	5,080 4,731	4,106 4,429	1,019 10,080	9 O	. 69 . 75
France	2015 2016 2017 2018	147,110 164,442 164,966 164,283	4,397 5,441	  		 	. 507 . 520 . 527 . 981	4,502 3,748	2 1,681 3 1,681	6,948 7,207
Germany	2015 2016 2017 2018	448,187 461,067 461,662 460,229	797 641	9 6 7 8			  	7,389 7,492	9 3,394 2 3,563	28,079 28,265
Greece	2015 2016 2017 2018	2,093 2,134 2,137 2,167					·		. 415 . 423 . 370	11,071 11,365
Hungary	2015 2016 2017 2018	47,835 48,096 46,514 44,144	2,700 2,749		848	} . ' .	  	2,321	1 2,120 3 2,588	468 493

Country or area	Year	Combust- ible fuels	Geo- thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Iceland	2015 2016 2017 2018	33 13 61 19	25,873 27,176 29,113 32,821	  			. 711		. 3,435	
Ireland	2015 2016 2017 2018		  	  					 	506 529
Italy	2015 2016 2017 2018	216,164 223,037 232,622 228,672	780 810 793 878	2 3 4 6			  		. 5,222 . 5,478	8,378 8,740
Kosovo	2015 2016 2017 2018	44 46 45 45		  			. 749 . 772		 	14 14
Latvia	2015 2016 2017 2018	25,452 28,959 29,972 29,680	  	  			. 8	( ( 12	 2	  
Liechtenstein	2015 2016 2017 2018	380 388 387 417		37 37 38 37			 		 	  
Lithuania	2015 2016 2017 2018	31,820 33,652 34,957 34,623	32 41 15	  		. 9,446 . 11,765	6 9 5 9	,		  
Luxembourg	2015 2016 2017 2018	2,363 2,432 2,760 3,127		  						86 91
Malta	2015 2016 2017 2018	6 8 3 0	  	  					 	207 209
Netherlands	2015 2016 2017 2018	123,167 116,010 112,736 100,517		  		. 5,784	 1		. 2,844	1,147 1,139
North Macedonia	2015 2016 2017 2018	2,193 2,239 2,419 2,245		  		 			. 210	 
Norway	2015 2016 2017 2018	14,828 15,948 16,737 17,827		  		3,360 3,535	5,458 5,478		2 9	
Poland	2015 2016 2017 2018	280,106 292,247 299,019 294,096	  	  		495	5 4 9 5	54 78	930 946	2,189 2,280

Country or area	Year	Combust- ible fuels	Geo- thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Portugal	2015 2016 2017 2018	19,527 18,846 19,101 20,180	  	  					. 57	3,515 3,683
Republic of Moldova	2015 2016 2017 2018	10,042 10,606 10,251 10,658	  	  		•	·			
Romania	2015 2016 2017 2018	76,366 76,505 74,327 71,224	251 256 262 246	  					1,098	22 3 32
Russian Federation	2015 2016 2017 2018	4,853,378 4,988,962 4,924,203 5,064,879	223 207 0 0	  	14,637 14,593		. 12,852 . 13,366	339,148 363,085 373,030 388,539	5 )	
Serbia	2015 2016 2017 2018	35,256 36,097 37,089 36,178		  			· · · · · · · · · · · · · · · · · · ·		. 214	 
Slovakia	2015 2016 2017 2018	34,510 35,325 35,434 29,113	121 140 148 159	1 2 1 2	1,976 2,096		. 95	8 10 7 17	) 66 7 63	232 272
Slovenia	2015 2016 2017 2018	8,664 8,982 9,435 9,284	21 18 18 19	 					. 1,832 . 2,003	458 458
Spain	2015 2016 2017 2018	  		  		•	· · · · · · · · · · · · · · · · · · ·		. 789 . 789	12,278 12,911
Sweden	2015 2016 2017 2018	165,056 176,404 173,473 173,343	  	  			. 18,399 . 17,025 . 16,434 . 16,366			468 464
Switzerland	2015 2016 2017 2018	19,194 20,515 20,969 20,431		  	1,330 1,320		. 100 . 102		. 19 . 17	2,450 2,509
Ukraine	2015 2016 2017 2018	348,082 414,323 374,362 381,170	  	 	6,339 6,329	25,082 22,833	<u> </u>	1,782 1,263 1,379	3	
United Kingdom	2015 2016 2017 2018	66,512 65,127 66,565 66,342	  	  					. 34	2,145 2,179
Oceania	2015 2016 2017 2018	 		 				1,259 1,309 1,193 1,267	8,288 8,184	15,365 15,395 16,222

Country or area	Year	Combust- ible fuels	Geo- thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Australia	2015 2016 2017 2018							  		14,872 15,698
New Caledonia	2015 2016 2017 2018	  	  	  	•		·	  		140 141
New Zealand	2015 2016 2017 2018	  	  	  	-		 	1,259 1,309 1,193 1,267	8,288 8,184	364
Niue	2015 2016 2017 2018	  	  	  				  		*16 *16 *16
Samoa	2015 2016 2017 2018		  	 	•		·	 		3 *3 *3

#### Production of uranium (uranium content)

Metric tons

#### **Table Notes**

Data are primarily based on country submissions and Table 1.19 of the OECD and IAEA publication *Uranium 2018: Resources, Production and Demand*, OECD Publishing, available at <a href="https://www.oecd-nea.org/ndd/pubs/2018/7413-uranium-2018.pdf">https://www.oecd-nea.org/ndd/pubs/2018/7413-uranium-2018.pdf</a>.

These sources are complemented with data from the World Nuclear Association, available at <a href="http://www.world-nuclear.org/information-library/nuclear-fuel-cycle/mining-of-uranium/world-uranium-mining-production.aspx">http://www.world-nuclear.org/information-library/nuclear-fuel-cycle/mining-of-uranium/world-uranium-mining-production.aspx</a>.

Production for Bulgaria, France, Germany and Hungary comes from mine rehabilitation efforts only.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Table 35

## Production of uranium (uranium content) Metric tons

Country or area	2015	2016	2017	2018
World	58,862	62,327	59,683	53,503
Africa	7,430	7,622	8,017	8,781
Malawi	0	0	0	
Namibia	2,993	3,654	4,224	5,525
Niger	4,115	3,478	3,485	2,910
South Africa	322	490	308	346
America, North	12,965	15,164	14,056	7,583
Canada	11,709	14,039	13,116	7,001
United States	1,256	1,125	940	582
America, South	51	0	0	0
Brazil	51	0	0	0
Asia	28,269	29,025	28,186	26,533
China	1,616	1,616	1,885	1,885
India	385	385	421	423
Iran (Islamic Rep. of)	38		40	71
Kazakhstan	23,800	24,575	23,391	21,705
Pakistan	45	45	45	45
Uzbekistan	2,385	2,404	2,404	2,404
Europe	4,493	4,201	3,542	4,089
Czechia	155	138	70	0
France	2	0	0	0
Germany	0	0	0	0
Hungary	4	4	5	*5
Romania	77	50	0	0
Russian Federation	3,055	3,004	2,917	2,904
Ukraine	1,200	1,005	550	1,180
Oceania	5,654	6,315	5,882	6,517
Australia	5,654	6,315	5,882	6,517

#### **Table Notes**

Based on country submissions and the publication *World Energy Resources - 2016*, World Energy Council (WEC), available at https://www.worldenergy.org/publications/2016/wo rld-energy-resources-2016/.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

Albania   223		Bitumi	nous coal / Anth	racite	Sub-bit	uminous coal /	Lignite	Pe	at
Albania Algeria 223 59 164	Country or area	amount in	recoverable	additional amount in	amount in	recoverable	additional amount in	amount in	recoverable
Algeria Angola A	Afghanistan	66	66	400			··		
Angola Angentina 800 500 7,300 500 273 90 88 Argentina 317 163 125,000 443,431 44,164 215,000	Albania				727	522			155
Argentina	0	223	59	164					
Armenia 317 163 Australia 1.598,761 62,095 125,000 443,431 44,164 215,000 Baltradio					 7 200				 *90
Australia   1,598,761   62,095   125,000   443,431   44,164   215,000     Azerbajaina   1				••	7,300	500	213		
Austria 1 3 333 25 61	Australia			125,000	443,431	44,164	215,000		•••
Bahrain's Barbain's Barbaidos Barbados Barbados Barbados Barbados Barbados Belarius	Austria					25	61		
Bangladesh Barbados Belarus Barbados Bar									
Barbados Belarus		2 200						*420	
Belatus Belgium	•				3				
Belgium Belize Benin Benin Bolivia (Plur State of) Bonia and Herzegovina Bosna and Herze		i			1 500				 323
Belize Benin Bhutan Bhutan Bhutan Bolivia (Plur State of) Boshia and Herzegovina Boshwa and Herzegovina Bosha and Herzegovina Bosha and H	Belgium								
Bhutan Bolivia (Plur State of)	Belize	1		,					
Bölivia (Plur. State of) Bosnia and Herzegovina 21,240 40 205,253 Brunel Darussalam Bulgaria G,212 1,547 17,636 5,049 15,319 Brunel Darussalam Bulgaria 4,112 192 1,200 4,574 2,174 2,618 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Benin								
Bosnia and Herzegovina Bosnia and Herzegovina Bosnia and Herzegovina Bostwama 21,240 40 205,253									
Botswana   21,240		1			 5 274	2 264		••	
Brazil Brunei Darussalam Bulgaria		21 240			5,274	2,204	••		••
Brunei Darussalam Bulgaria Burkina Faso Basina Faso Burkina Faso Burkina Faso Burkina Faso Burkina Faso Basina Faso Burkina Faso Burkina Faso Basina Faso Burkina Faso Burkina Faso Basina Faso Burkina Faso Basina F	Brazil				17,636	5,049	15,319		
Burkind Faso Burundi Cambodia Cameroon Cameroon Canada 187,606 4,346 26,045 120,506 2,236 31,990 1,092 Central African Rep. Chide Ch	Brunei Darussalam								
Burundi Cambodia	Bulgaria	4,112	192	1,200	4,574	2,174	2,618	5	5
Cambroon Cameroon					••	••			
Cameroon Canada Canada 187,606 4,346 26,045 120,506 2,236 31,900 1,092 Cantral African Rep. Chad Chile 5,316 1,181 125 7 155 5,000 China 5,462,672 124,059 363,200 332,652 7,555 304,700 4,687 328 Colombia 14,809 4,881 13,173 411 380 3,176 Cocongo Costa Rica Cote d'Ivoire Croatia 4 4 4 300 33 3 3 3 3 3 3 3 3 3 3 3 3 3									
Canada         187,606         4,346         26,045         120,506         2,236         31,990         1,092           Central African Rep.			••		••	••	••		••
Central African Rep. Chad	Canada	187.606	4.346	26.045	120.506	2.236	31.990		
Chaid Chile				•				•	
China	Chad								
Colmbia							5,000	4.007	
Congo Costa Rica 177								•	
Costa Rica		1		•			•		
Côte d'Ivoire  <	Costa Rica								
Cuba <td>Côte d'Ivoire</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Côte d'Ivoire								
Cyprus	Croatia	4	4		300	33			
Czechia     16,526     1,107     9,767     2,604       Dem. Rep. of the Congo     988     88          Denmark             Dominica             Dominican Republic             Ecuador             Eugypt     182     16             El Salvador									
Dem. Rep. of the Congo         988         88		16 526	 1 107		 0.767	2 604			
Denmark					•	•			
Dominican Republic	Denmark	i							
Ecuador	Dominica					••		••	••
Egypt       182       16        27       22       52	Dominican Republic							••	
EĬ Śalvador									
Equatorial Guinea <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
Estonia		i							••
Eswatini       4,644       144       793	Estonia								2,000
Faeroe Islands	Eswatini	4,644	144	793					
Falkland Is. (Malvinas)	Ethiopia				23	11		••	••
Fiji				••	**			••	••
Finland		i							
France       160       95       200       114       21       165	Finland	i							420
French Polynesia	France			200					
Gabon	French Guiana								
	French Polynesia								
	Gabon Georgia	901	201		••	••		••	••

Peat		Proved recovera	able reserves		Uranium (m	netric tons)	
Estimated additional amount in place	Natural gas (billions cubic metres)	Crude oil and NGL	Oil shale	Bituminous sands	Reasonably assured resources	Inferred Resources	Hydropower (Gross theoretical capability) (GWh/Year)
	*50 *1	 *26		 . 5			394,000 40,000
••	4,504 *308	1,537 1,709			19,500		12,000 150,000
50	332	328	57 44		0.000	11,000	354,000
	*18 3,471	442	4,531		1,174,000	558,700	
	*10 1,148	*7 959	1	00			44.000
 *138	172 232	15 *4					4,000
1,479	0	0 27	1,000				8,000
	0	 0	1,000			••	1,000
	 *1	0 1					1,000 2,000
	 281	 *22					263,000 178,000
					23,100	 59,100	70,000
487	424	1,890	11,734	 	155,100	121,000	3,040,000
	276 *6	*150 *2	18	 3			27,000
							1,000 6,000
			-				88,000
336,908 	*150 1,987 	*18 27,755 	2,192		 357,500 12,000	 192,500 	7,000
	 *40	216 *20		3	 700	 1,200	
952	3,841 135	2,521 333	47,600	120	120,000	56,600	6,083,000
	115	*190		0.1			50,000
22	 28	 *14					46,000
 280	*25 *71	*7 *3	-	 . 8			2,000
	*142		-				59,000
 	4 *1	*2 *24	14,310		1,300 1,400	100 1,300	13,000 1,397,000
	31	74					120
	 *11	 1,175					50,000
	1,846	458	816	. / 3 8		1,900	125,000
	 *37	 149					7,000
			2,494				2,000
	*25	0		·			4,000 650,000
 28				 			1,000
 2,200					 1,100		3,000 31,000
2,200	*10	*11	1,002	· · · · · · · · · · · · · · · · · · ·	11,500	100	270,000
							1,000
	*28 *9	 274 *5		 . 0	4,800 	1,000	200,000 136,000

	Bitumi	nous coal / Anth	racite	Sub-bit	uminous coal /	Lignite	Pe	at
Country or area	Proved amount in place	Proved recoverable reserves	Estimated additional amount in place	Proved amount in place	Proved recoverable reserves	Estimated additional amount in place	Proved amount in place	Proved recoverable reserves
Germany	82,982	21	8,065	76,800	36,300	34,100	157	96
Ghana Greece				6,430	2,876		4,000	
Greenland	383	 183		183	183	200	4,000	••
Grenada								
Guatemala Guinea								
Guinea-Bissau						••		••
Guyana								
Haiti		••		40		27	**	••
Honduras Hungary	5,351	 276	 298	21 5,337	2,633	2,630		
Iceland	3,551	210		3,337	2,000	2,000	••	
India	260,544	85,562	157,435	42,645	4,714	32,893		
Indonesia	109,825	17,394	6,035	40,639	8,274	38,704	49,000	
Iran (Islamic Rep. of)	41,203	1,203		2,295 		••		••
Ireland	40	14	26		9		154	
Israel							500	386
Italy Jamaica	610	10		29	7	600	200	 32
Japan	13,883	340	6,298	1,036	 10	7,122	200	
Jordan								
Kazakhstan Kenya	148,695	25,605	••		12,100	••		
Korea, Dem.Ppl's.Rep.	10,600	600	2,700	300	300	2,200		
Korea, Republic of	1,686	326	272	209	126	812		
Kuwait								
Kyrgyzstan Lao People's Dem. Rep.	28,499 62	971 4		 521	812 499			
Latvia						•••	190	94
Lebanon								
Lesotho Liberia		••		••		••	••	••
Libya							••	
Lithuania						••	937	269
Madagascar	150 802			37				
Malawi Malaysia	1,209	2 141	 78	 451	2 39	 575		
Mali	.,			3		3		
Mauritania		••				••	**	••
Mauritius Mexico	4,160	1,160	1,960	 51	 51	213	••	••
Mongolia	41,024	1,170	1,900	120,776	1,350	213		
Montenegro	337	142				••		
Morocco	96 23,636	14		40		2		
Mozambique Myanmar	25,636	1,792 3	155 120	 5	3	 80	••	
Namibia	350							
Nepal	8	1		1	1	7		
Netherlands New Caledonia	3,247	497 2	2,750 8			••	120	
New Zealand	3,175	825	942	 11,350	6,750	11,902	1,640	
Nicaragua								
Niger	90	70 287	 21	6 377	6 57	1 000		
Nigeria North Macedonia	2,144	287	21	632	332	1,000		••
Norway	93	2		64	5	100	745	
Oman	5 000			470 500	0.057		••	••
Pakistan	5,996	207	5	179,596	2,857	68,068		

Peat		Proved recover	able reserves		Uranium (m	netric tons)	
Estimated additional amount in place	Natural gas (billions cubic metres)	Crude oil and NGL	Oil shale	Bituminous sands	Reasonably assured resources	Inferred Resources	Hydropower (Gross theoretical capability) (GWh/Year)
200	39	*31	286		3,000	4,000	120,000
	*23 *1	*90 *1	-· 		1,000	6,000	28,000 80,000
						134,700	550,000
	3	 *11					FO 000
		232	••	••			26,000
							1,000 81,000
							4,000
238	*8	 *4	 8			8,600	16,000 10,000
							184,000
	1,489 2,839	764 498		67	77,000 8,400	27,900 2,200	2,638,000 2,147,000
	34,020	*21,433			700	1,800	448,000
 140	3,694 *10	19,308					1 000
1,000	181	*2	550	0			0
2,500	45	82	10,446		4,800	1,300	4 000
	*21	*4			6,600		718,000
	*6 936	0 3,932	5,242 400	5 6,689	0 285,600	33,800 417,300	4,000 170,000
							24.000
	6	••	••	••	••		52,000
	1,784	13,981	•	•		••	
	*6	*5 	••	••	••		163,000 233,000
760		••	••	•••	••	••	7,000
			••	••			2,000 5,000
			•	•••		••	28,000
	1,505	6,297 *1					6,000
	2	·	5				321,000
	 *1,169	 471		•••	8,200	5,700 	222 222
	•		••	•			12 000
	*28	*3	••	••	••		 150
	324	1,496		. 0	2,800	0	430,000
		*35	42		30,600	25,100	57,000 27,000
	*1	0	8,167				12,000
	*2,832 528	*2 *3	 286				103,000 348,000
	*62		200	· · · · · · · · · · · · · · · · · · ·	248,200	155,500	23,000
	0 675	*30	-				733,000 11,000
				· · · · · · · · · · · · · · · · · · ·			2,000
	*28	*17	3				205,000 33,000
		*20		· · · · · · · · · · · · · · · · · · ·	325,000	104,900	3,000
	5,111	5,003	-	. 91			43,000 9,000
7,015	1,857	994		· · · · · · · · · · · · · · · · · · ·			600,000
· · ·	688	720					475,000
<u></u>	543	*50_	••				4/5,000

	Bitumi	nous coal / Anth	racite	Sub-bit	uminous coal /	Lignite	Pe	eat
Country or area	Proved amount in place	Proved recoverable reserves	Estimated additional amount in place	Proved amount in place	Proved recoverable reserves	Estimated additional amount in place	Proved amount in place	Proved recoverable reserves
Panama								
Papua New Guinea								
Paraguay Peru	1,567	 102		100	100		••	•••
Philippines	1,367		 8	1,017	100		••	••
Poland	178,913		27,405	227,886	5,429		890	
Portugal	3		27,100	66	33			**
Qatar								
Republic of Moldova							••	••
Romania	2,446		2,143	9,920	280		25	
Russian Federation	2,727,915	69,634	200,000	1,379,623	90,730	200,000	17,680	11,554
Rwanda								
Samoa Saudi Arabia					••		••	••
Saudi Arabia Senegal					••		40	 24
Serbia	855 855			20,186	7,112		40	24
Serbia and Montenegro	"			20,100	7,112			
Sierra Leone				2				
Slovakia	19	2		1,073	135			
Slovenia	95	56		656	315	40		
Solomon Islands								
Somalia								
South Africa South Sudan	213,560	9,893	5,000	30	••			30
Spain	4,231	 868	3,000	 319	319		 94	 70
Sri Lanka	4,231		3,000			•	_	
Sudan								
Sudan (former)								
Suriname								
Sweden	5	1		4	1	20	700	70
Switzerland		••						••
Syrian Arab Republic	4.075			••	••	••	••	•••
Tajikistan Thailand	4,075			 1,889	1,063			
Timor-Leste		••		•	•	·	••	••
Togo				••				
Trinidad and Tobago								
Tunisia								
Turkey	1,182		249	12,828	12,466	296		
Turkmenistan	800							••
Uganda	800				0.000		0.400	
Ukraine United Arab Emirates	81,045	•	5,170	7,717	2,336		•	684
United Kingdom	 186,770		190	1,000	500	 I		
United Rep. of Tanzania	1,410		*1,500	1,000	300		••	
United States	6,680,329		445,346	1,398,360	30,483	667,415	26,000	13,000
Uruguay		,					,	.,,,,,,,
Uzbekistan	10,852	1,375			1,853		••	
Venezuela (Bolivar. Rep.)	6,712		4,528					
Viet Nam	6,635	3,116		200,120	244			••
Yemen	045	 1E		 69	 55		••	••
Zambia Zimbabwe	945 25,502		5,820			18		
<u> </u>	20,002	502	5,020	900				

Peat		Proved recover	able reserves		Uranium (m	etric tons)	
Estimated additional amount in place	Natural gas (billions cubic metres)	Crude oil and NGL	Oil shale	Bituminous sands	Reasonably assured resources	Inferred Resources	Hydropower (Gross theoretical capability) (GWh/Year)
 	 141	 *24					
200	 414	 170		 . 1	1,300	 1,300	
2,300	*99 95	*15 15	7				47.000
	 24,528	2,695			6,000	1,000	32,000
 10	110	2,888  80		4	3,100	3,600	2,000
168,320 2,000	32,271 *57	14,024 	35,470	4,518	216,500 	432,000 	2,295,000 2,000
	 8,325	 36,618		 			140
52	10 31	0 *7					11,000 27,000
	45	22 *60					440.000
	*14	*1			0	9,000	10,000
	0	0			1,700 	7,500 	3,000
	*6 10	 *2	19		5,000 175,300	2,600 179,200	
	 *3	472 *19	40		 14,000	0	
46		 202					,
	85	682 *12					48,000
			875		5,000	8,500	200,000
	285	*340					11,000
	*6 220	*2 49	916				527,000 18,000
		*59					4,000
	326 *65	*113 55		4			1,000
	*7	*46	284		7,300		433,000
	17,479 *14	82 *136	1,100				33,000
1,846	604 6,091	*54 12,976	600		84,800 	81,300 	•
	206 *1,317	374	501 536.031	12	 30,100	 15,600	35,000 39,000
46	10,441	*6,857	536,931				32,000
	1,086 5,617	81 *26,807	1,200	) . 9,212		31,900 	731,000
	617 266	*599 409			1,000	5,400 	
 	 			 	9,900 1,400	5,700 	53,000 44,000

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