United Nations | Department of Economic and Social Affairs

Energy Statistics Pocketbook

2020

ST/ESA/STAT/SER.E/3

Department of Economic and Social Affairs
Statistics Division

Statistics Papers Series E No.3

2020
Energy Statistics Pocketbook

United Nations
New York, 2020

Department of Economic and Social Affairs

The Department of Economic and Social Affairs of the United Nations is a vital interface between global policies in the economic, social and environmental spheres and national action. The Department works in three main interlinked areas: (i) it compiles, generates and analyses a wide range of economic, social and environmental data and information on which United Nations Member States draw to review common problems and to take stock of policy options; (ii) it facilitates the negotiations of Member States in many intergovernmental bodies on joint courses of action to address ongoing or emerging global challenges; and (iii) it advises interested Governments on the ways and means of translating policy frameworks developed in United Nations conferences and summits into programmes at the country level and, through technical assistance, helps build national capacities.

Note

The designations employed and the presentation of the material in the present publication do not imply the expression of any opinion whatsoever on the part of the United Nations concerning the legal status of any country or of its authorities, or the delimitations of its frontiers. The term "country" as used in this report also refers, as appropriate, to territories or areas. The designations of country groups are intended solely for statistical or analytical convenience and do not necessarily express a judgement about the stage reached by a particular country, territory or area in the development process. Mention of the names of firms and commercial products does not imply endorsement by the United Nations. The symbols of United Nations documents are composed of capital letters and numbers.

ST/ESA/STAT/SER.E/3

UNITED NATIONS PUBLICATION
Sales number: E.20.XVII.10

ISBN 978-92-1-259148-3
eISBN 978-92-1-004997-9
print ISSN 2617-2828
online ISSN 2617-2836

Content

Introduction

This publication is the third in a series of pocketbook compilations on energy statistics designed to highlight the availability of data on various aspects of energy production, transformation and use and its linkages to other key statistics. Energy is central to the achievement of the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change, and sound energy statistics are the basis for the reliable measurement of progress, thereby assisting the formulation of policy measures to achieve international and national sustainable development goals.

The information in this publication is primarily based on the energy data collection carried out by the Energy Statistics Section of the United Nations Statistics Division (UNSD). The data are available in the 2017 editions of the Energy Statistics Yearbook, the Energy Balances, and the Electricity Profiles, three annual UNSD publications that present energy data in basic indicator formats, as well as formats that show a more detailed, yet number-heavy, picture of production, trade, transformation and consumption of energy products in more than 200 countries and territories.

The present publication aims at providing additional information by highlighting key indicators and using different visualizations to also show developments, dependencies and distributions in a way that standard data tables cannot convey.

More information about the data collection process, as well as the three publications underlying the information in this pocketbook, are available at https://unstats.un.org/unsd/energystats/questionnaire/.

Acknowledgements

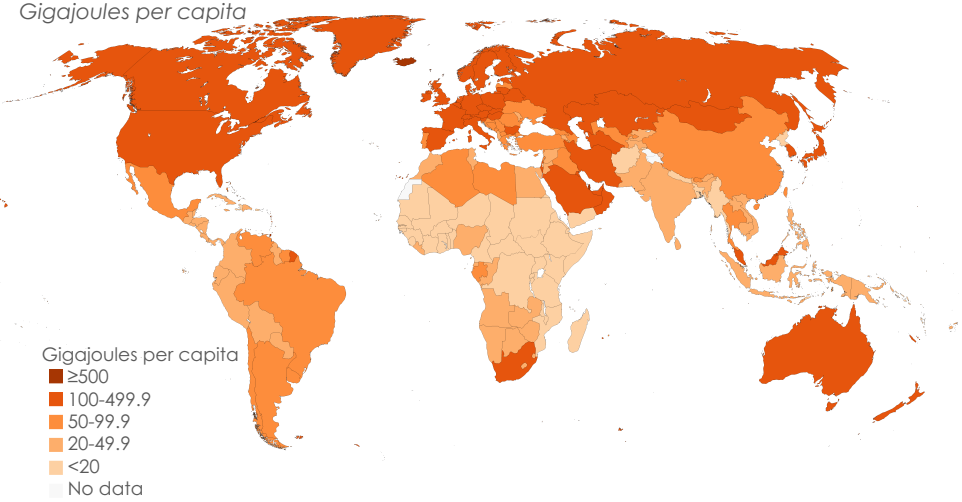
This publication has been compiled by the Energy Statistics Section of UNSD, which is headed by Mr. Leonardo Souza. The conceptual design of this pocketbook has been carried out by Mr. Souza, Ms. Agnieszka Koscielniak and Ms. Costanza Giovannelli. Ms. Giovannelli took the lead in the graphic design, supported by Mr. Graham Osborn and Ms. Peng Guo. The energy data used for the pocketbook have been collected and processed by the staff of the Energy Statistics Section.

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

Total energy supply

1. Total energy supply per capita, 2017

Gigajoules per capita



Source: United Nations Energy Database. Please see the disclaimer on page 66.

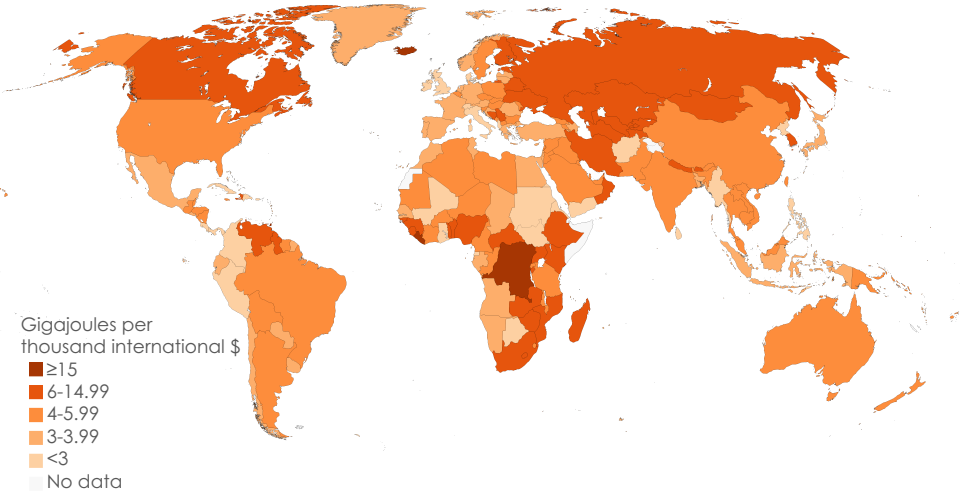
FACTS AND FIGURES

World total energy supply[1] (TES) increased by 62.0% from 1990 to 2017, reaching 580 EJ. This increase was driven by Asia, responsible for 83.5% of the world growth in the period. Chinese TES alone more than quadrupled, accounting for over a fifth of world TES in 2017. The European share of world TES almost halved from 35.3% in 1990 to 18.5% in 2017, with an absolute drop of 19 EJ. The United States, whose share of world TES dropped by 6.9 percentage points since 1990 to reach 15.6% in 2017, showed an absolute increase in TES of 9.9 EJ during this period. International bunkers were equal to 16.8 EJ in 2017 (accounting for 2.9% of world TES), almost doubling from 1990.

(1) See notes on pages 66-67.

2. Energy intensity[2], 2017

Gigajoules per thousand international $



Source: United Nations Energy Database. Please see the disclaimer on page 66.

3. Energy supply (total, per capita and energy intensity[2]), major countries, 2017

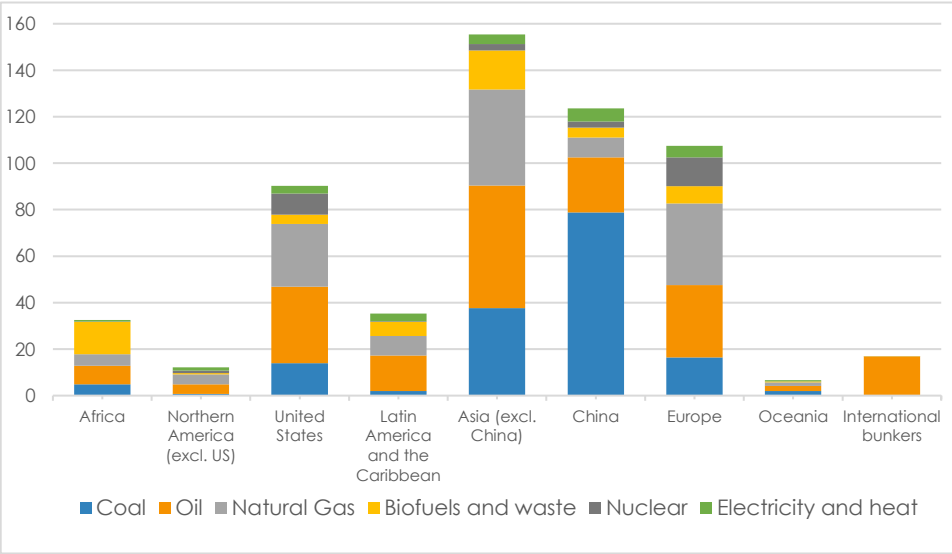
Exajoules, gigajoules per capita and gigajoules per thousand international $

Country	TES	Country	TES per capita	Country	Energy intensity[2]
China	123.6	Iceland	976.8	Iceland	19.9
United States	90.2	Qatar	681.2	Dem. Rep. of the Congo	19.0
India	38.1	Trinidad and Tobago	513.8	Curaçao	18.9
Russian Federation	31.2	Curaçao	473.3	Trinidad and Tobago	17.8
Japan	18.1	Bahrain	388.7	Liberia	17.6
Germany	13.0	Kuwait	383.0	Togo	13.0
Brazil	12.9	Brunei Darussalam	356.0	Zimbabwe	13.0
Canada	12.1	Canada	330.1	Turkmenistan	12.3
World	**580.2**	**World**	**76.9**	**World**	**5.0**

(2) See notes on pages 66-67.

4. Total energy supply by region and source, 2017

Exajoules



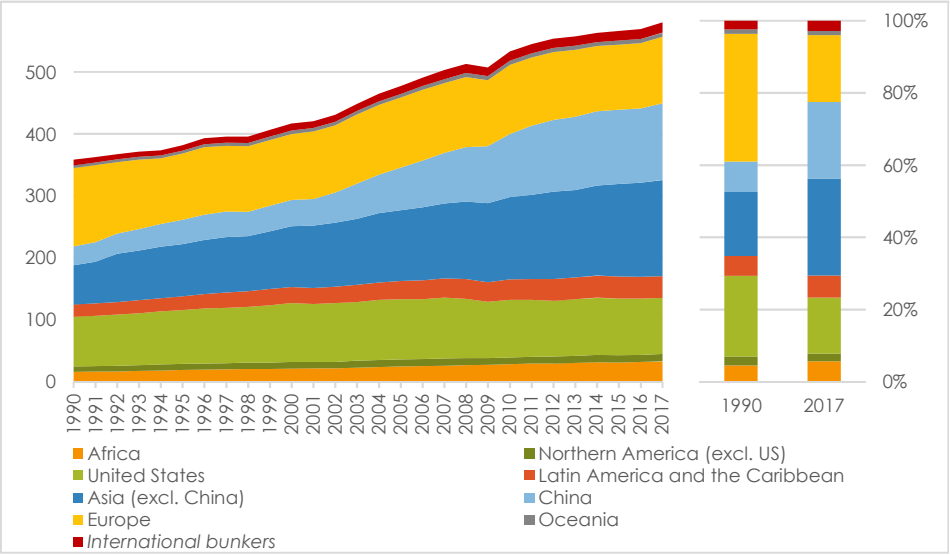
5. Total energy supply by region and source, 2017

Exajoules

Region	Coal	Oil	Natural gas	Biofuels and waste	Nuclear	Electricity and heat	TES
Africa	4.9	7.9	5.0	13.8	0.2	0.7	32.6
Northern America (excl. US)	0.7	4.2	4.2	0.6	1.1	1.3	12.1
United States	13.9	33.0	27.0	4.1	9.1	3.3	90.2
Latin America and the Caribbean	2.0	15.4	8.3	6.0	0.4	3.3	35.3
Asia (excl. China)	37.6	52.8	41.3	16.8	2.8	4.2	155.4
China	78.8	23.7	8.5	4.2	2.7	5.6	123.6
Europe	16.5	31.1	35.1	7.5	12.3	5.0	107.5
Oceania	1.9	2.3	1.5	0.3	-	0.6	6.6
International bunkers	-	*16.8*	*0⁺*	*0.01*	-	-	*16.8*
World	**156.4**	**187.1**	**130.9**	**53.3**	**28.5**	**24.0**	**580.2**

6. Total energy supply by region, 1990-2017

Exajoules and percentage



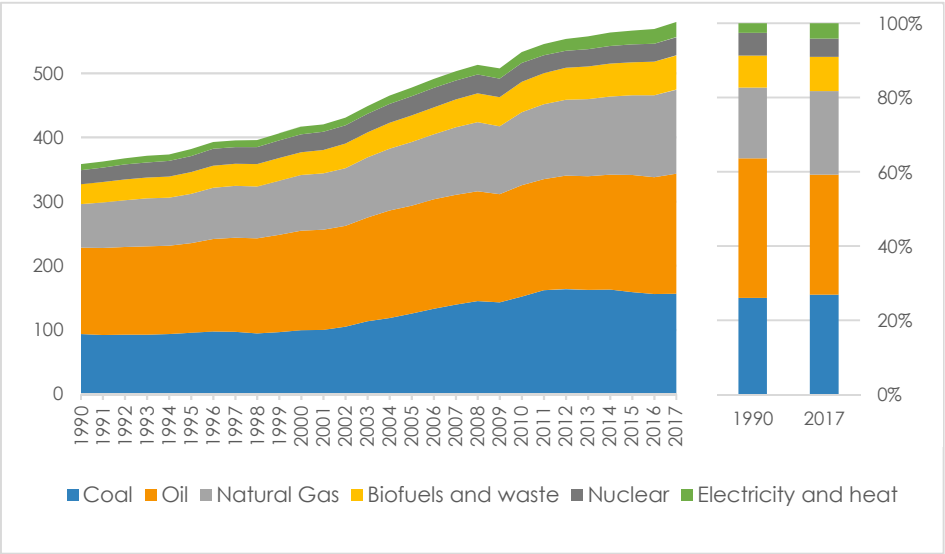
7. Total energy supply by region, 1990, 2000, 2010 and 2017

Exajoules

Region	1990	2000	2010	2017
Africa	15.9	21.0	27.9	32.6
Northern America (excl. US)	8.9	10.6	10.9	12.1
United States	80.3	95.3	92.9	90.2
Latin America and the Caribbean	19.7	25.7	33.2	35.3
Asia (excl. China)	63.4	97.9	133.1	155.4
China	30.4	42.5	101.6	123.6
Europe	126.5	106.9	111.8	107.5
Oceania	4.4	5.5	6.5	6.6
International bunkers	*8.8*	*11.2*	*14.9*	*16.8*
World	**358.2**	**416.6**	**532.9**	**580.2**

8. World total energy supply by source, 1990-2017

Exajoules and percentage



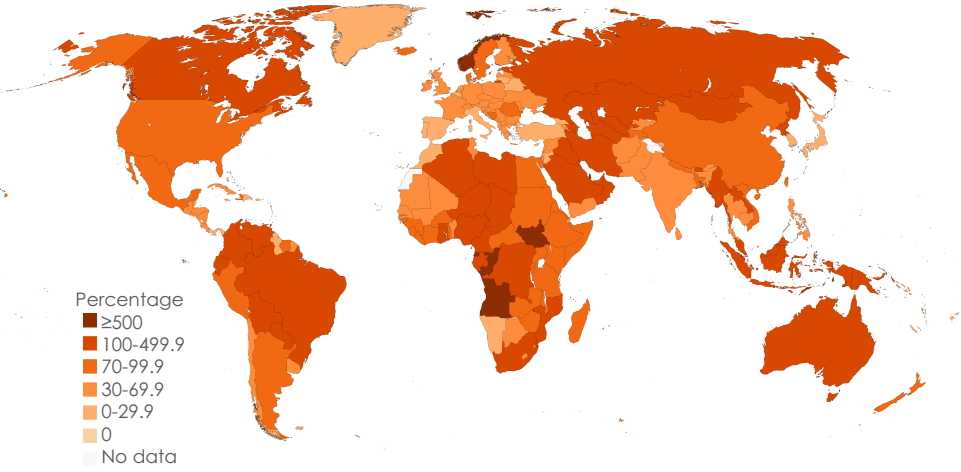
9. World total energy supply by source, 1990, 2000, 2010 and 2017

Exajoules

Source	1990	2000	2010	2017
Coal	93.5	99.4	151.5	156.4
Oil	134.4	155.0	173.6	187.1
Natural gas	68.2	87.1	114.0	130.9
Biofuels and waste	31.0	35.4	47.2	53.3
Nuclear	21.8	28.0	29.8	28.5
Electricity and heat	9.3	11.7	16.7	24.0
Total	**358.2**	**416.6**	**532.9**	**580.2**

Primary energy production

10. Energy self-sufficiency[3], 2017 - *Percentage*



Source: United Nations Energy Database. Please see the disclaimer on page 66.

FACTS AND FIGURES

World primary energy production almost reached 582 EJ in 2017, a 2.0% increase over 2016 and a 61% increase compared to 1990 (which translates into an average compounded yearly growth of 1.8%). Oil, coal and natural gas, in this order, are the largest energy sources, together representing 82% of total primary energy production, a combined share that barely changed since 1990.

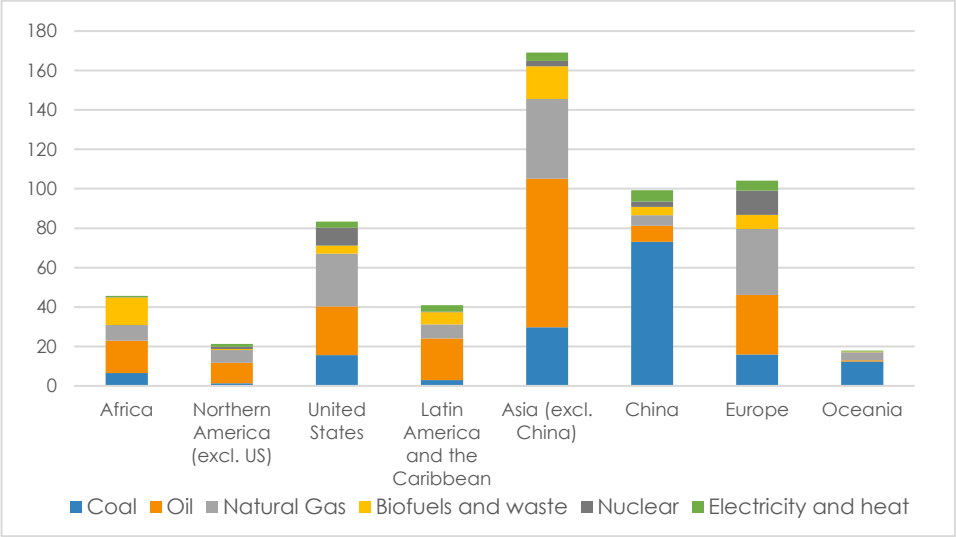
A significant share of 2017 primary energy production occurred in a handful of countries:

- China and the United States produced more than half of all primary coal (56%), with China alone producing 46% of the world coal;
- The United States topped the oil producers in 2017, rising from third in 2016. The three biggest producers of oil (United States, Russian Federation, Saudi Arabia), produced more than a third of all primary oil (38%) in 2017;
- Five natural gas producers (United States, Russian Federation, Iran, Canada and Qatar) produced more than half of all natural gas (54%).

(3) See notes on pages 66-67.

11. Primary energy production by region and source, 2017

Exajoules



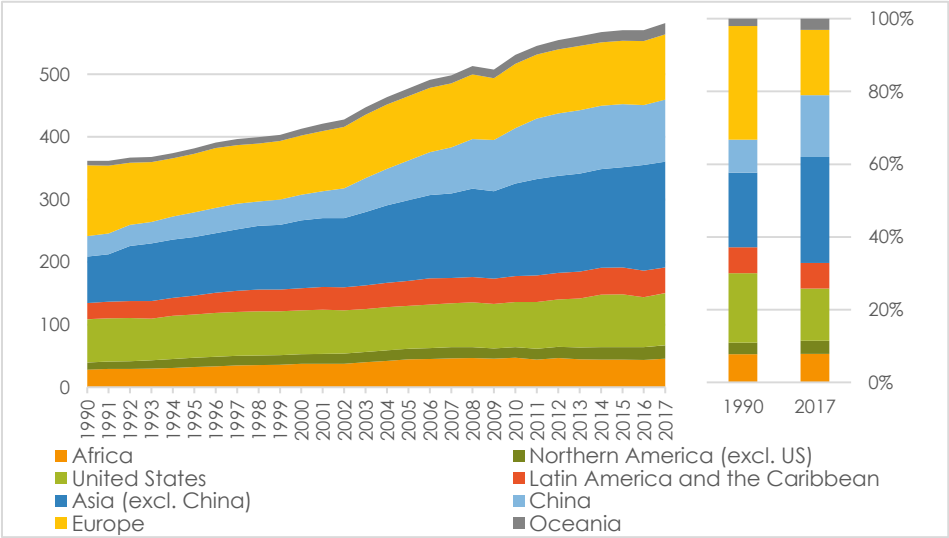
12. Primary energy production by region and source, 2017

Exajoules

Region	Coal	Oil	Natural gas	Biofuels and waste	Nuclear	Electricity and heat	Total
Africa	6.6	16.3	8.1	13.9	0.2	0.7	45.6
Northern America (excl. US)	1.3	10.4	6.4	0.6	1.1	1.5	21.3
United States	15.6	24.6	26.9	4.1	9.1	3.1	83.4
Latin America and the Caribbean	2.9	21.2	7.1	6.1	0.4	3.3	41.0
Asia (excl. China)	29.7	75.4	40.5	16.6	2.8	4.1	169.1
China	73.2	8.0	5.4	4.2	2.7	5.7	99.2
Europe	15.9	30.3	33.3	7.2	12.3	5.1	104.1
Oceania	12.3	0.8	4.0	0.3	-	0.6	18.0
World	**157.5**	**187.0**	**131.7**	**52.9**	**28.5**	**24.0**	**581.7**

13. Total primary energy production by region, 1990-2017

Exajoules and percentage



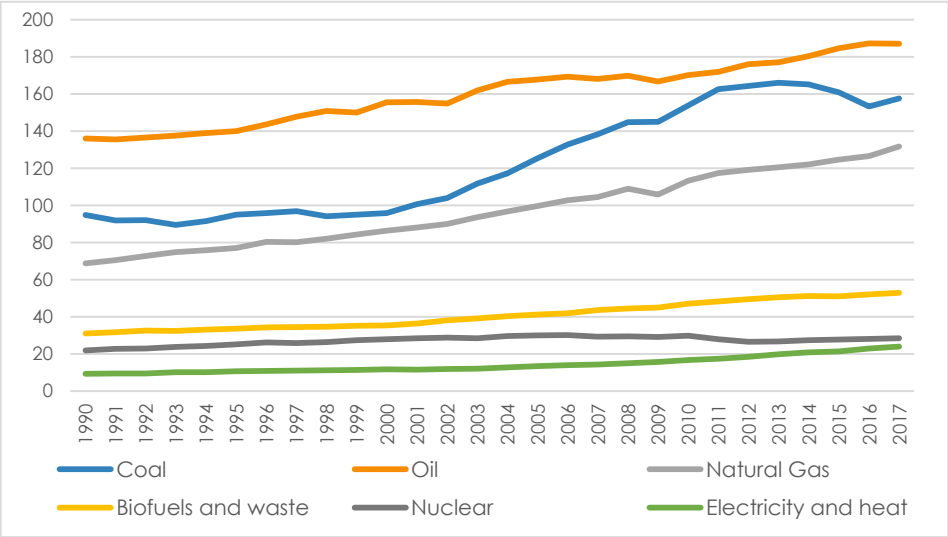
14. Total primary energy production by region, 1990, 2000, 2010 and 2017

Exajoules

Region	1990	2000	2010	2017
Africa	28.1	37.2	47.2	45.6
Northern America (excl. US)	11.6	15.7	16.7	21.3
United States	69.1	69.7	72.3	83.4
Latin America and the Caribbean	25.7	35.4	41.6	41.0
Asia (excl. China)	74.2	108.5	147.4	169.1
China	32.7	40.8	88.6	99.2
Europe	112.9	94.9	102.6	104.1
Oceania	7.4	10.6	14.5	18.0
World	**361.8**	**412.9**	**530.9**	**581.7**

15. World primary energy production by source, 1990-2017

Exajoules



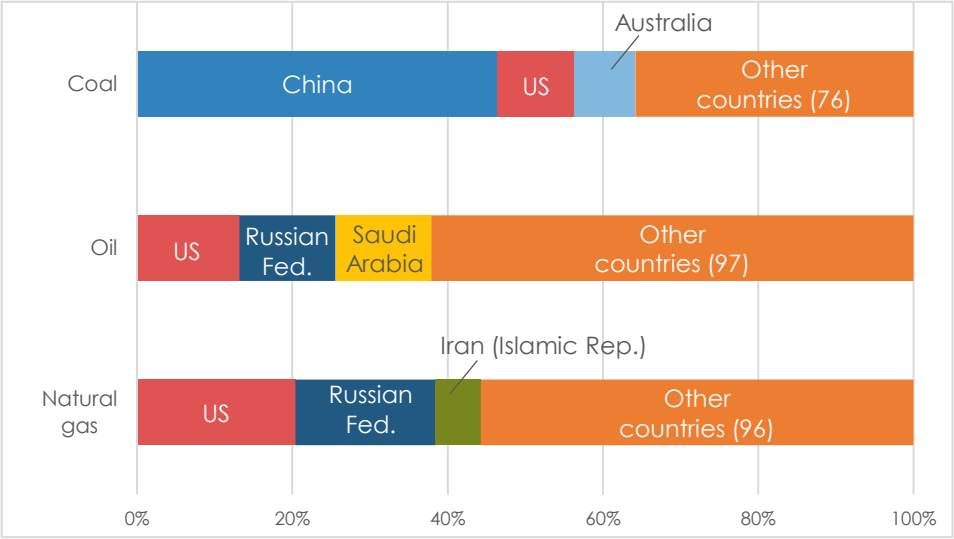
16. World primary energy production by source, 1990, 2000, 2010 and 2017

Percentage

Source	1990	2000	2010	2017
Coal	26.2%	23.2%	29.0%	27.1%
Oil	37.6%	37.7%	32.0%	32.2%
Natural gas	19.0%	20.9%	21.3%	22.6%
Biofuels and waste	8.6%	8.6%	8.9%	9.1%
Nuclear	6.0%	6.8%	5.6%	4.9%
Electricity and heat	2.6%	2.8%	3.1%	4.1%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

17. Primary production of coal, oil, and natural gas, major countries, 2017

Percentage

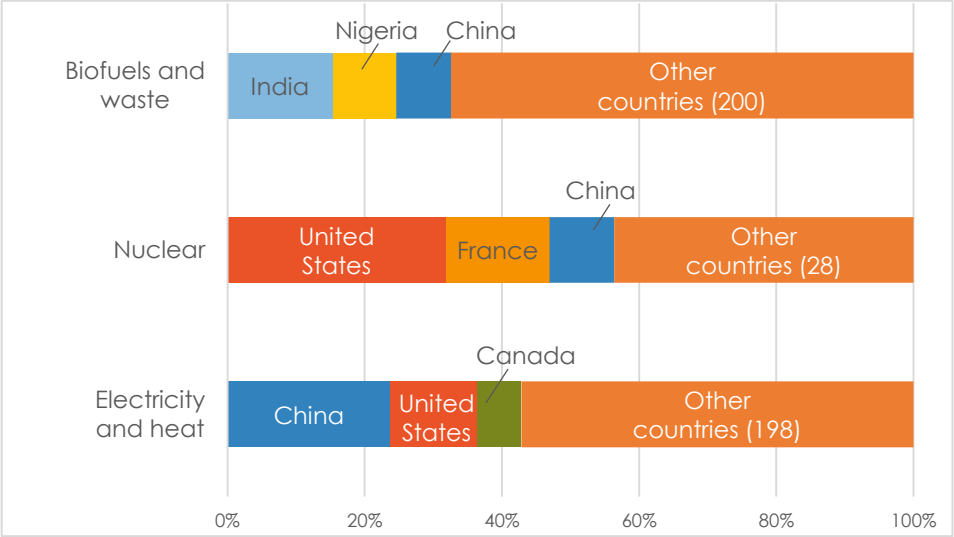


18. Primary production of coal, oil, and natural gas, major countries, 2017

Exajoules

Coal		Oil		Natural gas	
China	73.2	United States	24.6	United States	26.9
United States	15.6	Russian Federation	23.2	Russian Federation	23.8
Australia	12.3	Saudi Arabia	23.1	Iran (Islamic Rep.)	7.6
Indonesia	11.9	Canada	10.4	Canada	6.4
India	11.3	Iran (Islamic Rep.)	9.8	Qatar	6.3
Russian Federation	9.3	Iraq	9.6	China	5.4
South Africa	6.1	China	8.0	Norway	4.6
Colombia	2.5	United Arab Emirates	7.6	Saudi Arabia	4.0
Others	15.4	Others	70.6	Others	46.7
World	**157.5**	**World**	**187.0**	**World**	**131.7**

19. Primary production of biofuels and waste, nuclear, and electricity and heat, major countries, 2017 - *Percentage*

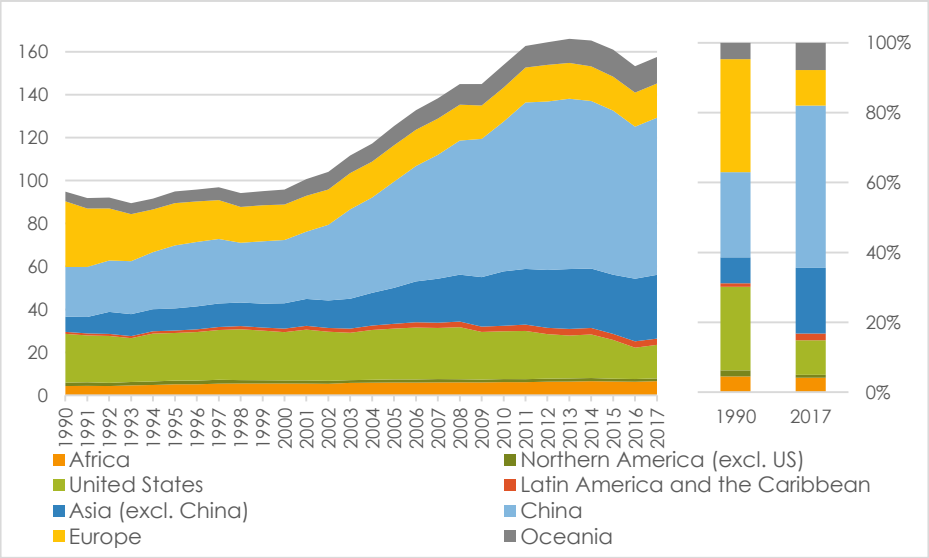


20. Primary production of biofuels and waste, nuclear, and electricity and heat, major countries, 2017 - *Exajoules*

Biofuels and waste		Nuclear		Electricity and heat	
India	8.1	United States	9.1	China	5.7
Nigeria	4.9	France	4.3	United States	3.1
China	4.2	China	2.7	Canada	1.5
United States	4.1	Russian Federation	2.2	Brazil	1.5
Brazil	3.8	Republic of Korea	1.6	Russian Federation	0.7
Indonesia	2.5	Canada	1.1	India	0.7
Ethiopia	1.3	Ukraine	0.9	Germany	0.6
Germany	1.3	Germany	0.8	Japan	0.6
Others	22.7	Others	5.8	Others	9.6
World	**52.9**	**World**	**28.5**	**World**	**24.0**

21. Primary production of coal by region, 1990-2017

Exajoules and percentage



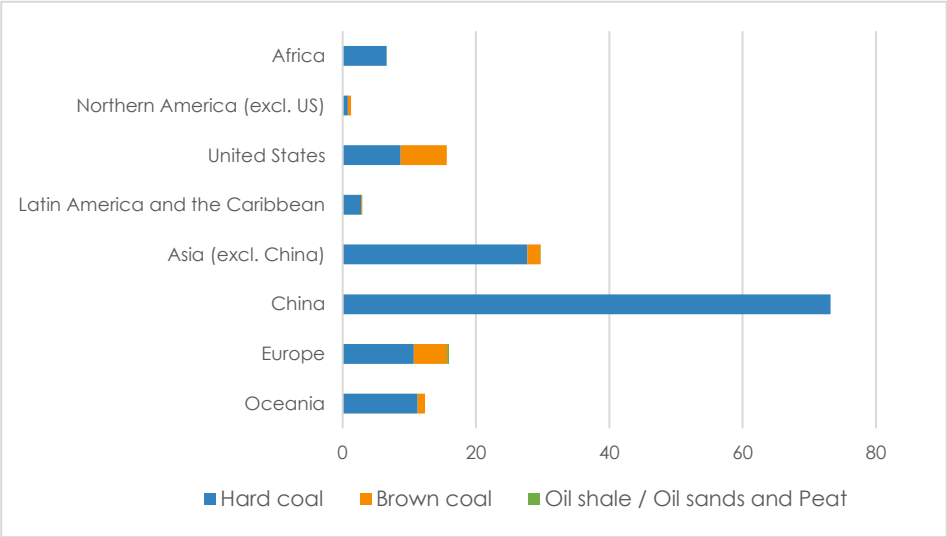
22. Primary production of coal by region, 1990, 2000, 2010 and 2017

Exajoules

Region	1990	2000	2010	2017
Africa	4.3	5.5	6.1	6.6
Northern America (excl. US)	1.6	1.4	1.4	1.3
United States	22.7	22.5	22.3	15.6
Latin America and the Caribbean	0.9	1.6	2.6	2.9
Asia (excl. China)	7.1	11.8	25.3	29.7
China	23.1	29.5	69.7	73.2
Europe	30.6	16.5	15.9	15.9
Oceania	4.5	7.0	10.6	12.3
World	**94.8**	**95.8**	**153.9**	**157.5**

23. Primary production of coal by region and type of fuel, 2017

Exajoules



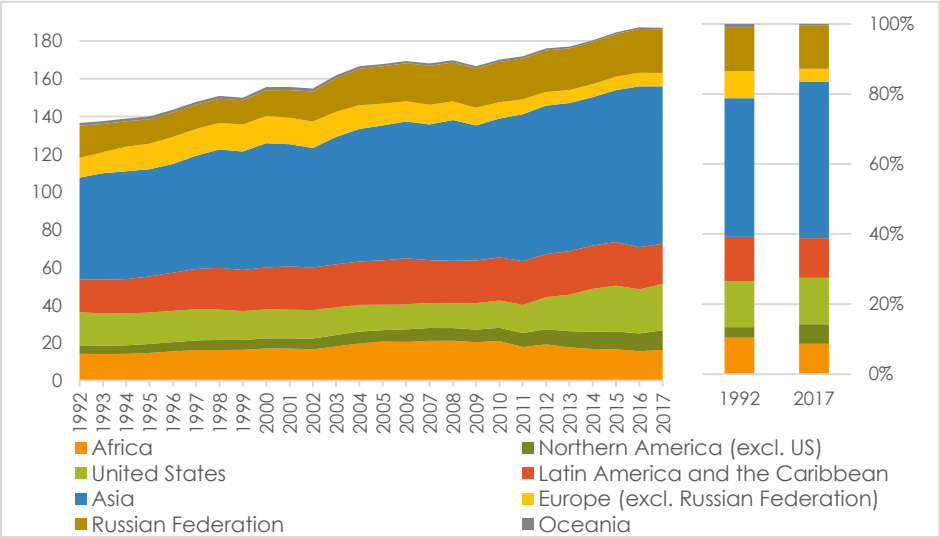
24. Primary production of coal by region and type of fuel, 2017

Exajoules

Region	Hard coal	Brown coal	Oil shale/ Peat	Total
Africa	6.6	-	0^{+}	6.6
Northern America (excl. US)	0.8	0.5	-	1.3
United States	8.7	6.9	-	15.6
Latin America and the Caribbean	2.8	0.1	0^{+}	2.9
Asia (excl. China)	27.7	2.0	0^{+}	29.7
China	73.2	-	-	73.2
Europe	10.7	5.0	0.3	15.9
Oceania	11.3	1.1	-	12.3
World	**141.7**	**15.6**	**0.3**	**157.5**

25. Primary production of oil by region, 1992-2017

Exajoules and percentage



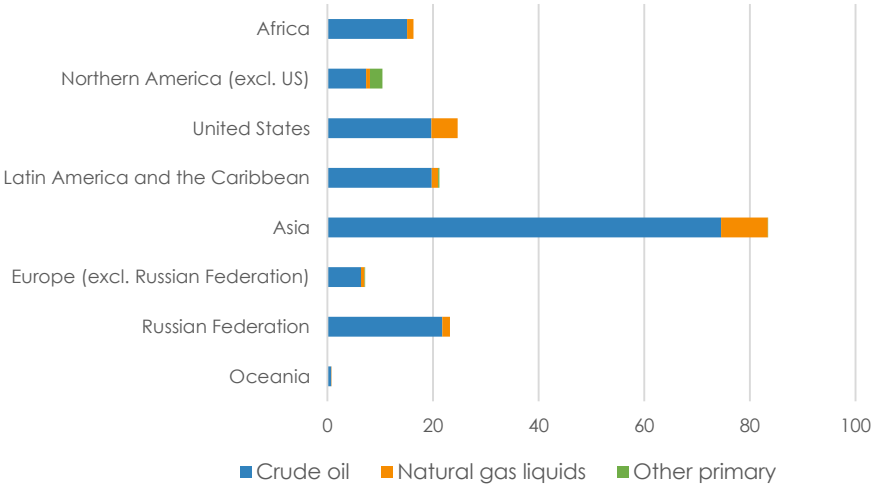
26. Primary production of oil by region, 1992, 2000, 2010 and 2017

Exajoules

Region	1992	2000	2010	2017
Africa	14.2	17.1	21.0	16.3
Northern America (excl. US)	4.1	5.4	7.0	10.4
United States	17.8	15.3	14.4	24.6
Latin America and the Caribbean	17.3	22.3	22.9	21.2
Asia	54.1	65.8	73.6	83.4
Europe (excl. Russian Federation)	10.6	14.5	8.7	7.1
Russian Federation	16.8	13.6	21.4	23.2
Oceania	1.5	1.7	1.2	0.8
World	**136.6**	**155.6**	**170.1**	**187.0**

27. Primary production of oil by region and type of fuel, 2017

Exajoules



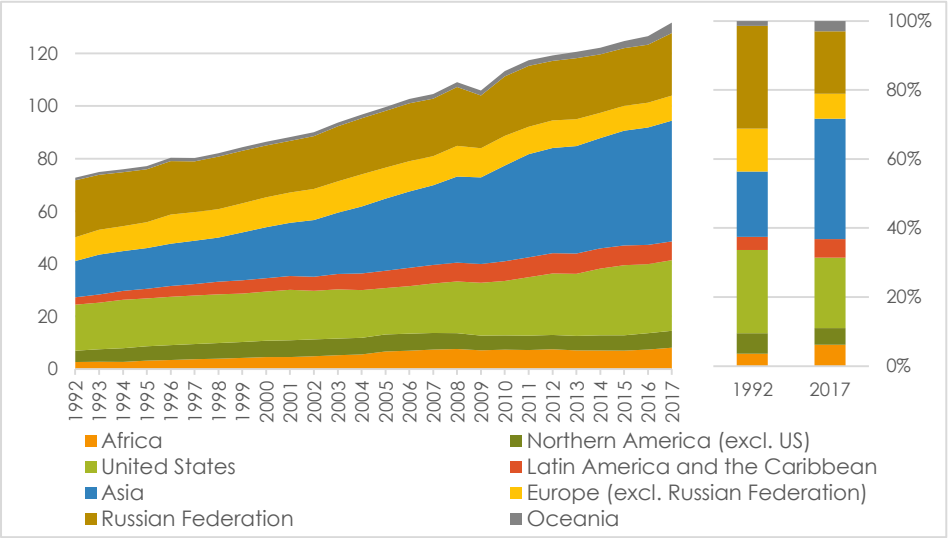
28. Primary production of oil by region and type of fuel, 2017

Exajoules

Region	Crude oil	Natural gas liquids	Other primary oil	Total
Africa	15.1	1.2	-	16.3
Northern America (excl. US)	7.3	0.7	2.4	10.4
United States	19.7	5.0	-	24.6
Latin America and the Caribbean	19.7	1.2	0.3	21.2
Asia	74.6	8.8	0.03	83.4
Europe (excl. Russian Federation)	6.3	0.7	0.1	7.1
Russian Federation	21.8	1.4	-	23.2
Oceania	0.7	0.1	-	0.8
World	**165.1**	**19.1**	**2.8**	**187.0**

29. Production of natural gas by region, 1992-2017

Exajoules and percentage



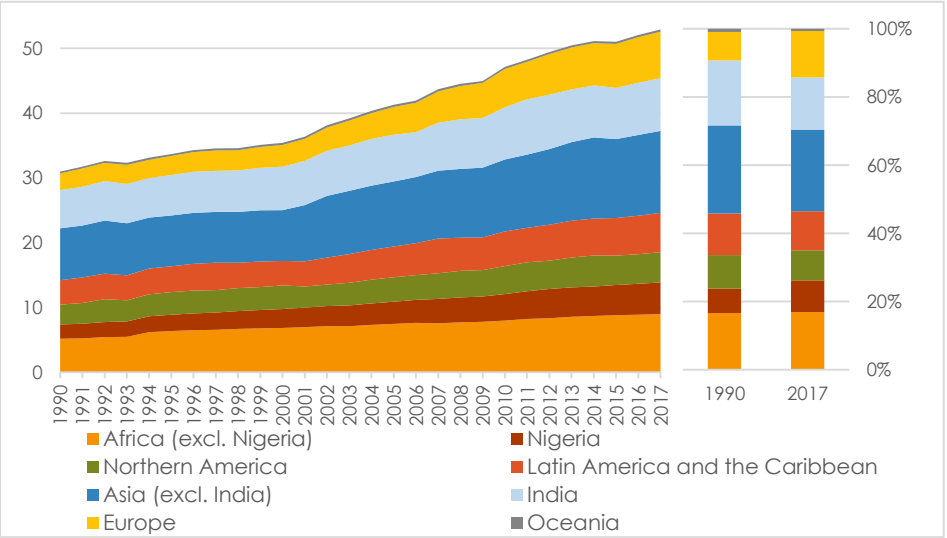
30. Production of natural gas by region, 1992, 2000, 2010 and 2017

Exajoules

Region	1992	2000	2010	2017
Africa	2.6	4.5	7.3	8.1
Northern America (excl. US)	4.3	6.2	5.4	6.4
United States	17.5	18.7	20.7	26.9
Latin America and the Caribbean	2.8	5.1	7.5	7.1
Asia	13.8	19.4	36.4	45.9
Europe (excl. Russian Federation)	9.0	11.4	11.3	9.5
Russian Federation	21.7	19.7	22.6	23.8
Oceania	1.0	1.4	2.0	4.0
World	**72.7**	**86.4**	**113.3**	**131.7**

31. Primary production of biofuels and waste by region, 1990-2017

Exajoules and percentage



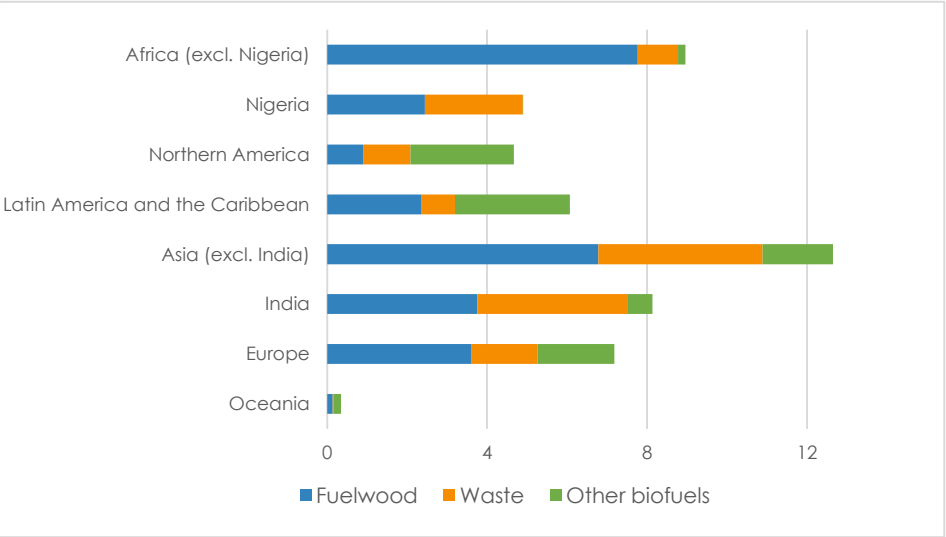
32. Primary production of biofuels and waste by region, 1990, 2000, 2010 and 2017

Exajoules

Region	1990	2000	2010	2017
Africa (excl. Nigeria)	5.2	6.8	8.0	9.0
Nigeria	2.2	2.9	4.1	4.9
Northern America	3.1	3.6	4.3	4.7
Latin America and the Caribbean	3.8	3.8	5.3	6.1
Asia (excl. India)	8.0	7.8	11.1	12.7
India	5.9	6.7	8.1	8.1
Europe	2.6	3.3	5.9	7.2
Oceania	0.3	0.3	0.3	0.3
World	**31.0**	**35.4**	**47.1**	**52.9**

33. Primary production of biofuels and waste by region and type of fuel, 2017

Exajoules



34. Primary production of biofuels and waste by region and type of fuel, 2017

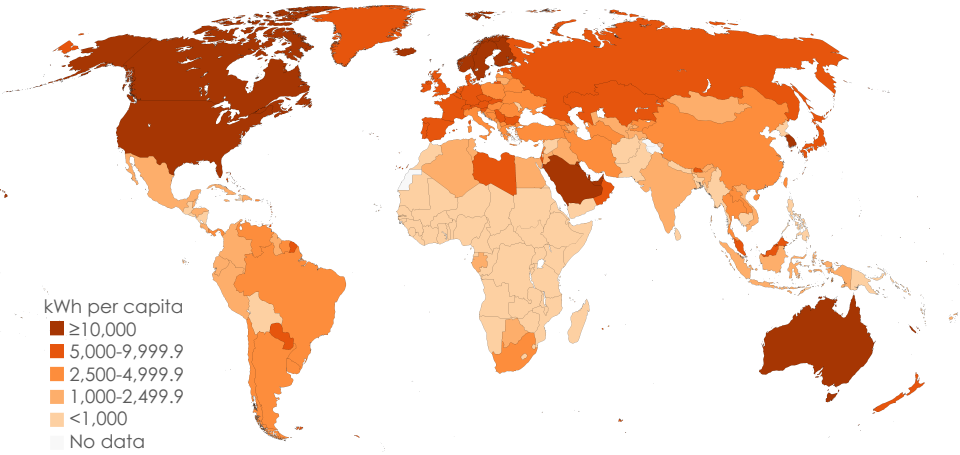
Exajoules

Region	Fuelwood	Waste	Other biofuels	Total
Africa (excl. Nigeria)	7.8	1.0	0.2	9.0
Nigeria	2.4	2.5	0^{+}	4.9
Northern America	0.9	1.2	2.6	4.7
Latin America and the Caribbean	2.3	0.8	2.9	6.1
Asia (excl. India)	6.8	4.1	1.8	12.7
India	3.8	3.8	0.6	8.1
Europe	3.6	1.7	1.9	7.2
Oceania	0.1	0.01	0.2	0.3
World	**27.8**	**15.0**	**10.2**	**52.9**

Electricity

35. Electricity generation per capita, 2017

Kilowatt hours per capita



Source: United Nations Energy Database. Please see the disclaimer on page 66.

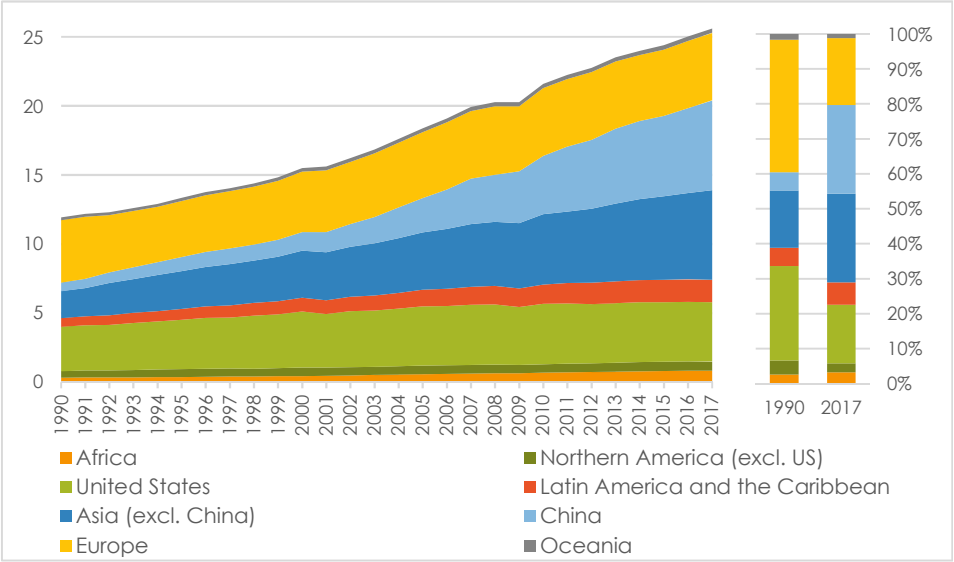
FACTS AND FIGURES

World electricity generation grew 114% from 1990 to 2017, reaching about 25,600 TWh in 2017. The largest absolute growth from 1990 to 2017 was observed for electricity generated from coal (5,315 TWh or +120%) and natural gas (4,131 TWh or +231%) while the fastest growth was visible for electricity generated from solar, wind and other sources[4] (+2,673% or 1,644 TWh). In 2017, about 3/4 of all electricity was generated from non-renewable sources[5], mainly from non-renewable thermal (65% or 16,600 TWh) and nuclear sources (10% or 2,633 TWh). However, renewable electricity accounted for 57% of global electricity capacity additions over the past seven years, growing to 2,314 GW in 2017 and reaching 1/3 of total electricity capacity.

(4) - (5) See notes on pages 66-67.

36. Total electricity generation by region, 1990-2017

Petawatt hours and percentage



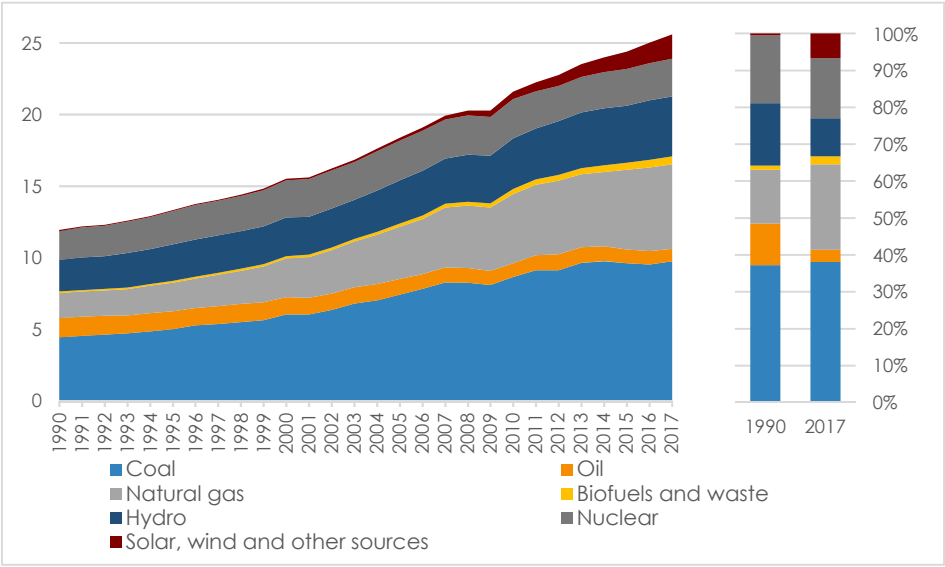
37. Total electricity generation by region, 2017

Terawatt hours

Region	1990	2000	2010	2017
Africa	311.7	437.1	677.1	828.6
Northern America (excl. US)	482.9	606.7	605.2	659.6
United States	3,218.6	4,052.7	4,378.4	4,286.4
Latin America and the Caribbean	624.4	1,010.6	1,405.7	1,636.8
Asia (excl. China)	1,948.5	3,395.6	5,091.0	6,490.7
China	621.2	1,355.6	4,207.2	6,495.1
Europe	4,571.0	4,386.5	4,916.6	4,887.3
Oceania	192.5	257.7	307.9	314.7
World	**11,970.8**	**15,502.4**	**21,588.9**	**25,599.4**

38. World electricity generation by source, 1990-2017

Petawatt hours and percentage



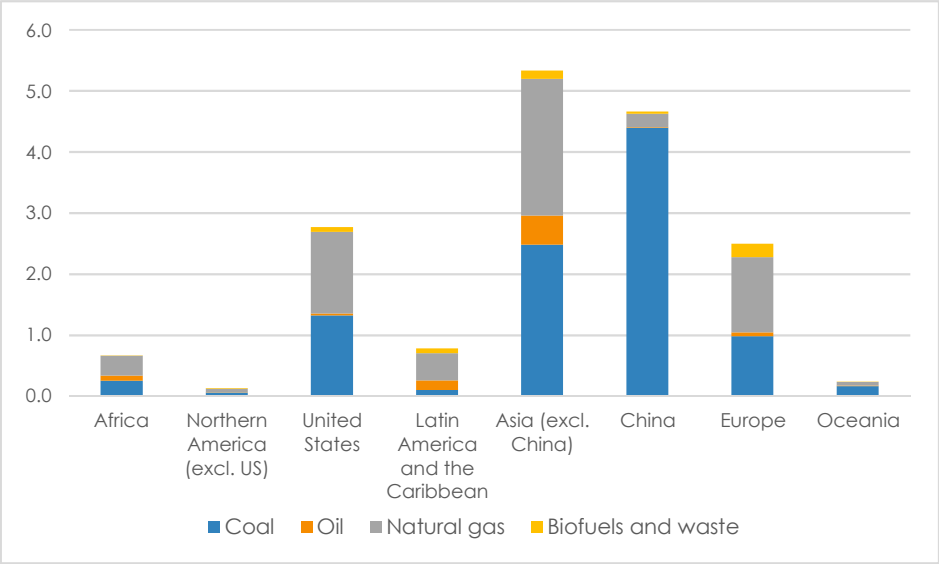
39. World electricity generation by source, 1990, 2000, 2010 and 2017

Terawatt hours

Source	1990	2000	2010	2017
Thermal	7,696.5	10,102.8	14,790.7	17,080.0
- Coal	4,439.3	6,038.7	8,656.7	9,754.6
- Oil	1,340.7	1,206.6	955.4	851.4
- Natural gas	1,785.7	2,694.8	4,826.8	5,916.9
- Biofuels and waste	130.9	162.6	351.8	557.2
Nuclear	2,019.8	2,589.0	2,756.3	2,632.9
Hydro	2,193.0	2,706.8	3,528.7	4,181.4
Solar, wind and other sources	61.5	103.8	513.2	1,705.1
Total	**11,970.8**	**15,502.4**	**21,588.9**	**25,599.4**

40. Thermal electricity generation by region and source, 2017

Petawatt hours



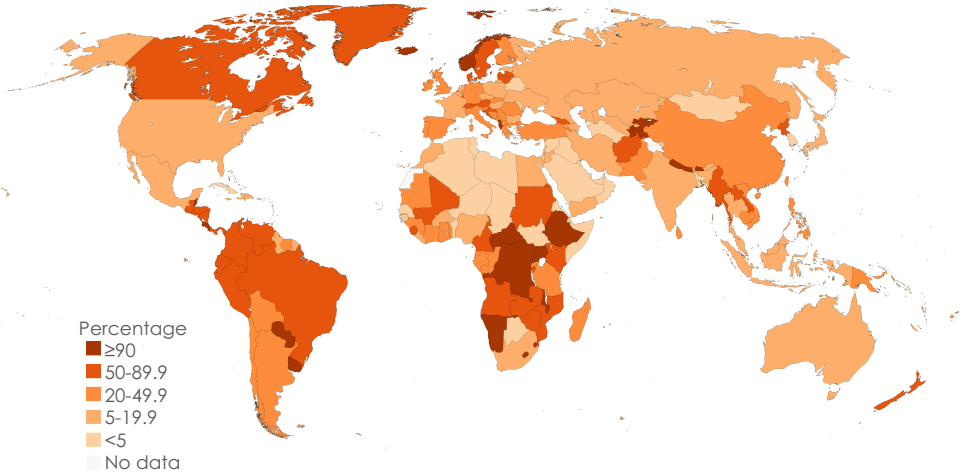
41. Thermal electricity generation by region and source, 2017

Terawatt hours

Region	Coal	Oil	Natural gas	Biofuels and waste	Total
Africa	253.7	84.1	324.4	2.6	664.7
Northern America (excl. US)	59.8	8.1	57.6	7.4	132.9
United States	1,321.4	32.4	1,337.7	78.5	2,770.1
Latin America and the Caribbean	100.6	161.5	445.4	74.5	782.0
Asia (excl. China)	2,479.9	476.7	2,241.4	135.2	5,333.2
China	4,391.6	11.0	222.4	37.6	4,662.7
Europe	983.2	64.7	1,229.5	217.3	2,494.6
Oceania	164.4	12.9	58.4	4.1	239.8
World	**9,754.6**	**851.4**	**5,916.9**	**557.2**	**17,080.0**

42. Renewable electricity share in total electricity generation, 2017

Percentage



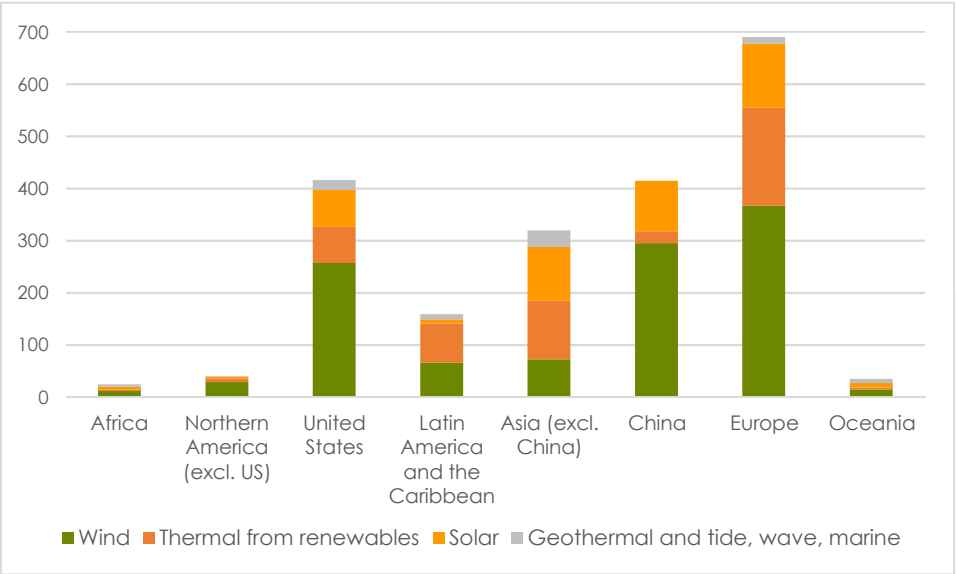
Source: United Nations Energy Database. Please see the disclaimer on page 66.

43. Renewable electricity generation by type (hydro, wind, total), major countries, 2017 - *Terawatt hours*

Country	Hydro	Country	Wind	Country	Total renewables
China	1,189.8	China	295.0	China	1,604.5
Canada	392.6	United States	257.2	United States	740.9
Brazil	370.9	Germany	105.7	Brazil	466.8
United States	325.1	United Kingdom	50.0	Canada	432.3
Russian Federation	187.1	Spain	49.1	India	246.3
Norway	143.0	Brazil	42.4	Germany	222.3
Others	1,572.8	Others	314.4	Others	2,567.2
World	**4,181.4**	**World**	**1,113.8**	**World**	**6,280.4**

44. Electricity from non-hydro renewable sources by region and type, 2017

Terawatt hours



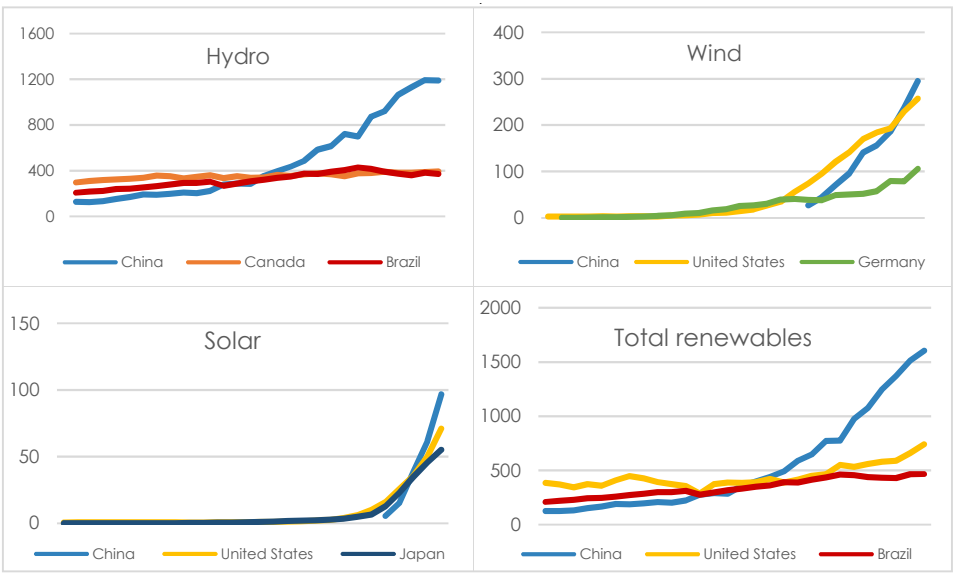
45. Electricity from non-hydro renewable sources by region and type, 2017

Terawatt hours

Region	Wind	Thermal (ren.)	Solar	Geoth. & tide	Total
Africa	12.0	2.6	5.6	4.8	24.9
Northern America (excl. US)	28.8	7.3	3.6	0.02	39.6
United States	257.2	68.9	71.0	18.7	415.8
Latin America and the Caribbean	66.6	74.4	8.3	9.8	159.1
Asia (excl. China)	72.7	112.2	102.8	32.1	319.8
China	295.0	22.9	96.7	-	414.7
Europe	366.7	187.7	122.4	12.8	689.7
Oceania	14.8	4.1	8.3	8.3	35.5
World	**1,113.8**	**480.1**	**418.6**	**86.6**	**2,099.0**

46. Renewable electricity by type, major countries in 2017, 1990-2017

Terawatt hours



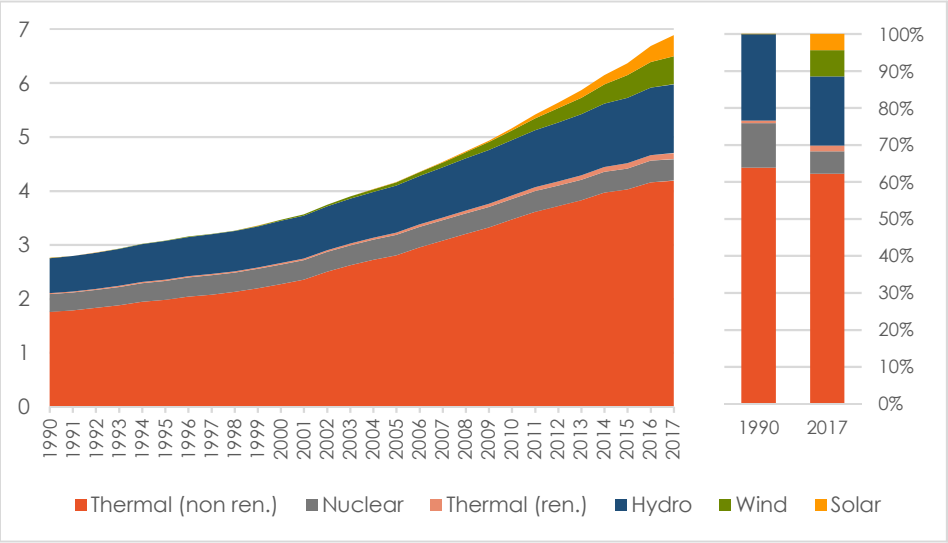
47. Renewable electricity by type, major countries in 2017, 1990 and 2017, and share in total electricity generation, 2017

Gigawatt hours and percentage

Hydro	1990	2017	%2017	Wind	1990	2017	%2017
China	126,720	1,189,840	18%	China	0	295,023	5%
Canada	296,848	392,647	60%	US	3,066	257,249	6%
Brazil	206,708	370,906	63%	Germany	215 [1991]	105,693	16%
Solar	**1990**	**2017**	**%2017**	**Total renewables**	**1990**	**2017**	**%2017**
China	0	96,721	1%	China	126,720	1,604,504	25%
US	666	70,980	2%	US	385,049	740,927	17%
Japan	67	55,068	5%	Brazil	210,567	466,838	79%

48. World electricity capacity by type[6], 1990-2017

Terawatt and percentage



49. World electricity capacity by type[6], 1990, 2000, 2010 and 2017

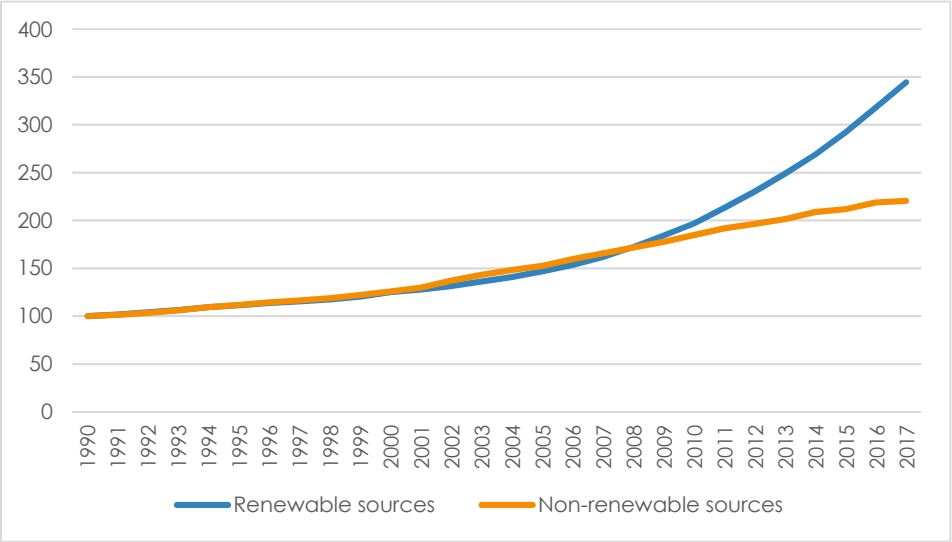
Gigawatt

Type	1990	2000	2010	2017
Non-renewable, *of which*	2,089.2	2,632.0	3,857.0	4,608.8
- Thermal (non-ren.)	1,758.8	2,273.4	3,466.5	4,190.3
- Nuclear	330.4	358.3	381.8	398.9
Renewable, *of which*	672.0	840.3	1,323.3	2,314.4
- Thermal (ren.)	19.0	29.7	66.6	111.7
- Hydro	644.2	783.8	1,025.3	1,275.7
- Wind	2.4	17.1	180.5	520.5
- Solar	0.4	1.2	40.6	393.2
Total	**2,761.2**	**3,472.3**	**5,180.3**	**6,923.2**

(6) See notes on pages 66-67.

50. World electricity capacity by type[6], 1990-2017

Index number (1990=100)



51. World electricity capacity by type[6], 1990, 2000, 2010 and 2017, and share in 2017

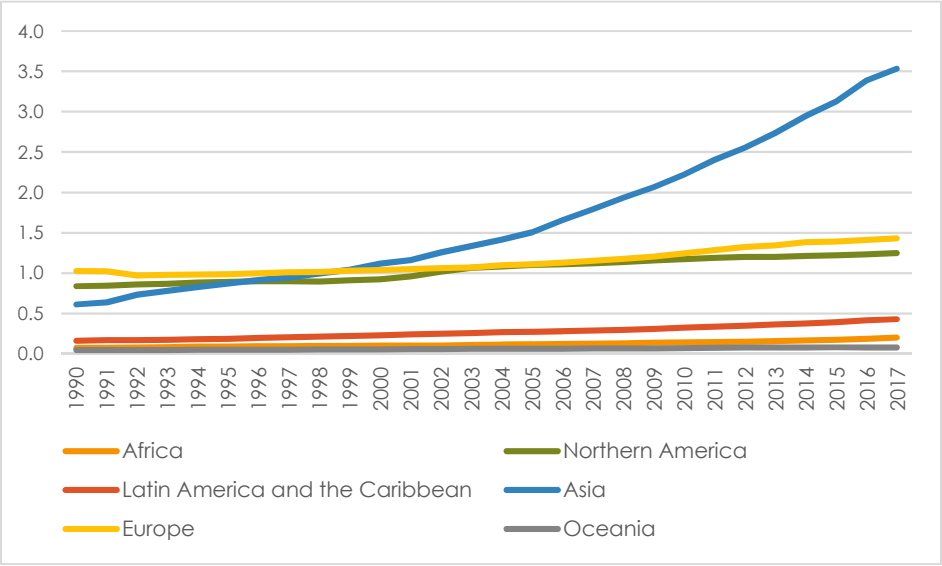
Index number (1990=100) and percentage

Type	1990	2000	2010	2017	%2017
Non-renewable, *of which*	100	126	185	221	67%
- Thermal (non-ren.)	100	129	197	238	61%
- Nuclear	100	108	116	121	6%
Renewable, *of which*	100	125	197	344	33%
- Thermal (ren.)	100	156	351	588	2%
- Hydro	100	122	159	198	18%
- Wind	100	728	7,665	22,102	8%
- Solar	100	338	11,395	110,438	6%
Total	**100**	**126**	**188**	**251**	**100%**

(6) See notes on pages 66-67.

52. Total electricity capacity by region, 1990-2017

Terawatt



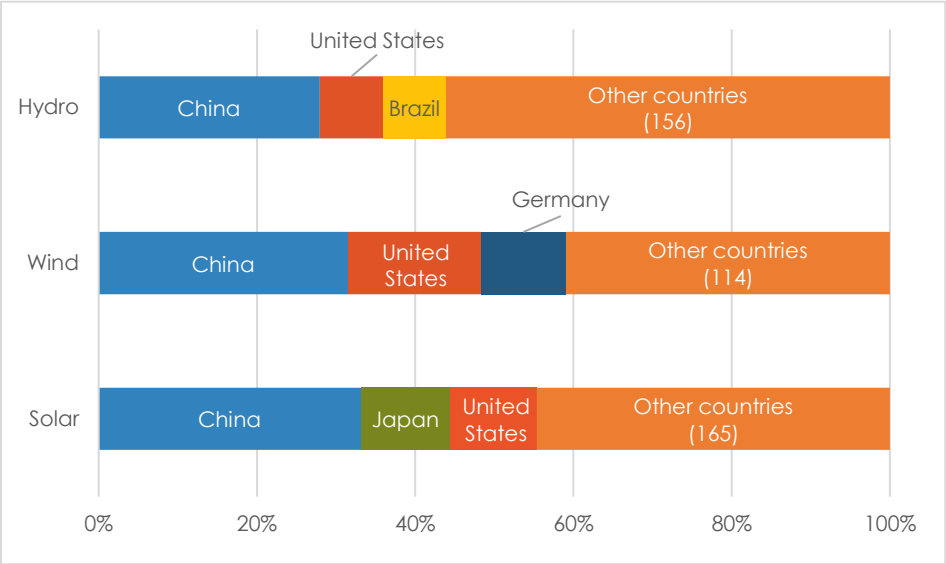
53. Total electricity capacity by region, 1990, 2000, 2010 and 2017

Gigawatt

Region	1990	2000	2010	2017
Africa	74.7	101.4	141.2	203.3
Northern America	838.0	923.0	1,174.8	1,248.4
Latin America and the Caribbean	162.4	231.1	324.1	429.6
Asia	612.1	1,119.7	2,221.6	3,532.3
Europe	1,026.9	1,040.4	1,245.6	1,430.5
Oceania	47.1	56.7	73.0	79.1
World	**2,761.2**	**3,472.3**	**5,180.3**	**6,923.2**

54. Electricity capacity by type (hydro, wind, solar), major countries, 2017

Percentage



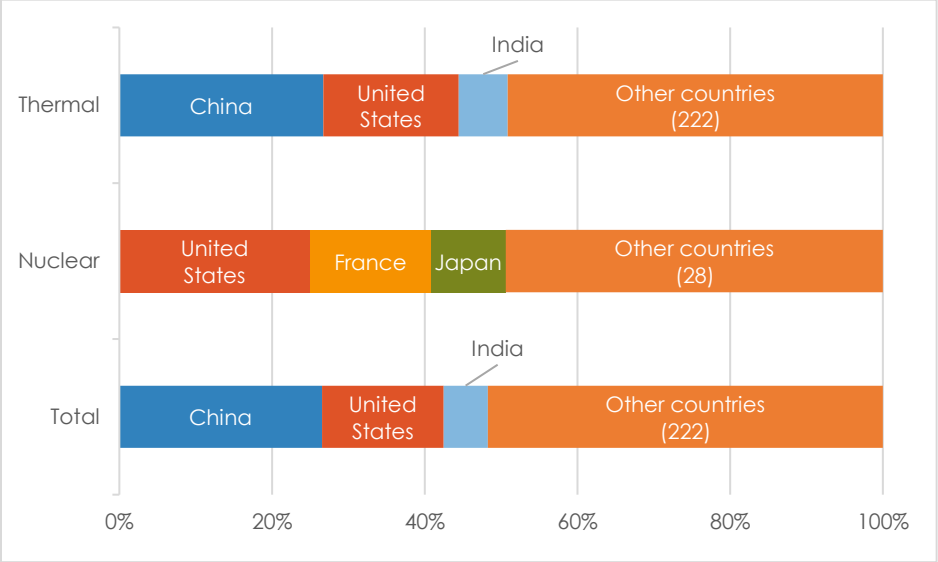
55. Electricity capacity by type (hydro, wind, solar), major countries, 2017

Gigawatt

Country	Hydro	Country	Wind	Country	Solar
China	356.6	China	164.0	China	130.4
United States	102.7	United States	87.6	Japan	44.2
Brazil	100.3	Germany	55.7	United States	43.1
Canada	80.8	India	38.2	Germany	42.3
Russian Fed.	53.2	Spain	23.1	India	24.5
Japan	50.0	United Kingdom	19.8	Italy	19.7
Others	532.0	Others	132.1	Others	88.8
World	**1,275.7**	**World**	**520.5**	**World**	**393.2**

56. Electricity capacity by type (thermal, nuclear, total), major countries, 2017

Percentage



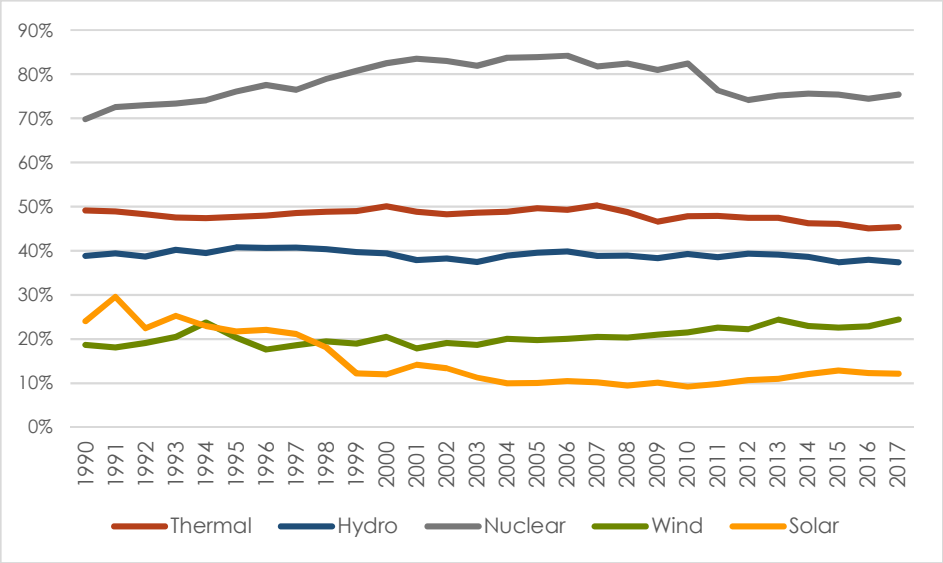
57. Electricity capacity by type (thermal, nuclear, total), major countries, 2017

Gigawatt

Country	Thermal	Country	Nuclear	Country	Total
China	1,149.5	United States	99.6	China	1,839.4
United States	762.8	France	63.1	United States	1,100.3
India	276.3	Japan	39.1	India	400.7
Japan	197.1	China	35.8	Japan	336.9
Russian Fed.	190.6	Russian Fed.	28.0	Russian Fed.	272.4
Germany	95.1	Rep. of Korea	22.5	Germany	215.5
Others	1,630.6	Others	110.7	Others	2,757.9
World	**4,301.9**	**World**	**398.9**	**World**	**6,923.2**

58. Utilization of electricity capacity by type, 1990-2017

Percentage



59. Utilization of electricity capacity by type, 1990, 2000, 2010 and 2017

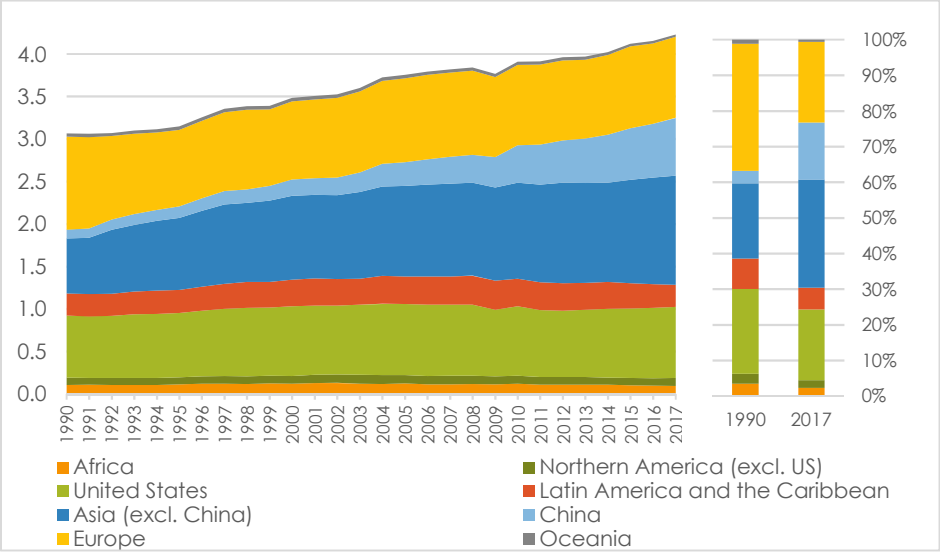
Percentage

Type	1990	2000	2010	2017
Thermal	49%	50%	48%	45%
Hydro	39%	39%	39%	37%
Nuclear	70%	82%	82%	75%
Wind	19%	20%	22%	24%
Solar	24%	12%	9%	12%
Total	**49%**	**51%**	**48%**	**42%**

Refinery output

60. Total refinery output by region, 1990-2017

Billion metric tons



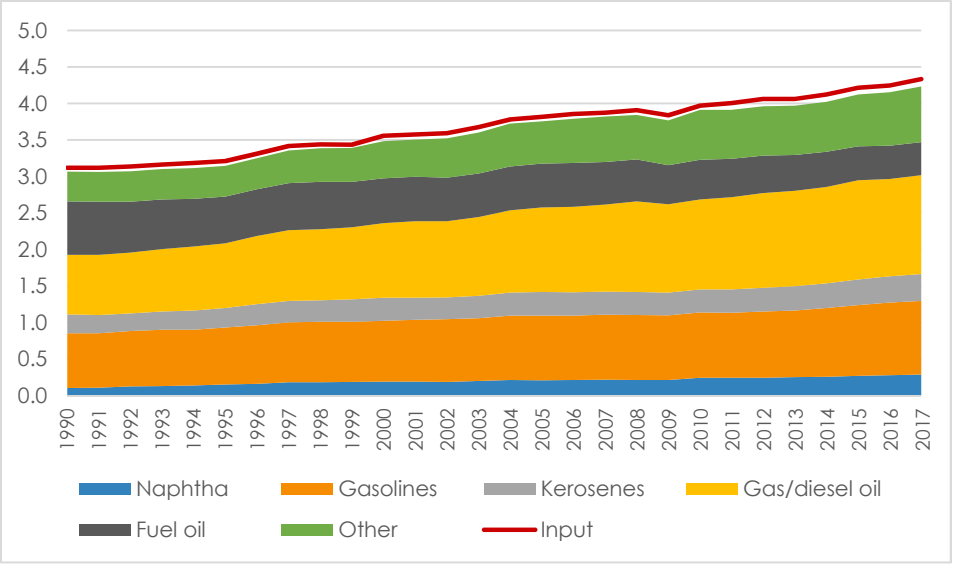
61. Total refinery output by region, 1990, 2000, 2010 and 2017

Million metric tons

Region	1990	2000	2010	2017
Africa	106.3	118.5	119.2	95.1
Northern America (excl. US)	84.2	93.7	96.1	92.7
United States	730.6	817.9	815.8	837.8
Latin America and the Caribbean	261.8	315.2	325.1	259.9
Asia (excl. China)	646.0	983.8	1,128.3	1,284.2
China	106.0	191.8	440.5	678.3
Europe	1,094.3	919.7	947.5	956.0
Oceania	35.5	41.8	36.8	27.8
World	**3,064.5**	**3,482.2**	**3,909.3**	**4,231.6**

62. World total refinery input and refinery output by type of fuel, 1990-2017

Billion metric tons



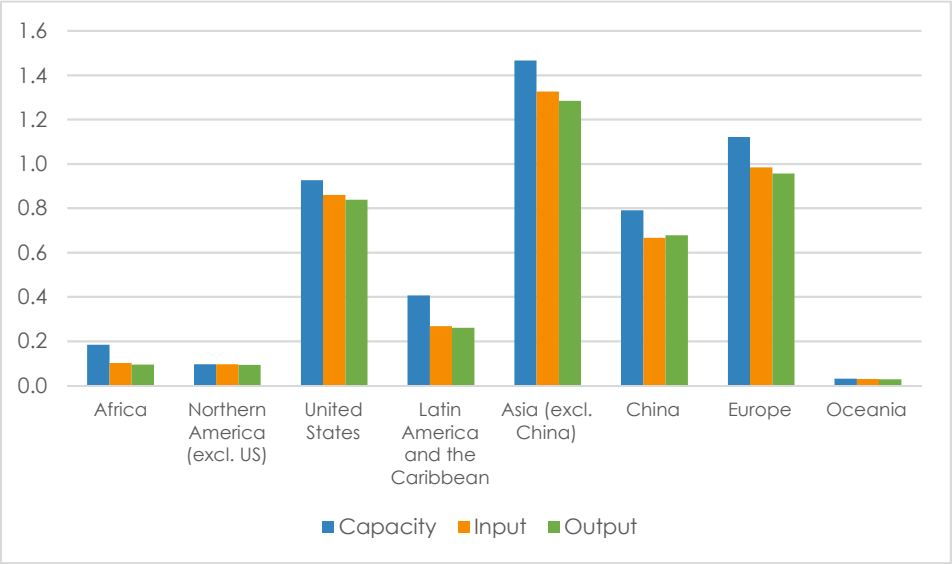
63. World total refinery input and refinery output by type of fuel, 1990, 2000, 2010 and 2017

Million metric tons

Refinery input and output	1990	2000	2010	2017
Total refinery input	**3,120.1**	**3,555.2**	**3,969.6**	**4,330.3**
Total refinery output	**3,064.5**	**3,482.2**	**3,909.3**	**4,231.6**
- Naphtha	104.8	192.3	244.1	290.4
- Gasolines	749.0	834.3	895.0	1,005.3
- Kerosenes	258.1	311.4	316.4	366.6
- Gas/diesel oil	813.2	1,022.8	1,230.5	1,354.7
- Fuel oil	732.0	615.0	541.1	450.5
- Other	407.4	506.5	682.2	764.2

64. Total refinery capacity, input and output by region, 2017

Billion metric tons



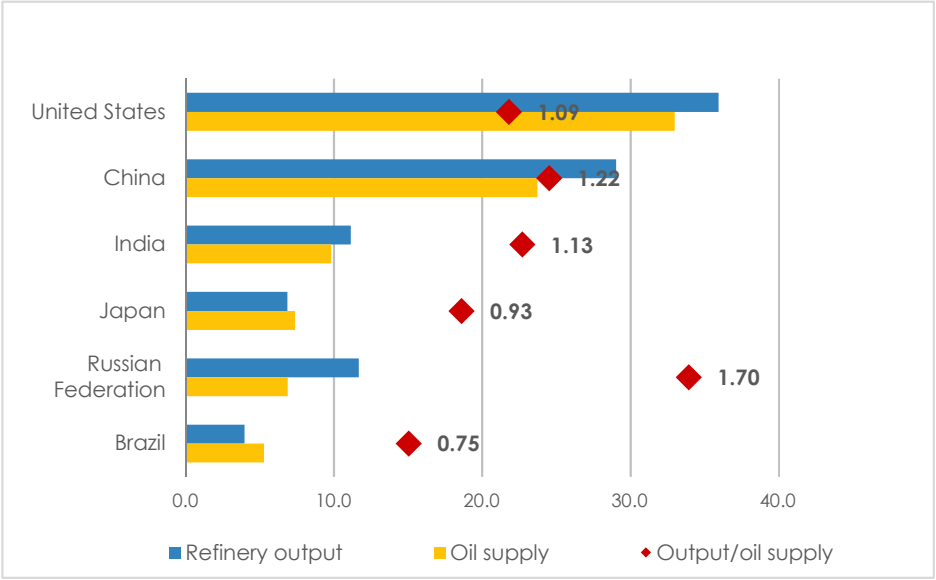
65. Total refinery capacity, input and output by region, 2017

Million metric tons

Region	Capacity	Input	Output
Africa	183.8	101.5	95.1
Northern America (excl. US)	95.3	96.4	92.7
United States	925.9	859.2	837.8
Latin America and the Caribbean	406.5	268.0	259.9
Asia (excl. China)	1,465.3	1,325.1	1,284.2
China	790.0	666.4	678.3
Europe	1,121.4	984.0	956.0
Oceania	30.7	29.7	27.8
World	**5,018.9**	**4,330.3**	**4,231.6**

66. Total refinery output and total oil supply, largest oil supply countries, 2017

Exajoules and ratio between total refinery output and total oil supply



67. Total refinery output and total oil supply[7], largest oil supply countries, 2017

Exajoules and ratio between total refinery output and total oil supply

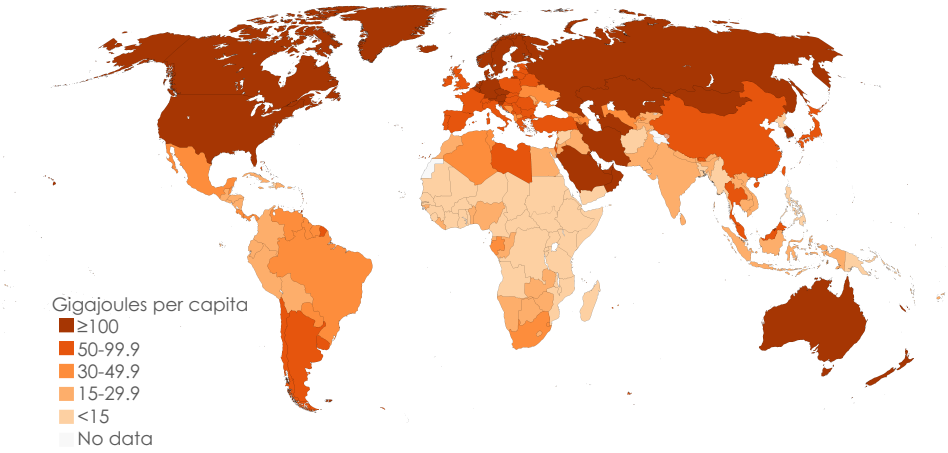
Country	Refinery output	Oil supply	Output/ oil supply
United States	35.9	33.0	1.09
China	29.0	23.7	1.22
India	11.2	9.8	1.13
Japan	6.9	7.4	0.93
Russian Federation	11.7	6.9	1.70
Brazil	4.0	5.3	0.75
Others	83.3	84.2	0.99
World	**181.9**	**187.1**	**-**

(7) See notes on pages 66-67.

Total final consumption

68. Total final consumption per capita, 2017

Gigajoules per capita



Source: United Nations Energy Database. Please see the disclaimer on page 66.

FACTS AND FIGURES

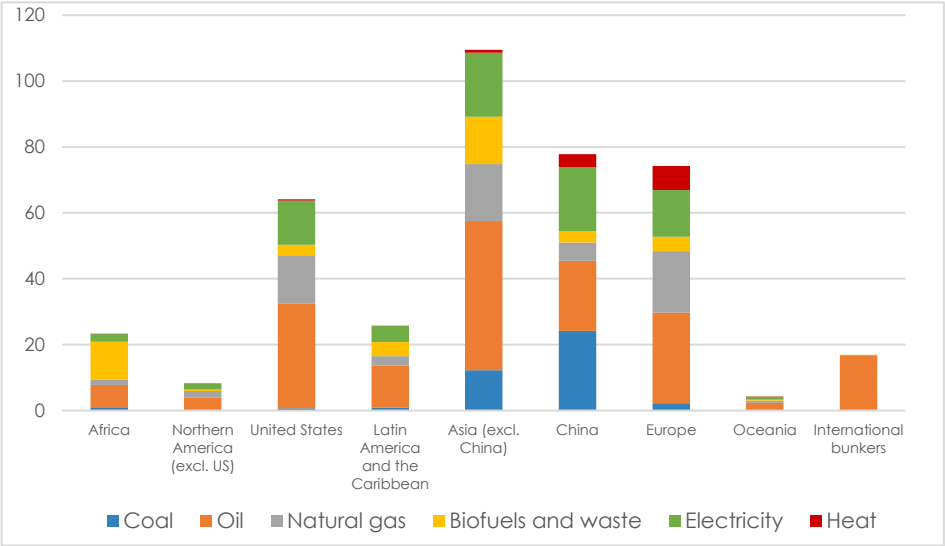
World total final consumption[8] (TFC) amounted to almost 404 EJ in 2017, showing an increase just shy of 60% compared to 1990. Energy use in the industry and transport sectors dominated TFC in 2017, accounting in total for around 57% of TFC.

In 2017, almost 78% of coal TFC (or 32 EJ) occurred in the industry sector, while over 61% of oil TFC (almost 104 EJ) was used for transportation. Most of natural gas TFC happened in industry (almost 37% or 23 EJ) and households (almost 30% or 19 EJ). The largest share of electricity end use was accounted for by the industry sector (42% of all electricity). Households were the major users of biofuels and waste, accounting for almost 60% of all TFC of these energy sources, and for 30% of all household TFC.

(8) See notes on pages 66-67.

69. Total final consumption by region and source, 2017

Exajoules



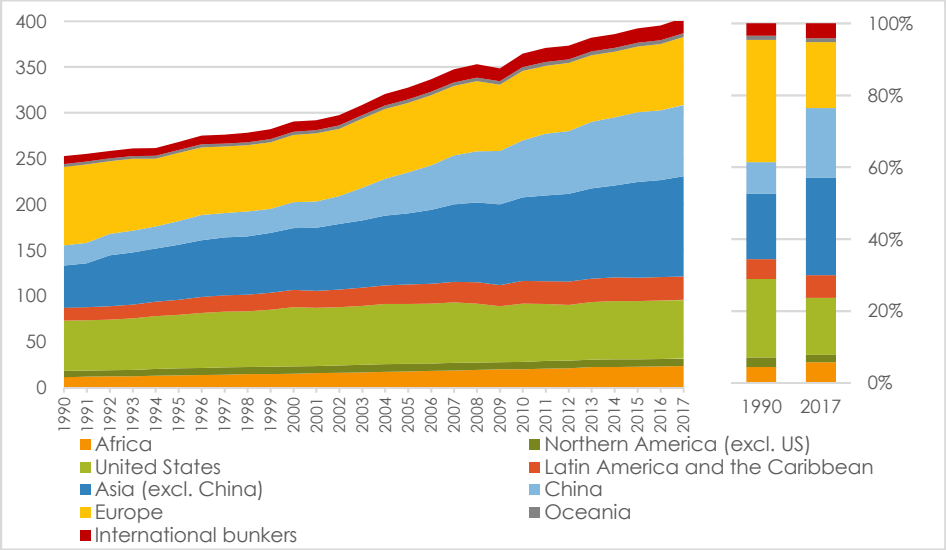
70. Total final consumption by region and source, 2017

Exajoules

Region	Coal	Oil	Natural gas	Biofuels and waste	Elec-tricity	Heat	Total
Africa	0.8	6.9	1.6	11.6	2.3	0.02	23.2
Northern America (excl. US)	0.1	3.8	2.0	0.5	1.8	0.03	8.2
United States	0.7	31.9	14.5	3.2	13.5	0.3	64.1
Latin America and the Caribbean	0.9	12.7	3.0	4.3	4.8	0.01	25.6
Asia (excl. China)	12.2	45.3	17.3	14.4	19.5	0.8	109.5
China	24.2	21.3	5.5	3.4	19.5	4.0	77.9
Europe	2.3	27.4	18.7	4.4	14.2	7.3	74.2
Oceania	0.1	2.2	0.7	0.3	0.9	0.02	4.3
International bunkers	-	*16.8*	*0 +*	*0.01*	-	-	*16.8*
World	**41.3**	**168.3**	**63.1**	**42.0**	**76.5**	**12.5**	**403.8**

71. Total final consumption by region, 1990-2017

Exajoules



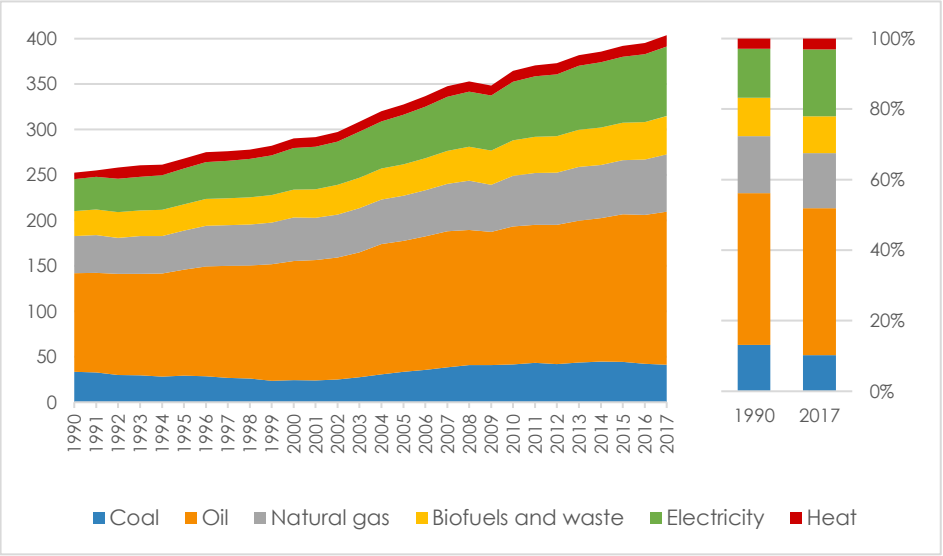
72. Total final consumption by region, 1990, 2000, 2010 and 2017

Exajoules

Region	1990	2000	2010	2017
Africa	11.1	14.9	19.8	23.2
Northern America (excl. US)	6.8	8.0	8.0	8.2
United States	55.0	64.6	63.7	64.1
Latin America and the Caribbean	14.1	18.8	24.6	25.6
Asia (excl. China)	46.1	67.5	91.3	109.5
China	22.0	28.2	62.2	77.9
Europe	85.8	73.5	76.1	74.2
Oceania	2.9	3.6	3.9	4.3
International bunkers	*8.8*	*11.2*	*14.9*	*16.8*
World	**252.7**	**290.3**	**364.6**	**403.8**

73. World total final consumption by source, 1990-2017

Exajoules



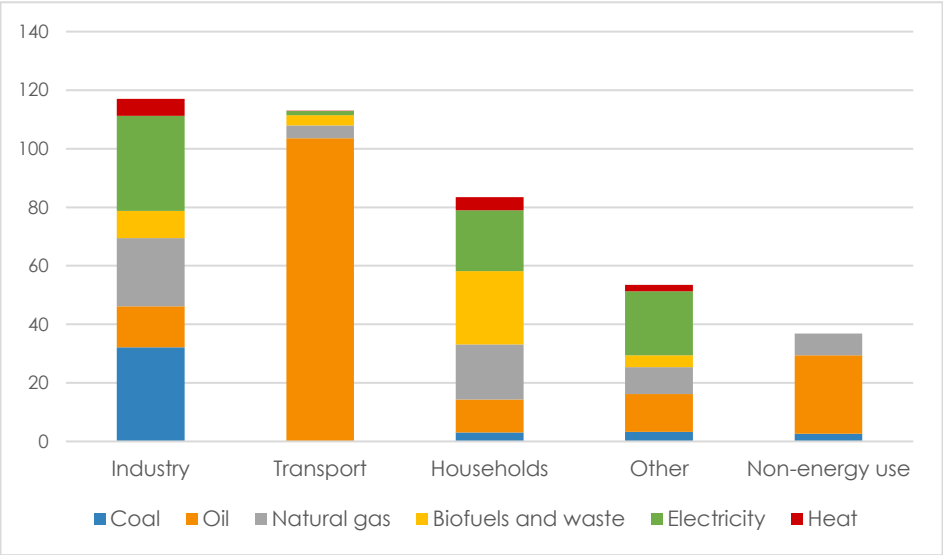
74. World total final consumption by source, 1990, 2000, 2010 and 2017

Exajoules

Source	1990	2000	2010	2017
Coal	33.3	24.4	41.6	41.3
Oil	108.7	131.1	152.0	168.3
Natural gas	40.7	47.9	55.6	63.1
Biofuels and waste	27.5	30.6	39.0	42.0
Electricity	35.3	45.9	64.5	76.5
Heat	7.2	10.5	11.8	12.5
Total	**252.7**	**290.3**	**364.6**	**403.8**

75. World total final consumption by sector and source, 2017

Exajoules



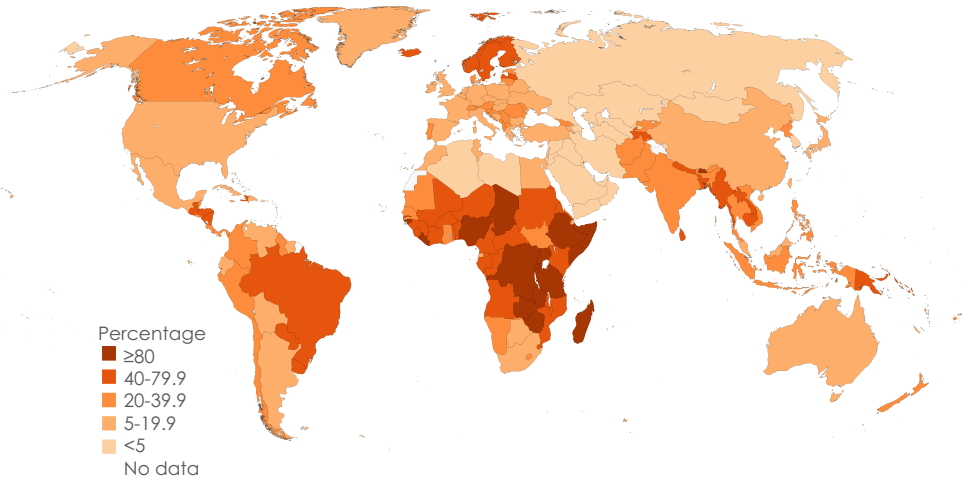
76. World total final consumption by sector and source, 2017

Exajoules

Sector	Coal	Oil	Natural gas	Biofuels and waste	Elec-tricity	Heat	Total
Total final consumption	**41.3**	**168.3**	**63.1**	**42.0**	**76.5**	**12.5**	**403.8**
- Total energy consumption	38.7	141.6	55.6	42.0	76.5	12.5	366.9
- Industry	32.2	14.0	23.3	9.4	32.5	5.8	117.0
- Transport	0.1	103.5	4.4	3.6	1.4	0.03	112.9
- of which intl. bunkers	-	16.8	0+	0.01	-	-	16.8
- Households	3.1	11.2	18.8	25.1	20.8	4.5	83.5
- Other	3.3	12.9	9.2	4.0	21.9	2.2	53.5
- Non-energy use	2.7	26.7	7.5	-	-	-	36.9

77. Renewable energy share in total final energy consumption (TFEC), 2017

Percentage



Source: United Nations Energy Database. Please see the disclaimer on page 66.

78. Final consumption (total and per capita) and renewable energy share in TFEC, major countries, 2017

Exajoules, gigajoules per capita and percentage

Country	TFC	Country	TFC per capita	Country	% REN in TFEC
China	77.9	Iceland	372.5	Dem. Rep. Congo	97.1%
United States	64.1	Trinidad and Tobago	371.3	Somalia	94.9%
India	28.7	Qatar	288.7	Uganda	88.5%
Russian Fed.	20.1	Luxembourg	265.3	Burundi	88.2%
Japan	12.3	Gibraltar	257.8	Ethiopia	87.2%
Brazil	10.0	United Arab Emirates	234.3	Rwanda	86.7%
Germany	9.5	Sint Maarten (Dutch part)	233.4	Guinea-Bissau	86.5%
Others	164.4	Others	50.9	Others	16.8%
World	**403.8**	**World**	**51.3**	**World**	**17.5%**

Energy balance, 2017 *(Exajoules)*

World	Primary coal	Coal products	Primary oil	Oil products
Primary production	157.5	-	187.0	-
Imports	32.8	0.8	100.6	60.7
Exports	-35.3	-0.8	-98.5	-63.4
Stock changes	1.0	0.4	0.9	-0.05
Total energy supply	156.0	0.3	189.9	-2.8
Statistical difference	-2.4	0.1	0.7	-1.7
Transfers	-	-	7.3	-2.6
Transformation	-122.7	11.3	-195.2	180.6
Electricity plants	-86.5	-1.9	-1.6	-6.5
CHP and heat plants	-13.6	-0.9	-0.02	-1.0
Coke ovens	-19.8	20.8	-	-0.1
Oil refineries	-	-	-184.2	181.9
Other transformation	-2.7	-6.7	-9.3	6.3
Energy industries own use	-4.8	-1.1	-0.4	-9.0
Losses	-0.02	-0.1	-0.3	-0.02
Final consumption	30.9	10.4	0.5	167.9
Final energy consumption	28.8	9.8	0.2	141.5
Industry	22.5	9.6	0.2	13.8
Iron and steel	4.0	8.2	0+	0.3
Chemical and petrochemical	1.8	0.4	0.03	2.7
Non-ferrous metals	0.2	0.03	0+	0.3
Non-metallic minerals	1.5	0.1	0+	1.3
Other industries	15.1	0.9	0.1	9.2
Transport[9]	0.1	0+	0+	103.4
of which Road	-	-	-	76.7
of which Aviation	-	-	-	13.6
Households	3.0	0.1	-	11.2
Commerce, public services	0.6	0.01	-	2.7
Other energy use	2.6	0.04	0+	10.2
Non-energy use	2.1	0.6	0.3	26.4

(9) - (10) See notes on pages 66-67.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which renewables[10]
131.7	52.9	28.5	20.2	3.8	581.7	75.1
40.8	1.2	-	2.6	0+	239.5	1.2
-41.1	-0.8	-	-2.6	0-	-242.7	-0.8
-0.5	-0.01	-	-	-	1.8	-0.01
130.9	53.3	28.5	20.2	3.8	580.2	75.5
0.6	0.02	-	0.04	0.1	-2.5	20.6
-	-0.1	-	-	-	4.5	-0.1
-54.2	-10.7	-28.5	71.6	11.2	-136.6	-12.2
-37.7	-5.0	-28.2	64.2	-3.8	-107.1	-7.0
-15.0	-2.7	-0.2	7.4	15.0	-11.1	-2.3
0-	0-	-	-	-	0.9	-
-0.1	-	-	-	-	-2.4	-
-1.4	-3.0	-	-	-	-16.9	-3.0
-11.9	-0.5	-	-8.0	-1.5	-37.2	-0.5
-1.0	-0.01	-	-7.3	-0.8	-9.6	-0.01
63.1	42.0	-	76.5	12.5	403.8	41.9
55.6	42.0	-	76.5	12.5	366.9	41.9
23.3	9.4	-	32.5	5.8	117.0	9.0
2.3	0.2	-	3.9	0.6	19.5	0.2
5.8	0.1	-	4.2	2.2	17.4	0.1
0.5	0.01	-	1.6	0.02	2.7	0+
1.8	0.3	-	0.8	0.1	5.9	0.1
12.9	8.8	-	21.8	2.8	71.6	8.7
4.4	3.6	-	1.4	0.03	112.9	3.6
1.5	3.6	-	0.1	-	81.8	3.6
-	-	-	-	-	13.6	-
18.8	25.1	-	20.8	4.5	83.5	25.3
7.4	1.2	-	15.3	1.6	28.9	1.2
1.8	2.8	-	6.6	0.6	24.6	2.8
7.5	-	-	-	-	36.9	-

Energy balance, 2017 *(Petajoules)*

Africa	Primary coal	Coal products	Primary oil	Oil products
Primary production	6,580.3	-	16,264.4	-
Imports	338.3	14.1	1,293.3	5,404.4
Exports	-2,011.4	-9.8	-12,766.1	-1,649.2
International bunkers	-	-	-	-555.5
Stock changes	-20.3	0.7	-46.8	0.5
Total energy supply	4,887.0	5.0	4,744.8	3,200.2
Statistical difference	13.9	-0.1	-105.0	286.8
Transfers	-	-	-120.9	164.7
Transformation	-3,514.3	79.8	-4,675.1	3,960.3
Electricity plants	-3,097.6	-	-42.2	-715.6
CHP and heat plants	-0.2	-	-	-
Coke ovens	-105.2	97.1	-	-
Oil refineries	-	-	-4,302.5	4,082.2
Other transformation	-311.3	-17.7	-330.4	593.7
Energy industries own use	-626.0	-0.8	-26.7	-117.6
Losses	-	-2.5	-27.1	-5.7
Final consumption	732.8	81.6	-	6,915.1
Final energy consumption	689.3	81.6	-	6,600.3
Industry	370.1	80.3	-	750.4
Iron and steel	66.9	62.8	-	0.1
Chemical and petrochemical	0.1	5.5	-	4.1
Non-ferrous metals	40.6	1.6	-	4.3
Non-metallic minerals	84.9	0.4	-	88.1
Other industries	177.7	10.0	-	653.9
Transport	0.3	-	-	4,809.5
of which Road	-	-	-	4,664.0
Households	197.1	0.1	-	606.5
Commerce, public services	97.2	1.1	-	67.8
Other energy use	24.6	0.1	-	366.1
Non-energy use	43.5	-	-	314.8

(10) See notes on pages 66-67.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which renewables[10]
8,081.9	13,858.3	153.3	494.7	195.8	45,628.6	14,541.8
608.4	1.4	-	151.8	-	7,811.6	1.4
-3,701.7	-21.3	-	-116.8	-	-20,276.4	-21.3
-	-	-	-	-	-555.5	-
19.6	-	-	-	-	-46.3	-
5,008.1	13,838.5	153.3	529.6	195.8	32,562.1	14,521.9
-45.6	-8.7	-	73.4	-	214.7	507.1
-	-	-	-	-	43.8	-
-2,877.5	-2,249.8	-153.3	2,470.9	-177.5	-7,136.4	-2,411.7
-2,713.0	-52.5	-153.3	2,468.0	-186.9	-4,493.0	-214.5
-1.3	-20.5	-	3.1	9.4	-9.5	-20.5
-	-	-	-	-	-8.1	-
-	-	-	-	-	-220.3	-
-163.1	-2,176.8	-	-	-	-2,405.6	-2,176.7
-575.0	0.0	-	-219.4	-	-1,565.6	0.0
-42.9	-1.3	-	-392.6	-	-472.1	-1.3
1,558.3	11,596.0	-	2,315.1	18.3	23,217.2	11,601.9
1,177.4	11,596.0	-	2,315.1	18.3	22,477.9	11,601.9
678.8	799.0	-	954.4	9.4	3,642.3	795.9
28.3	-	-	21.9	-	179.9	-
61.7	0.4	-	52.6	-	124.4	0.1
2.0	-	-	133.9	-	182.3	-
115.2	5.8	-	37.9	-	332.2	3.1
471.7	792.8	-	708.1	9.4	2,823.6	792.7
54.1	1.2	-	21.2	-	4,886.3	1.2
13.6	1.2	-	0.1	-	4,679.0	1.2
396.3	9,939.8	-	777.7	2.1	11,919.7	9,941.9
7.2	389.7	-	387.0	0.1	950.1	389.8
40.9	466.3	-	174.9	6.7	1,079.6	473.0
380.9	-	-	-	-	739.2	-

Energy balance, 2017 *(Petajoules)*

Northern America	Primary coal	Coal products	Primary oil	Oil products
Primary production	16,902.6	-	35,075.0	-
Imports	363.5	24.7	19,080.3	4,931.6
Exports	-3,090.4	-32.8	-10,428.8	-10,210.9
International bunkers	-	-	-	-2,049.3
Stock changes	446.0	7.2	613.7	167.4
Total energy supply	14,621.7	-0.9	44,340.2	-7,161.2
Statistical difference	-160.4	7.7	224.2	-1,620.3
Transfers	-	-	394.8	-241.2
Transformation	-14,200.5	306.1	-44,325.3	43,276.6
Electricity plants	-13,272.3	-2.1	-	-297.9
CHP and heat plants	-299.0	-20.3	-	-86.9
Coke ovens	-504.0	481.7	-	-
Oil refineries	-	-	-41,070.9	39,936.7
Other transformation	-125.2	-153.2	-3,254.3	3,724.7
Energy industries own use	-1.3	-48.8	-	-2,042.9
Losses	-	-	-	-0.1
Final consumption	580.3	248.6	185.4	35,451.5
Final energy consumption	578.5	246.7	-	29,925.7
Industry	558.5	246.7	-	1,026.6
Iron and steel	18.1	215.6	-	9.0
Chemical and petrochemical	79.4	-	-	78.1
Non-ferrous metals	9.2	-	-	7.4
Non-metallic minerals	221.8	0.9	-	92.2
Other industries	230.0	30.2	-	839.8
Transport	-	-	-	26,766.0
of which Road	-	-	-	23,163.2
Households	0.4	-	-	680.7
Commerce, public services	19.7	-	-	644.7
Other energy use	-	-	-	807.5
Non-energy use	1.8	1.9	185.4	5,525.9

(10) See notes on pages 66-67.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which renewables[10]
33,289.6	4,671.1	10,151.7	3,788.3	803.2	104,681.5	9,065.1
3,788.5	137.6	-	272.1	-	28,598.2	137.6
-6,091.0	-175.0	-	-293.3	-	-30,322.3	-175.0
-	-8.1	-	-	-	-2,057.4	-8.1
196.1	5.0	-	-	-	1,435.4	5.0
31,183.2	4,630.5	10,151.7	3,767.1	803.2	102,335.5	9,024.5
405.6	-6.3	-	-129.2	-0.1	-1,278.7	3,862.6
-	-	-	-	-	153.5	-
-10,523.5	-928.6	-10,151.7	13,934.6	-237.7	-22,849.9	-1,396.5
-8,559.3	-701.7	-10,151.7	12,797.9	-712.9	-20,900.1	-1,201.1
-1,708.8	-69.4	-	1,136.8	475.2	-572.4	-38.0
-	-	-	-	-	-22.3	-
-	-	-	-	-	-1,134.2	-
-255.4	-157.4	-	-	-	-220.9	-157.4
-3,762.0	-4.9	-	-1,391.0	-151.0	-7,402.0	-4.9
-	-	-	-1,147.8	-54.4	-1,202.3	-
16,492.1	3,703.3	-	15,292.1	360.2	72,313.5	3,760.4
15,356.8	3,703.3	-	15,292.1	360.2	65,463.2	3,760.4
5,833.2	1,354.5	-	3,447.3	215.3	12,682.1	1,330.7
437.1	0.2	-	227.8	7.2	915.0	0.2
2,360.2	10.5	-	588.6	129.9	3,246.7	2.7
160.0	0.04	-	345.8	3.8	526.3	0.0
289.4	7.2	-	107.4	0.1	719.0	0.9
2,586.5	1,336.7	-	2,177.7	74.3	7,275.2	1,326.8
900.7	1,431.6	-	68.2	-	29,166.6	1,431.6
49.8	1,410.0	-	18.6	-	24,641.5	1,410.0
4,933.9	701.9	-	5,550.7	18.4	11,886.1	719.9
3,590.9	34.8	-	5,293.3	123.8	9,707.3	96.1
98.0	180.4	-	932.6	2.6	2,021.1	182.2
1,135.3	-	-	-	-	6,850.3	-

Energy balance, 2017 *(Petajoules)*

Latin America and the Caribbean	Primary coal	Coal products	Primary oil	Oil products
Primary production	2,902.7	-	21,218.7	-
Imports	1,331.5	85.9	1,797.2	6,446.2
Exports	-2,838.0	-55.0	-10,929.3	-2,326.4
International bunkers	-	-	-	-1,169.7
Stock changes	535.7	-3.0	309.7	6.2
Total energy supply	1,931.9	27.9	12,396.2	2,956.3
Statistical difference	-18.6	-5.8	-273.3	-40.2
Transfers	-	-	-105.8	34.9
Transformation	-1,496.5	451.8	-12,539.2	10,367.2
Electricity plants	-1,015.2	-25.7	-25.5	-1,437.3
CHP and heat plants	-	-	-	-17.7
Coke ovens	-481.3	520.5	-	-38.0
Oil refineries	-	-	-11,652.5	11,080.7
Other transformation	-	-43.0	-861.3	779.4
Energy industries own use	-	-38.9	-23.5	-689.5
Losses	-2.9	-1.8	-0.1	-10.7
Final consumption	451.1	444.8	1.0	12,698.4
Final energy consumption	451.0	442.3	1.0	11,727.7
Industry	448.2	439.1	0.7	1,424.2
Iron and steel	132.0	420.7	0.04	18.3
Chemical and petrochemical	12.1	0.1	-	201.4
Non-ferrous metals	36.3	10.7	-	72.3
Non-metallic minerals	61.6	1.9	0.04	176.7
Other industries	206.2	5.8	0.6	955.6
Transport	-	-	0.3	8,517.6
of which Road	-	-	-	8,116.8
Households	2.7	2.2	-	846.0
Commerce, public services	-	-	-	187.7
Other energy use	0.1	1.0	-	752.1
Non-energy use	0.2	2.5	-	970.6

(10) See notes on pages 66-67.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which renewables[10]
7,145.1	6,072.6	353.3	2,923.2	367.0	40,982.6	9,361.9
2,477.8	52.2	-	191.9	-	12,382.7	52.2
-1,296.6	-94.2	-	-185.6	-	-17,725.0	-94.2
-1.3	-	-	-	-	-1,171.0	-
14.0	-9.5	-	-	-	853.1	-9.5
8,339.0	6,021.2	353.3	2,929.5	367.0	35,322.3	9,310.5
146.8	-15.3	-	-16.2	0+	-222.6	2,943.1
-	-141.2	-	-	-	-212.1	-141.2
-3,694.4	-1,199.7	-353.3	2,967.9	-352.5	-5,848.8	-1,516.1
-3,423.3	-802.9	-353.3	2,873.1	-352.5	-4,562.7	-1,119.3
-266.1	-227.2	-	94.8	-	-416.2	-227.2
-	-	-	-	-	1.3	-
-	-	-	-	-	-571.7	-
-5.0	-169.6	-	-	-	-299.5	-169.6
-1,428.9	-434.0	-	-258.5	-	-2,873.4	-434.0
-98.4	-5.4	-	-869.3	-	-988.5	-5.4
2,970.4	4,256.2	-	4,785.8	14.5	25,622.1	4,270.7
2,538.1	4,256.2	-	4,785.8	14.5	24,216.5	4,270.7
1,654.9	1,859.4	-	2,019.2	0.6	7,846.3	1,860.0
283.8	145.1	-	177.7	0.0	1,177.6	145.1
283.0	6.0	-	127.8	-	630.2	6.0
34.6	0.03	-	126.0	-	279.8	0.03
95.5	0.4	-	96.1	-	432.2	0.4
958.0	1,708.0	-	1,491.7	0.6	5,326.5	1,708.6
253.6	880.8	-	19.1	-	9,671.4	880.8
197.0	877.7	-	1.8	-	9,193.2	877.7
491.9	1,323.2	-	1,375.3	7.3	4,048.4	1,330.4
100.1	31.9	-	1,054.6	4.5	1,378.9	36.4
37.6	160.9	-	317.6	2.1	1,271.4	163.0
432.3	-	-	-	-	1,405.6	-

Energy balance, 2017 *(Petajoules)*				
Asia	Primary coal	Coal products	Primary oil	Oil products
Primary production	102,866.8	-	83,423.8	-
Imports	24,833.2	282.4	51,638.7	24,835.8
Exports	-11,983.5	-284.3	-48,233.3	-26,391.1
International bunkers	-	-	-	-8,086.1
Stock changes	365.7	392.6	-201.9	-520.7
Total energy supply	116,082.1	390.7	86,627.3	-10,162.1
Statistical difference	-2,266.5	65.9	934.3	-288.3
Transfers	-	-	4,997.7	-691.5
Transformation	-86,372.0	8,886.7	-90,113.8	80,992.5
Electricity plants	-62,183.0	-1,656.2	-1,540.2	-3,580.3
CHP and heat plants	-7,496.9	-489.2	-	-353.2
Coke ovens	-15,207.3	16,760.7	-	-18.4
Oil refineries	-	-	-84,133.8	84,396.3
Other transformation	-1,484.8	-5,725.0	-4,439.8	548.2
Energy industries own use	-4,119.3	-659.1	-333.0	-4,004.9
Losses	-11.2	-5.7	-59.8	-1.1
Final consumption	27,846.1	8,546.6	184.1	66,421.2
Final energy consumption	25,851.8	8,036.2	148.2	52,251.4
Industry	20,438.9	7,921.9	148.2	8,511.5
Iron and steel	3,599.1	6,673.2	0+	251.2
Chemical and petrochemical	1,601.1	378.0	28.5	1,693.4
Non-ferrous metals	38.2	8.9	0+	155.1
Non-metallic minerals	909.9	12.3	0.2	719.9
Other industries	14,290.7	849.5	119.6	5,691.9
Transport	80.2	1.7	-	28,415.9
of which Road	-	-	-	23,785.7
Households	2,362.3	75.5	-	7,164.0
Commerce, public services	405.1	4.3	-	932.8
Other energy use	2,565.2	32.9	-	7,227.2
Non-energy use	1,994.2	510.4	35.9	14,169.8

(10) See notes on pages 66-67.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which renewables[10]
45,915.3	20,793.6	5,477.8	8,512.8	1,312.2	268,302.2	29,902.9
15,641.2	267.5	-	354.6	-	117,853.4	266.8
-11,669.2	-33.7	-	-356.0	-	-98,951.1	-33.7
-	-	-	-	-	-8,086.1	-
-84.8	-21.8	-	-	-	-70.9	-21.9
49,802.5	21,005.6	5,477.8	8,511.4	1,312.2	279,047.5	30,114.1
179.6	41.6	-	64.0	49.0	-1,220.4	8,673.7
-	-	-	-	-	4,306.2	-
-22,015.1	-3,177.9	-5,477.8	38,179.1	4,306.1	-74,792.2	-3,700.1
-19,803.1	-2,561.4	-5,477.8	37,278.5	-1,869.1	-61,392.6	-3,161.3
-1,317.9	-189.7	-	900.6	6,175.2	-2,771.1	-116.7
-	-4.7	-	-	-	1,530.2	-
-57.2	-	-	-	-	205.4	-
-836.9	-422.1	-	-	-	-12,360.4	-422.1
-4,274.9	-9.2	-	-4,171.8	-628.1	-18,200.3	-9.2
-554.1	-	-	-3,519.0	-92.1	-4,243.1	-
22,778.7	17,777.0	-	38,935.7	4,849.1	187,338.4	17,731.2
19,752.0	17,777.0	-	38,935.7	4,849.1	167,601.4	17,731.2
9,455.0	3,985.5	-	20,195.5	2,946.0	73,602.4	3,847.4
588.4	31.9	-	2,764.5	241.0	14,149.3	30.1
1,882.9	55.5	-	2,534.6	1,278.9	9,452.8	33.4
55.3	4.9	-	177.0	0.7	440.0	3.6
240.1	70.0	-	234.2	0.2	2,186.8	17.7
6,688.4	3,823.1	-	14,485.1	1,425.2	47,373.5	3,762.6
1,627.9	626.3	-	684.5	30.6	31,467.2	626.3
1,107.4	626.0	-	117.7	-	25,636.9	626.0
5,747.8	10,896.3	-	8,848.0	1,320.2	36,414.0	11,008.8
1,589.7	436.6	-	4,371.8	152.3	7,892.6	411.8
1,331.7	1,832.4	-	4,835.9	400.0	18,225.2	1,837.0
3,026.7	-	-	-	-	19,737.0	-

Energy balance, 2017 *(Petajoules)*				
Europe	Primary coal	Coal products	Primary oil	Oil products
Primary production	15,932.4	-	30,277.4	-
Imports	5,885.6	347.6	25,792.2	17,596.7
Exports	-5,164.1	-410.3	-15,648.5	-22,718.0
International bunkers	-	-	-	-4,658.4
Stock changes	-106.1	-9.9	190.4	277.4
Total energy supply	16,547.8	-72.5	40,611.5	-9,502.3
Statistical difference	37.8	21.1	60.5	89.0
Transfers	-	-	2,017.8	-1,908.1
Transformation	-15,246.2	1,499.5	-42,205.1	40,818.7
Electricity plants	-5,266.7	-218.8	-	-357.1
CHP and heat plants	-5,762.5	-393.1	-22.8	-578.2
Coke ovens	-3,403.4	2,869.2	-	-17.0
Oil refineries	-	-	-41,805.4	41,217.6
Other transformation	-813.6	-757.7	-376.9	553.3
Energy industries own use	-54.4	-299.7	-11.8	-1,960.6
Losses	-2.4	-60.8	-260.2	-1.3
Final consumption	1,206.9	1,045.5	91.6	27,357.3
Final energy consumption	1,176.4	980.7	1.2	22,113.6
Industry	632.8	925.6	0.7	1,926.0
Iron and steel	148.4	803.9	-	47.1
Chemical and petrochemical	135.8	14.7	0.7	744.3
Non-ferrous metals	18.2	4.4	-	15.5
Non-metallic minerals	199.9	74.8	-	263.8
Other industries	130.4	27.8	-	855.2
Transport	0.9	0.04	-	16,491.2
of which Road	-	-	-	15,540.0
Households	410.4	50.1	-	1,909.0
Commerce, public services	85.6	3.6	-	841.9
Other energy use	46.8	1.3	0.5	945.5
Non-energy use	30.5	64.8	90.4	5,243.7

(10) See notes on pages 66-67.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which renewables[10]
33,331.0	7,182.1	12,326.0	4,281.1	770.7	104,100.7	11,315.4
18,105.0	771.7	-	1,658.0	0.3	70,157.1	751.2
-15,695.7	-514.0	-	-1,674.1	-0.2	-61,824.8	-512.4
-2.6	-	-	-	-	-4,661.0	-
-632.7	19.6	-	-	-	-261.3	19.4
35,105.0	7,459.5	12,326.0	4,265.1	770.8	107,510.7	11,573.6
-16.8	3.7	-	48.5	4.8	248.6	4,392.0
-	-	-	-	-	109.6	-
-14,568.9	-3,048.9	-12,326.0	13,143.2	7,921.7	-24,012.0	-2,891.9
-2,775.1	-889.5	-12,095.0	7,917.5	-373.6	-14,058.2	-1,034.5
-11,612.4	-2,115.6	-231.0	5,225.7	8,295.2	-7,194.6	-1,813.6
-0.5	-	-	-	-	-551.7	-
-	-	-	-	-	-587.8	-
-181.0	-42.4	-	-	-	-1,618.3	-42.3
-1,543.7	-37.7	-	-1,832.3	-758.8	-6,499.0	-28.3
-352.3	-2.8	-	-1,282.2	-674.0	-2,635.9	-2.8
18,656.9	4,366.5	-	14,245.2	7,254.9	74,224.8	4,258.7
16,208.4	4,366.5	-	14,245.2	7,254.9	66,346.9	4,258.7
5,281.5	1,186.8	-	5,523.4	2,618.3	18,095.1	982.0
935.9	21.4	-	739.9	332.5	3,029.1	0.8
1,108.7	42.5	-	898.3	832.1	3,777.2	13.2
162.3	0.6	-	721.6	17.9	940.6	0.2
990.8	174.5	-	342.1	110.9	2,156.7	54.4
2,083.7	947.9	-	2,821.4	1,324.9	8,191.4	913.5
1,501.2	651.5	-	558.6	-	19,203.3	651.5
84.4	649.7	-	7.4	-	16,281.4	649.7
7,112.3	2,130.0	-	3,976.2	3,123.6	18,711.6	2,216.1
2,064.3	286.2	-	3,887.0	1,356.3	8,524.8	289.4
249.2	112.0	-	300.1	156.7	1,812.1	119.6
2,448.5	-	-	-	-	7,877.9	-

Energy balance, 2017 *(Petajoules)*				
Oceania	Primary coal	Coal products	Primary oil	Oil products
Primary production	12,340.8	-	754.7	-
Imports	39.9	5.0	963.4	1,481.0
Exports	-10,258.7	-9.5	-529.0	-145.2
International bunkers	-	-	-	-287.1
Stock changes	-172.4	0.2	0.7	20.7
Total energy supply	1,949.6	-4.3	1,189.8	1,069.3
Statistical difference	8.7	-	-93.3	-84.3
Transfers	-	-	74.7	42.5
Transformation	-1,831.5	67.0	-1,354.7	1,201.9
Electricity plants	-1,688.2	-0.2	-	-111.8
CHP and heat plants	-21.8	-7.6	-	-1.5
Coke ovens	-119.7	109.6	-	-
Oil refineries	-	-	-1,281.4	1,213.6
Other transformation	-1.8	-34.8	-73.3	101.6
Energy industries own use	-2.9	-42.9	-2.5	-184.5
Losses	-	-0.1	-	-
Final consumption	106.4	19.7	0.6	2,213.5
Final energy consumption	100.0	19.7	0.6	2,028.8
Industry	95.6	19.7	0.6	201.2
Iron and steel	0.5	11.3	-	0.8
Chemical and petrochemical	6.2	0.5	-	4.4
Non-ferrous metals	38.9	6.3	-	13.1
Non-metallic minerals	20.7	0.1	-	9.2
Other industries	29.2	1.5	0.6	173.7
Transport	-	-	-	1,638.8
of which Road	-	-	-	1,398.1
Households	0.3	0.02	-	22.7
Commerce, public services	1.7	0.05	-	42.4
Other energy use	2.5	0+	-	123.6
Non-energy use	6.4	-	-	184.8

(10) See notes on pages 66-67.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which renewables[10]
3,965.3	345.5	-	238.6	324.2	17,969.2	904.6
206.2	0.01	-	-	-	2,695.5	0.01
-2,668.4	-0.01	-	-	-	-13,610.8	-0.01
-	-	-	-	-	-287.1	-
2.8	-	-	-	-	-148.0	-
1,505.9	345.5	-	238.6	324.2	6,618.8	904.6
-39.2	0-	-	1.2	-	-206.8	268.6
-	-	-	-	-	117.2	-
-564.4	-55.8	-	893.4	-299.8	-1,943.8	-325.6
-450.2	-19.8	-	832.9	-298.1	-1,735.3	-287.4
-114.1	-35.3	-	60.5	-1.7	-121.6	-37.6
-0.01	-	-	-	-	-10.1	-
-	-	-	-	-	-67.8	-
-0.04	-0.7	-	-	-	-9.0	-0.7
-321.3	-	-	-128.0	-	-682.0	-
-0.6	-	-	-63.4	-	-64.2	-
658.9	289.7	-	939.5	24.4	4,252.8	310.3
581.0	289.7	-	939.5	24.4	3,983.7	310.3
346.8	168.8	-	340.9	4.7	1,178.4	169.8
13.8	-	-	17.2	-	43.7	-
88.5	3.6	-	16.0	-	119.1	-
115.0	-	-	142.0	-	315.4	-
47.3	2.1	-	17.6	-	96.9	2.1
82.1	163.2	-	148.2	4.7	603.3	167.7
15.6	4.3	-	21.4	-	1,680.0	4.3
3.5	4.3	-	-	-	1,405.9	4.3
155.3	67.1	-	266.8	15.9	528.1	83.0
61.0	0.8	-	288.8	3.1	397.7	3.8
2.3	48.8	-	21.6	0.7	199.5	49.5
77.9	-	-	-	-	269.1	-

Energy indicators, 2017

Region	Total energy supply	Energy use (TES) per capita	Energy intensity	Self-sufficiency	Renewable share in TFEC	Electricity consumption per capita
	PJ	GJ	MJ/INTL$	%	%	kWh
WORLD	**580,215**	**76.9**	**5.0**	**100.2**	**17.5**	**2,817.0**
Africa	**32,562**	**26.1**	**5.4**	**140.1**	**53.7**	**514.8**
Northern Africa	8,730	37.4	3.8	145.1	9.8	1,214.2
Sub-Saharan Africa	23,832	23.5	6.3	138.3	67.9	353.9
Americas	**137,658**	**136.9**	**4.8**	**105.8**	**15.8**	**5,548.4**
Latin America & Caribbean	35,322	54.9	3.8	116.0	28.2	2,064.3
Northern America	102,335	283.3	5.3	102.3	11.2	11,760.0
Asia	**279,048**	**61.9**	**5.0**	**96.1**	**15.1**	**2,400.6**
Central Asia	6,722	94.9	8.3	193.9	4.6	2,218.8
Eastern Asia	159,471	96.8	5.6	66.0	10.4	4,369.3
South-eastern Asia	27,276	42.0	3.8	119.0	31.1	1,403.3
Southern Asia	56,519	30.2	4.6	80.9	24.7	841.2
Western Asia	29,059	108.3	4.4	247.1	3.7	3,629.6
Europe	**107,511**	**144.4**	**4.4**	**96.8**	**13.9**	**5,316.3**
Eastern Europe	46,330	158.4	7.0	147.4	6.6	4,253.4
Northern Europe	14,386	138.1	3.2	123.6	26.8	6,939.8
Southern Europe	15,576	102.5	3.3	28.9	17.6	4,727.4
Western Europe	31,218	159.5	3.6	43.4	15.1	6,497.7
Oceania	**6,619**	**162.7**	**5.0**	**271.5**	**13.8**	**6,414.2**
Australia and New Zealand	6,308	216.4	4.9	280.9	12.6	8,560.4
Melanesia	281	27.2	6.4	87.3	38.4	796.4
Micronesia	10	18.9	7.9	9.9	6.8	4,125.5
Polynesia	20	29.2	11.2	10.4	13.1	1,454.8

Region	Total energy supply	Energy use (TES) per capita	Energy intensity	Self-sufficiency	Renewable share in TFEC	Electricity consumption per capita
	PJ	GJ	MJ/INTL $	%	%	kWh
Afghanistan	122.9	3.5	1.9	67.0	24.7	127.1
Albania	100.2	34.2	3.0	68.6	36.5	2,032.8
Algeria	2,288.6	55.4	4.0	274.6	0.1	1,364.4
American Samoa[11]	0.01	0.2	-	-	1.8	2,695.9
Andorra	9.0	116.6	-	7.0	19.1	6,372.5
Angola	618.4	20.8	3.4	617.7	56.4	310.5
Anguilla	2.0	135.6	-	0.1	0.2	4,581.1
Antigua and Barbuda	7.1	69.3	3.3	0.5	0.6	2,499.7
Argentina	3,385.0	76.5	4.1	89.7	12.3	2,913.9
Armenia	136.8	46.7	5.3	33.1	15.6	1,921.9
Aruba	13.0	123.5	3.4	4.0	6.5	7,727.2
Australia	5,352.7	218.9	4.9	316.9	9.6	8,616.4
Austria	1,404.0	160.7	3.5	36.1	33.1	7,187.8
Azerbaijan	601.7	61.2	3.8	383.6	1.9	1,738.5
Bahamas	28.6	72.3	2.6	1.1	1.4	4,656.5
Bahrain	580.1	388.7	9.0	162.4	0.1	18,602.0
Bangladesh	1,925.3	11.7	3.3	83.4	41.2	365.4
Barbados	15.7	54.9	3.3	15.0	3.6	3,409.3
Belarus	1,080.8	114.2	6.6	16.6	7.4	3,163.4
Belgium	2,300.6	201.3	4.7	27.2	9.7	7,167.5
Belize	16.0	42.8	5.6	53.7	38.7	1,671.6
Benin	212.9	19.1	9.2	53.8	47.5	101.9
Bermuda[12]	9.3	151.1	2.5	6.4	0.5	9,527.5
Bhutan	67.0	82.9	9.7	118.7	83.4	2,706.4
Bolivia (Plurinational State of)	371.4	33.6	4.9	236.3	13.2	756.5
Bonaire, Sint Eustatius and Saba	5.4	213.6	-	2.7	2.8	4,079.1

Region	Total energy supply	Energy use (TES) per capita	Energy intensity	Self-sufficiency	Renewable share in TFEC	Electricity consumption per capita
	PJ	GJ	MJ/INTL $	%	%	kWh
Bosnia and Herzegovina	277.8	79.2	6.8	69.9	18.5	3,250.1
Botswana	98.8	43.1	2.8	59.5	7.1	1,431.3
Brazil	12,900.3	61.6	4.4	101.3	42.7	2,379.3
British Virgin Islands	2.4	77.1	-	0.8	1.3	3,981.3
Brunei Darussalam	152.6	356.0	5.0	427.2	0.2	7,259.2
Bulgaria	781.1	110.2	5.9	62.9	17.3	4,221.4
Burkina Faso	185.1	9.6	5.7	69.9	70.0	75.6
Burundi	63.5	5.8	8.7	88.1	88.2	20.7
Cabo Verde	9.8	17.9	2.9	17.5	22.9	628.5
Cambodia	338.9	21.2	5.8	58.4	61.4	423.2
Cameroon	387.7	16.1	4.8	121.8	79.1	261.4
Canada	12,088.4	330.1	7.5	176.4	23.0	13,890.3
Cayman Islands	8.3	135.2	2.0	0	0.01	10,429.0
Central African Republic	23.1	5.0	6.7	81.4	75.8	29.1
Chad	85.5	5.7	3.2	372.2	85.4	14.6
Chile	1,602.5	88.8	3.9	33.9	23.6	3,866.0
China	123,597.5	87.7	5.8	80.3	11.7	3,835.6
China, Hong Kong SAR	587.0	79.7	1.4	0	0.03	5,951.5
China, Macao SAR	48.3	77.5	0.7	11.6	5.9	8,367.0
Colombia	1,677.5	34.2	2.6	308.2	27.5	1,255.0
Comoros	6.2	7.7	3.0	46.1	38.8	67.6
Congo	123.7	23.5	4.7	554.7	69.5	295.6
Cook Islands	1.0	55.7	-	1.3	1.7	2,094.4
Costa Rica	212.0	43.2	2.8	48.0	36.2	2,018.2
Côte d'Ivoire	457.6	18.8	5.3	95.7	61.8	260.1
Croatia	364.1	86.9	3.9	48.3	29.8	3,814.9

Region	Total energy supply	Energy use (TES) per capita	Energy intensity	Self-sufficiency	Renewable share in TFEC	Electricity consumption per capita
	PJ	GJ	MJ/INTL $	%	%	kWh
Cuba	403.6	35.1	1.6	48.2	15.9	1,348.8
Curaçao	76.0	473.3	18.9	1.6	3.8	4,142.3
Cyprus	93.8	79.5	3.2	5.9	10.3	3,849.8
Czechia	1,817.6	171.2	5.3	63.7	14.7	5,399.5
Democratic People's Rep. of Korea	307.4	12.1	2.8	210.2	27.0	444.4
Democratic Rep. of the Congo	1,246.1	15.3	19.0	101.5	97.1	88.8
Denmark	720.1	125.6	2.6	90.9	36.4	5,458.9
Djibouti	8.9	9.3	-	40.6	14.5	481.8
Dominica	2.4	33.0	3.5	6.8	9.8	1,634.0
Dominican Republic	344.1	32.0	2.2	9.2	11.9	1,475.5
Ecuador	614.6	37.0	3.5	205.6	17.4	1,441.9
Egypt	4,012.3	41.1	3.9	85.2	9.8	1,554.1
El Salvador	174.8	27.4	3.8	50.8	26.7	964.6
Equatorial Guinea	49.2	38.8	1.7	1,504.1	12.0	567.2
Eritrea[12]	36.6	10.7	2.4	76.8	78.7	95.8
Estonia	242.5	185.2	6.2	100.0	28.2	5,511.5
Eswatini	43.6	38.7	4.2	83.8	60.6	1,233.1
Ethiopia	1,533.5	14.6	8.4	89.4	87.2	90.2
Falkland Islands (Malvinas)	0.5	183.1	-	13.9	4.9	6,017.1
Faroe Islands	10.3	209.6	-	6.0	6.0	6,218.1
Fiji	34.4	38.0	4.2	19.3	27.0	996.5
Finland	1,385.2	250.8	6.1	54.3	43.9	14,672.4
France	10,278.0	152.8	3.9	52.4	14.5	6,494.7
French Polynesia	11.4	40.3	-	7.8	10.9	2,098.0
Gabon	108.8	53.7	3.3	454.6	61.0	1,000.4
Gambia	14.3	6.8	2.9	48.3	50.8	111.9

Region	Total energy supply	Energy use (TES) per capita	Energy intensity	Self-sufficiency	Renewable share in TFEC	Electricity consumption per capita
	PJ	GJ	MJ/INTL $	%	%	kWh
Georgia	204.3	52.2	5.4	28.6	29.7	2,865.1
Germany	12,998.5	158.3	3.5	36.9	15.1	6,320.0
Ghana	314.7	10.9	2.7	164.9	39.9	420.3
Gibraltar	10.7	309.0	-	0	0.01	7,520.8
Greece	965.6	86.5	3.6	31.2	15.9	4,836.2
Greenland	8.8	155.9	-	16.9	11.3	5,801.7
Grenada	4.3	40.2	2.9	9.2	12.6	1,818.5
Guam[11]	0.2	1.1	-	-	3.0	9,804.0
Guatemala	530.2	31.3	4.2	64.7	60.2	598.0
Guernsey[11]	1.1	17.7	-	0	0	5,921.7
Guinea	156.3	12.3	6.0	73.3	77.0	121.9
Guinea-Bissau	31.2	16.8	10.8	83.7	86.5	20.7
Guyana	36.8	47.4	6.4	18.0	22.5	1,104.9
Haiti	187.6	17.1	10.3	76.0	76.0	38.4
Honduras	251.8	27.2	6.0	49.9	53.4	890.1
Hungary	1,114.8	114.7	4.2	42.4	14.3	3,958.9
Iceland	327.2	976.8	19.9	91.3	76.5	53,408.0
India	38,083.2	28.4	4.4	61.5	27.6	844.0
Indonesia	9,958.8	37.7	3.4	192.7	38.5	926.7
Iran (Islamic Republic of)	10,987.2	135.4	7.1	161.5	1.9	3,105.3
Iraq	2,520.9	65.9	4.2	392.0	0.6	1,002.7
Ireland	573.8	120.5	1.8	35.5	10.4	5,429.0
Isle of Man[11]	4.5	53.3	-	9.1	1.9	4,306.7
Israel	964.6	115.9	3.3	38.9	3.9	6,764.7
Italy	6,436.9	108.4	3.0	22.1	16.4	4,915.8
Jamaica	111.0	38.4	4.7	5.2	7.2	1,124.8

Region	Total energy supply	Energy use (TES) per capita	Energy intensity	Self-sufficiency	Renewable share in TFEC	Electricity consumption per capita
	PJ	GJ	MJ/INTL $	%	%	kWh
Japan	18,115.7	142.1	3.7	9.5	7.1	7,561.0
Jersey[11]	3.1	28.9	-	26.2	16.8	5,876.4
Jordan	383.9	39.6	4.7	2.8	2.2	1,811.2
Kazakhstan	3,335.4	183.2	7.7	220.6	1.7	3,821.9
Kenya	931.8	18.7	6.3	79.2	65.6	175.9
Kiribati	1.5	12.5	6.3	38.4	45.8	210.5
Kosovo	107.9	58.9	6.0	69.6	25.1	2,369.0
Kuwait	1,584.1	383.0	6.0	436.8	0.2	10,270.2
Kyrgyzstan	161.6	26.7	7.7	54.3	24.4	1,821.0
Lao People's Democratic Rep.	237.1	34.6	5.4	116.6	45.9	724.1
Latvia	184.7	94.7	3.8	58.6	42.5	3,326.2
Lebanon	368.8	54.1	4.6	2.1	3.1	3,189.9
Lesotho	47.6	21.3	8.0	37.4	38.7	301.7
Liberia	97.4	20.6	17.6	83.4	85.0	60.2
Libya	554.7	87.0	4.9	402.5	1.8	2,215.7
Liechtenstein[11]	3.4	88.7	-	38.0	55.3	10,722.0
Lithuania	313.2	108.4	3.7	27.4	34.0	3,479.9
Luxembourg	159.6	273.5	2.8	5.0	18.3	10,957.1
Madagascar	321.6	12.6	7.6	84.6	82.6	70.5
Malawi	84.3	4.5	4.1	80.8	75.9	71.4
Malaysia	3,482.2	110.1	4.1	110.0	6.3	4,633.2
Maldives	21.5	43.3	3.3	1.0	1.2	1,202.7
Mali	95.6	5.2	2.6	60.0	58.6	72.4
Malta	28.6	66.5	1.6	3.0	7.3	5,412.7
Marshall Islands	2.3	42.6	11.3	8.9	11.8	1,460.7
Mauritania	73.3	16.6	4.7	41.1	23.3	196.6

Region	Total energy supply	Energy use (TES) per capita	Energy intensity	Self-sufficiency	Renewable share in TFEC	Electricity consumption per capita
	PJ	GJ	MJ/INTL $	%	%	kWh
Mauritius	69.2	54.7	2.7	14.6	7.9	2,069.5
Mexico	7,622.3	59.0	3.4	91.7	9.5	2,105.3
Micronesia (Federated States of)	2.2	20.5	6.1	1.4	1.6	444.0
Mongolia	394.6	128.3	10.9	332.3	1.5	1,934.1
Montenegro	42.9	68.3	4.2	62.7	38.4	4,539.2
Montserrat	0.4	71.8	-	0	0	3,476.9
Morocco	868.8	23.9	3.2	10.3	12.0	894.2
Mozambique	452.0	15.2	12.2	183.9	58.6	486.8
Myanmar	854.1	16.0	2.9	138.8	68.7	313.6
Namibia	82.0	32.3	3.4	25.7	29.1	1,601.2
Nauru	0.6	54.5	3.5	0.7	0.8	2,817.1
Nepal	570.9	19.5	7.9	76.8	77.8	194.8
Netherlands	3,085.4	181.1	3.7	56.7	6.5	6,201.4
New Caledonia	67.9	245.7	-	2.7	5.1	11,440.5
New Zealand	955.4	203.0	5.5	79.4	30.4	8,269.1
Nicaragua	166.9	26.8	5.1	55.9	47.0	555.0
Niger	84.6	3.9	4.3	115.3	72.8	47.2
Nigeria	6,568.1	34.4	6.4	158.4	82.6	135.0
Niue	0.1	59.9	-	17.3	22.4	1,891.2
North Macedonia	119.1	57.2	4.4	44.5	23.9	2,929.1
Northern Mariana Islands[11]	-	-	-	-	-	5,349.6
Norway	1,235.1	232.8	3.6	722.4	60.7	21,430.3
Oman	1,102.3	237.8	6.3	294.1	0.1	6,977.6
Other Asia	4,600.0	194.7	-	7.6	3.0	10,221.8
Pakistan	4,279.9	21.7	4.3	50.8	28.8	524.2
Palau	3.2	181.6	11.2	0.03	0.05	4,160.8

Region	Total energy supply	Energy use (TES) per capita	Energy intensity	Self-sufficiency	Renewable share in TFEC	Electricity consumption per capita
	PJ	GJ	MJ/INTL $	%	%	kWh
Panama	196.6	48.0	2.2	21.1	21.7	2,219.1
Papua New Guinea	168.1	20.4	5.0	138.2	49.7	484.5
Paraguay	287.8	42.3	3.6	117.3	56.0	1,696.4
Peru	959.9	29.8	2.4	95.0	23.8	1,444.5
Philippines	2,320.8	22.1	2.9	47.3	27.3	741.5
Poland	4,384.2	114.9	4.2	61.4	11.3	3,557.4
Portugal	951.3	92.1	3.3	23.2	24.9	4,515.4
Puerto Rico[11]	50.3	15.9	0.4	2.6	2.2	4,285.3
Qatar	1,797.8	681.2	5.8	522.1	0.1	15,167.4
Republic of Korea	11,820.8	231.9	6.4	17.2	3.1	10,263.1
Republic of Moldova	114.1	28.2	5.2	32.2	31.5	914.3
Romania	1,400.8	71.2	3.0	76.5	23.6	2,271.5
Russian Federation	31,181.5	216.6	8.5	190.8	3.4	5,284.3
Rwanda	99.4	8.1	4.4	86.7	86.7	48.8
Saint Helena	0.2	26.3	-	9.7	13.1	1,579.4
Saint Kitts and Nevis	3.5	62.8	2.5	1.1	1.8	3,279.4
Saint Lucia	5.2	29.0	2.3	1.7	2.7	2,011.0
Saint Pierre and Miquelon	1.1	170.7	-	0.5	0.7	7,310.1
Saint Vincent and the Grenadines	3.8	34.8	3.3	3.2	3.4	932.1
Samoa	4.9	24.8	4.2	22.5	26.8	677.1
Sao Tome and Principe	2.8	13.8	4.5	37.4	38.4	353.8
Saudi Arabia	8,946.0	271.6	5.5	303.5	0.01	8,357.6
Senegal	168.1	10.6	3.4	40.1	35.6	249.3
Serbia	646.7	92.9	6.0	67.7	20.3	4,040.9
Seychelles	8.2	86.2	3.2	0.8	1.2	4,960.0
Sierra Leone	68.2	9.0	6.5	80.4	77.5	27.8

Region	Total energy supply	Energy use (TES) per capita	Energy intensity	Self-sufficiency	Renewable share in TFEC	Electricity consumption per capita
	PJ	GJ	MJ/INTL $	%	%	kWh
Singapore	1,166.4	204.3	2.4	2.4	0.7	8,684.4
Sint Maarten (Dutch part)	11.7	291.5	10.0	0	0.05	6,684.9
Slovakia	716.5	131.5	4.4	37.0	12.3	4,736.5
Slovenia	289.2	139.0	4.4	52.8	20.6	6,504.4
Solomon Islands	7.4	12.1	5.5	44.1	48.7	147.5
Somalia	148.4	10.1	-	94.0	94.9	21.4
South Africa	5,909.7	104.2	8.5	112.6	12.0	3,428.7
South Sudan[12]	27.8	2.6	0.1	853.5	28.0	45.6
Spain	5,226.5	112.8	3.3	26.2	15.6	5,060.4
Sri Lanka	461.2	22.1	1.8	36.2	43.4	646.1
State of Palestine	77.8	15.8	3.8	12.6	12.4	1,095.0
Sudan	532.3	13.1	2.9	77.4	46.3	319.8
Suriname	40.1	71.3	5.2	97.8	19.7	3,147.7
Sweden	2,032.8	205.1	4.3	73.4	51.5	12,840.1
Switzerland	988.3	116.1	2.0	46.5	25.1	6,867.6
Syrian Arab Republic	374.4	20.5	4.5	46.1	1.1	723.6
Tajikistan	186.5	20.9	7.2	84.0	59.4	1,543.9
Thailand	5,777.2	83.7	5.1	54.5	22.8	2,684.3
Timor-Leste	7.9	6.1	0.9	692.9	19.0	263.9
Togo	153.6	19.7	13.0	77.8	67.7	168.4
Tonga	2.1	19.9	3.7	1.6	1.5	509.2
Trinidad and Tobago	703.4	513.8	17.8	194.4	0.2	7,610.0
Tunisia	473.3	41.0	3.8	48.6	11.8	1,397.2
Turkey	6,138.4	76.0	3.0	24.9	11.6	3,045.3
Turkmenistan	1,158.2	201.1	12.3	278.2	0.1	2,166.2
Turks and Caicos Islands	3.2	91.5	4.0	0.6	1.0	6,096.6

Region	Total energy supply	Energy use (TES) per capita	Energy intensity	Self-sufficiency	Renewable share in TFEC	Electricity consumption per capita
	PJ	GJ	MJ/INTL $	%	%	kWh
Tuvalu	0.1	13.3	3.7	8.5	13.5	768.4
Uganda	693.1	16.2	9.5	90.1	88.5	68.7
Ukraine	3,738.7	84.5	11.1	65.0	7.1	2,654.0
United Arab Emirates	3,041.9	323.6	4.8	318.6	0.2	12,259.9
United Kingdom	7,352.9	111.1	2.8	68.3	10.1	4,543.3
United Republic of Tanzania	854.6	14.9	5.7	88.4	83.8	103.5
United States	90,227.9	278.1	5.1	92.4	9.7	11,521.1
United States Virgin Islands[11]	0.1	0.7	-	-	3.5	4,759.7
Uruguay	217.5	62.9	3.1	62.6	60.7	3,143.3
Uzbekistan	1,880.1	58.9	7.9	117.3	2.0	1,577.8
Vanuatu	2.9	10.7	3.6	31.0	36.1	246.2
Venezuela (Bolivarian Rep. of)	2,064.5	64.6	6.1	293.3	15.4	2,539.5
Viet Nam	2,980.0	31.2	5.1	94.3	36.7	1,828.0
Wallis and Futuna Islands	0.3	29.7	-	0.5	0.7	1,428.8
Yemen	141.7	5.0	2.1	54.3	4.8	143.7
Zambia	501.3	29.3	8.0	89.4	86.0	713.2
Zimbabwe	473.7	33.3	13.0	90.1	83.3	543.1

(11) - (12) See notes on pages 66-67.

Maps disclaimer

The designations employed and the presentation of material on the maps in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

Chapter notes

Chapter: Total energy supply

Note (1), page 1

World total energy supply includes international aviation and marine bunkers; conversely, bunkers are excluded from total energy supply calculated for countries and regions. For further explanations, please refer to the General notes.

Note (2), page 2

Energy intensity is calculated by dividing the total energy supply by GDP, PPP (constant 2011 international $).

Chapter: Primary energy production

Note (3), page 6

Energy self-sufficiency is calculated as the ratio between primary energy production and total energy supply, expressed in percentage.

Chapter: Electricity

Note (4), page 19

"Solar, wind and other sources" refers to solar, wind, geothermal, chemical heat, tide, wave and marine, and other non-specified sources.

Note (5), page 19

Non-renewable electricity refers to: (a) non-renewable thermal, i.e. electricity generated from all non-renewable combustible fuels: coal, oil, natural gas, and non-renewable waste; (b) nuclear; (c) chemical heat and other non-specified sources. Renewable electricity refers to hydro, wind, solar, geothermal, tide, wave and marine, and thermal from biofuels and renewable waste.

Note (6), pages 26 and 27

Non-renewable sources refer to thermal from non-renewable fuels, nuclear and other non-specified capacities. Renewable sources refer to thermal from renewable fuels, hydro, wind, solar, geothermal and tide, wave and marine capacities. Sources not shown in table 49 and 51 have negligible capacity values (33.1 GW in 2017) and are not included in chart 48.

Chapter: Refinery output

Note (7), page 35

World oil energy supply includes international aviation and marine bunkers; conversely, bunkers are excluded from oil energy supply calculated for countries. For further explanations, please refer to the General notes.

Chapter: Total final consumption

Note (8), page 36

Fuels used for electricity generation are not accounted here, but indirectly as electricity TFC. Likewise for fuels and energy undergoing other types of transformation. World TFC includes international aviation and marine bunkers. For further explanations, please refer to the General notes.

Chapter: Energy balances

Note (9), page 42

Including international bunkers

Note (10), all balances, starting from page 43

The category *of which: renewables* follows the convention used in the Energy Balances publication available at https://unstats.un.org/unsd/energystats/pubs/balance/ and therefore includes only directly identifiable renewable energy. As a result, no part of imports and exports of electricity and heat, nor their consumption, losses or own use, is considered as renewable, which may lead to differences with values presented in other chapters.

Chapter: Indicators

Note (11), Several countries

Energy statistics for this country are partially covered by another country (see geographical notes at https://unstats.un.org/unsd/energystats/pubs/yearbook/2017/05gn.pdf. Therefore, indicators should be interpreted with caution.

Note (12), Several countries

Energy intensity for this country is estimated based on the latest available GDP PPP value

General notes

Please note that UN energy data are subject to the Terms and Conditions available at: http://data.un.org/Host.aspx?Content=UNdataUse.

Data sources

Data used in this publication derive from the Energy Statistics database maintained by the United Nations Statistics Division. For more information please refer to https://unstats.un.org/unsd/energystats/data.

Population data used to calculate the per capita indicators are from the United Nations Population Division and are available at: https://population.un.org/wpp.

GDP data used to calculate energy intensity are primarily from the World Bank (GDP, PPP, constant 2011 international $) and are available at: https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.KD. For some countries such data were not available from the World Bank, but estimates were available from the CHELEM database (http://www.cepii.fr/%5C/anglaisgraph/bdd/chelem/gpd/gdppresent.htm). For these countries, namely: Cuba, the Democratic People's Republic of Korea, and the Syrian Arab Republic, the estimates from the CHELEM database were used.

Geographical notes

The assignment of countries and areas follows the United Nations publication "Standard Country or Area Codes for Statistical Use" originally published as Series M, No. 49 and now commonly referred to as the M49 standard. For more information please refer to https://unstats.un.org/unsd/methodology/m49.

For a detailed description of the geographical coverage of the data please refer to https://unstats.un.org/unsd/energystats/pubs/yearbook/2017/05gn.pdf.

The designations employed and the presentation of material on the maps do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

The expression *Other countries (x)* is used to represent all the countries that are not shown separately in a chart and indicates that x countries have positive values.

Products and flows

All the definitions of products and flows are based on the International Recommendations for Energy Statistics (IRES) available at: https://unstats.un.org/unsd/energystats/methodology/ires. Particularly for products, the definitions come from the Standard International Energy Product Classification (SIEC) contained in IRES. A more concise version of these definitions can be found in the Energy Balances publication under the chapter "Concepts and Definitions". The Energy Balances publication is available at: https://unstats.un.org/unsd/energystats/pubs/balance.

Please note that in the present publication the product coal includes peat unless otherwise specified; data for natural gas are expressed on an NCV basis (as are data for all other products); energy sources (i.e. coal, oil, natural gas, biofuels and waste, and electricity and heat) generally refer to both primary and secondary products, with the exception of the chapter on primary energy production.

Chapter: Total energy supply

International aviation and marine bunkers are recorded separately due to their importance, e.g. for the estimation of greenhouse gas emissions. At the world level, bunkers are classified as part of transport final consumption and they are included in the world total energy supply; however, at the country and regional levels, bunkers are not accounted for as final consumption because they pertain to more than one country or region and are therefore subtracted from total energy supply.

Being excluded from regional TES, international bunkers are shown as a separate category in charts 4 and 6 and in tables 5 and 7 to provide a complete overview of the world total energy supply.

Total energy supply per capita is calculated by dividing total energy supply by population.

Energy intensity is calculated by dividing total energy supply by GDP, PPP (constant 2011 international $). It corresponds to SDG indicator 7.3.1.

Chapter: Primary energy production

Energy self-sufficiency is calculated as the ratio between primary energy production and total energy supply expressed in percentage.

The categories *other primary oil* (chart 27 and table 28) refer to additives and oxygenates, and other hydrocarbons.

The category *waste* (chart 33 and table 34) refers to other vegetable material and residues (vegetal waste), animal waste, industrial waste and municipal waste.

The category *other biofuels* (chart 33 and table 34) refers to biogasoline, biodiesel, biogases, bio jet kerosene, bagasse, black liquor and other liquid biofuels as defined in SIEC (for definitions, see section "Products and flows" above).

Chapter: Electricity

Electricity generation per capita is calculated by dividing electricity production by population.

Electricity capacity is the abbreviated form for the Net Maximum Electrical Capacity, which in turn is defined as 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 station). For annual data, it is considered as measured at the end of the reference year.

Utilization of electricity capacity is calculated by dividing electricity production by electricity capacity and then by the total number of hours in a year. It shows a percentage of theoretical maximal utilization; since the capacity is measured on a net basis and the production on a gross basis, there is a small upwards bias in this utilization indicator.

The category *solar, wind and other sources* (Facts and figures box, chart 38 and table 39) refers to solar, wind, geothermal, chemical heat, tide, wave and marine and other non-specified sources.

Both the category *total renewables* (table 43 and 47 and chart 46) and the category *renewable sources* (tables 49 and 51 and chart 50) refer to hydro, wind, solar, geothermal, tide, wave, marine, as well as thermal from combustible renewables.

The category *non-renewable sources* (tables 49 and 51 and chart 50) refers to thermal from non-renewable fuels, nuclear and other non-specified net installed capacities.

Chapter: Refinery output

Refinery output refers to the total amount of oil products produced in refineries (naphtha, aviation gasoline, motor gasoline, gasoline-type jet fuel, kerosene-type jet fuel, other kerosene, gas/diesel oil, fuel oil, refinery gas, ethane, LPG, white spirit and SBP industrial spirits, lubricants, paraffin waxes, petroleum coke, bitumen, refinery feedstocks, and other oil products not elsewhere classified).

Refinery input refers to the amount of oil (conventional crude oil, natural gas liquids, feedstocks, other hydrocarbons, and additives and oxygenates) that has entered the refinery process.

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

The category *others* (chart 62 and table 63) refers to refinery gas, ethane, LPG, white spirit and SBP industrial spirits, lubricants, paraffin waxes, petroleum coke, bitumen, refinery feedstocks, and other oil products not elsewhere classified. The category *gasolines* refers to aviation gasoline, motor gasoline and gasoline-type jet fuel; the category *kerosenes* refers to kerosene-type jet fuel and other kerosene.

Fuel quantities used in *international aviation and marine bunkers* are included in the world oil supply (chart 66 and table 67); conversely, bunkers are excluded from the oil supply for the shown countries.

The different approach adopted in treating international bunkers at the world level as opposed to the country level determines a divergence between the world oil supply and the sum of the country values in table 67.

Chapter: Total final consumption

Total final consumption per capita is calculated by dividing total final consumption by population.

Total final consumption refers to the consumption of energy products by end users, which is the last stage of energy flows captured in energy statistics. As such, TFC excludes energy products that are transformed into secondary energy products. For example, fuels used for electricity generation are not accounted directly in TFC, but accounted for indirectly as final electricity consumption. For coal specifically, more than 60% of TES in 2017 is used as input for electricity generation worldwide.

International aviation and marine bunkers are classified as part of final consumption at the world level but not at the country and regional levels. Not being included in the total final consumption at the regional level, international bunkers are shown as a separate category in charts 69 and 71 and in tables 70 and 72 to provide a complete overview of world final energy consumption.

The different approach adopted in treating international bunkers at the world level as opposed to the country level determines a divergence between the world TFC and the sum of the country values in table 78.

The category *other* (chart 75 and table 76) refers to agriculture, forestry and fishing, commerce and public services, and to other non-specified consumers. The categories *industry, transport, households* and *other* do not include non-energy use in these sectors.

Renewable energy share in total final energy consumption (map 77 and table 78) refers to renewables directly consumed as energy products, as well as final consumption of electricity and heat attributed to renewable sources, including combustible renewables. It corresponds to SDG indicator 7.2.1.

Chapter: Energy balances

In the regional balances, the category *total energy supply* excludes international aviation and marine bunkers, whereas in the world balance international bunkers are treated as consumption for transportation purposes.

Country energy balances for 2016 and 2017 are available in the Energy Balances publication (https://unstats.un.org/unsd/energystats/pubs/balance).

The category *of which: renewables* follows the convention used in the Energy Balances publication available at: https://unstats.un.org/unsd/energystats/pubs/balance and therefore includes only directly identifiable renewable energy. As a result, no part of imports and exports of heat or electricity, nor their consumption, losses or own use, is considered as renewable, which may lead to differences with values presented in other chapters.

Chapter: Energy indicators

The category *total energy supply* excludes international aviation and marine bunkers at the country and regional levels, as defined by the international methodology set forth in IRES.

Energy statistics for American Samoa, Guam, Guernsey, Isle of Man, Jersey, Liechtenstein, Northern Mariana Islands, Puerto Rico, United States Virgin Islands are partially covered by another country (see geographical notes at: https://unstats.un.org/unsd/energystats/pubs/yearbook/2017/05gn.pdf) . Indicators for these areas, therefore, should be interpreted with caution.

Energy use (TES) per capita is calculated by dividing total energy supply by population.

Energy intensity is calculated by dividing total energy supply by GDP, PPP (constant 2011 international $). It corresponds to SDG indicator 7.3.1.

Self-sufficiency is calculated as the ratio between primary energy production and total energy supply expressed in percentage.

Renewable energy share in total final energy consumption refers to renewables directly consumed as energy products, as well as final consumption of electricity and heat attributed to renewable sources, including combustible renewables. It corresponds to SDG indicator 7.2.1.

Electricity consumption per capita is calculated by dividing electricity consumption by population.

The Energy Statistics Pocketbook highlights the availability of data on various aspects of energy production, transformation and use and its linkages to other key statistics. It uses visual representations of key energy indicators to facilitate the understanding of the current state and developments in the energy sector. Energy is central to the achievement of the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change, and sound energy statistics are the basis for the reliable measurement of progress, thereby assisting the formulation of policy measures to achieve international and national sustainable development goals.

ISBN 978-92-1-259148-3

20-03036