United Nations | Department of Economic and Social Affairs

Energy Statistics Pocketbook

2023

ST/ESA/STAT/SER.E/6

Department of Economic and Social Affairs
Statistics Division

Statistics Papers Series E No.6

2023
Energy Statistics Pocketbook

United Nations
New York, 2023

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.

United Nations Publications, 405 East 42nd Street, S-09FW001, New York, NY 10017 USA
Email: publications@un.org
Website: shop.un.org

ST/ESA/STAT/SER.E/6

Sales number: E.23.XVII.1
print ISBN 9789212592244
PDF ISBN 9789210024389
print ISSN 2617-2828
online ISSN 2617-2836

Content

Introduction

This publication is the sixth 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 2020 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 other three annual publications sourced from the same database as this pocketbook, is available at https://unstats.un.org/unsd/energystats.

Acknowledgements

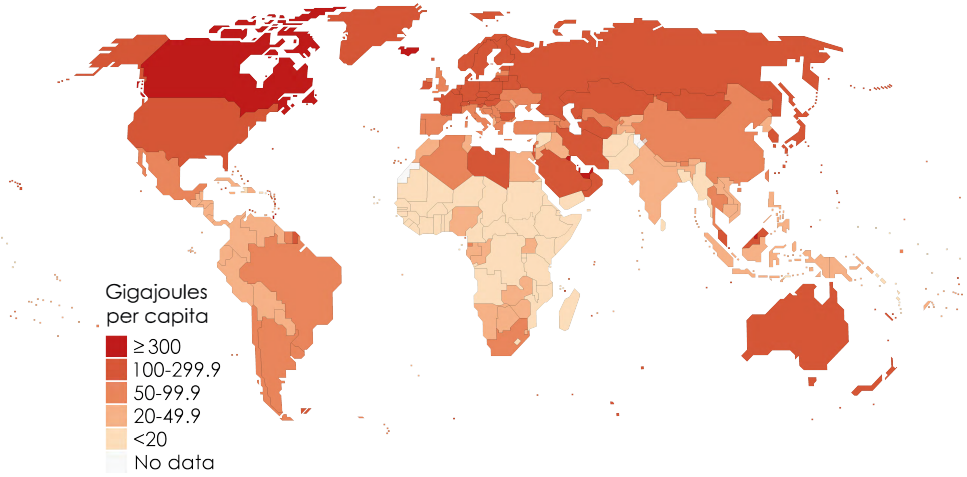
This publication has been compiled by the Energy Statistics Section of UNSD, which is headed by Mr. Leonardo Souza. The conceptual design of this pocketbook has been carried out by Mr. Souza, Ms. Agnieszka Koscielniak and Ms. Costanza Giovannelli. Ms. Giovannelli took the lead in the graphic design, 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, 2020

Gigajoules per capita



Source: UN Energy Statistics Database / UN Geospatial. 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).

FACTS AND FIGURES

World total energy supply[1] (TES) was 578.6 EJ in 2020, declining by 4.1% compared to 2019. The decrease affected all the regions but was most intense in Northern America (-7.7%) and Latin America and the Caribbean (-5.8%). In the United States, the absolute decrease in TES observed between 2019 and 2020 was more than 7 EJ (-7.7%).

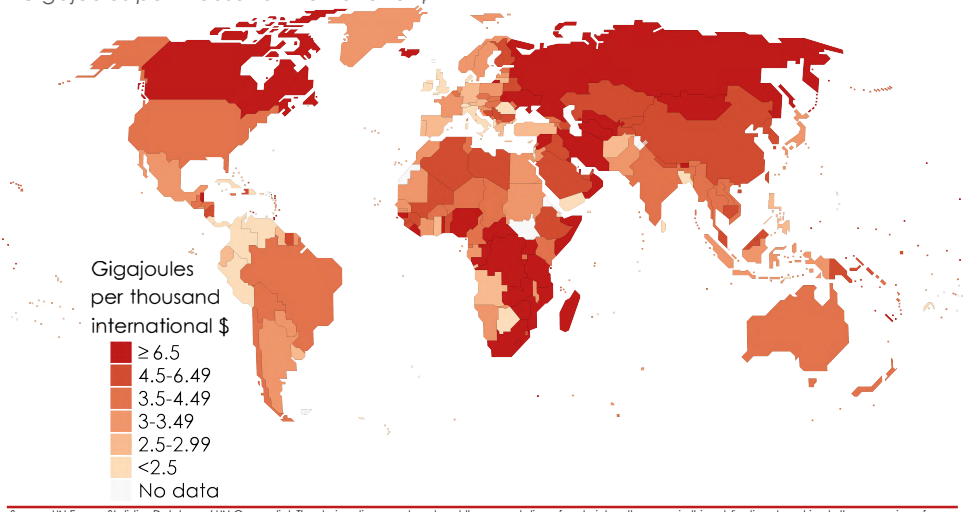
Asia TES diminution was more modest (-1.3%), with the region accounting for the first time for more than 50% of the world total energy supply; China, in contrast to the overall trend, has increased its TES in 2020 (+2.8%). On the other hand, Europe's share of world TES has been steadily declining in the last 30 years, dropping from 35.3% in 1990 to 17.5% in 2020, with an absolute reduction of more than 5 EJ between 2019 and 2020 (-4.8%).

International bunkers were equal to 12.5 EJ in 2020 (accounting for 2.2% of world TES), showing a substantial contraction compared to 2019 (-27.3%).

(1) See notes on pages 68-73.

2. Energy intensity[2], 2020

Gigajoules per thousand international $



Source: UN Energy Statistics Database / UN Geospatial. 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).

3. Energy supply (total, per capita and energy intensity[2]), major countries, 2020

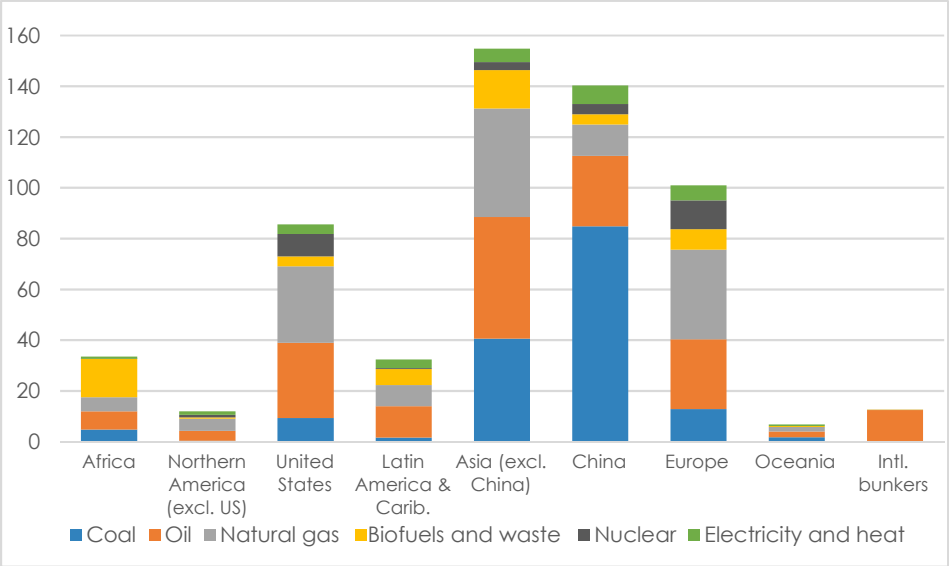
Exajoules, gigajoules per capita and gigajoules per thousand international $

Country	TES	Country	TES per capita	Country	Energy intensity[2]
China	140.2	Iceland	988.2	Iceland	18.9
United States	85.5	Qatar	635.2	Trinidad and Tobago	17.7
India	38.2	Bahrain	451.2	New Caledonia	14.1
Russian Federation	31.5	Trinidad and Tobago	405.0	Liberia	14.0
Japan	16.1	United Arab Emirates	391.6	Zimbabwe	13.7
Brazil	11.9	Brunei Darussalam	369.7	Dem. Rep. of the Congo	13.5
Canada	11.9	Kuwait	350.9	Uganda	12.3
Germany	11.6	Gibraltar	320.8	Turkmenistan	11.9
World	**578.6**	**World**	**73.8**	**World**	**4.6**

(2) See notes on pages 68-73.

4. Total energy supply by region and source, 2020

Exajoules



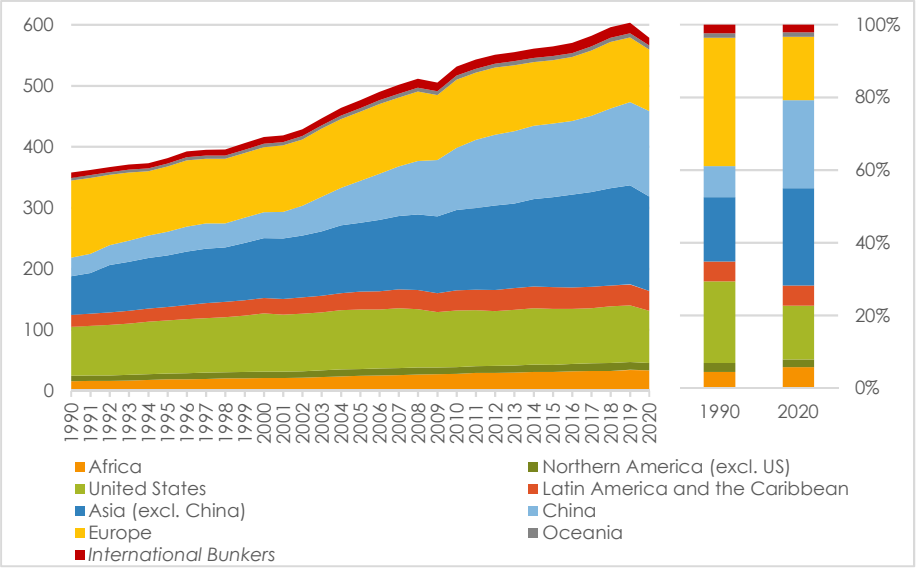
5. Total energy supply by region and source, 2020

Exajoules

Region	Coal	Oil	Natural gas	Biofuels and waste	Nuclear	Electricity and heat	TES
Africa	4.7	7.2	5.6	15.0	0.1	0.9	33.5
Northern America (excl. US)	0.4	3.9	4.7	0.5	1.1	1.3	11.9
United States	9.3	29.6	30.1	3.9	8.9	3.7	85.5
Latin America and the Caribbean	1.6	12.4	8.3	6.2	0.4	3.5	32.4
Asia (excl. China)	40.6	47.9	42.7	15.1	3.2	5.2	154.7
China	84.8	27.6	12.4	4.1	4.0	7.3	140.2
Europe	12.9	27.4	35.3	8.1	11.4	6.0	101.0
Oceania	1.7	2.3	1.8	0.3	-	0.6	6.8
International bunkers	-	*12.5*	*0.01*	*0.02*	-	-	*12.5*
World	**156.0**	**170.8**	**140.9**	**53.4**	**28.9**	**28.5**	**578.6**

6. Total energy supply by region, 1990 – 2020

Exajoules and percentage



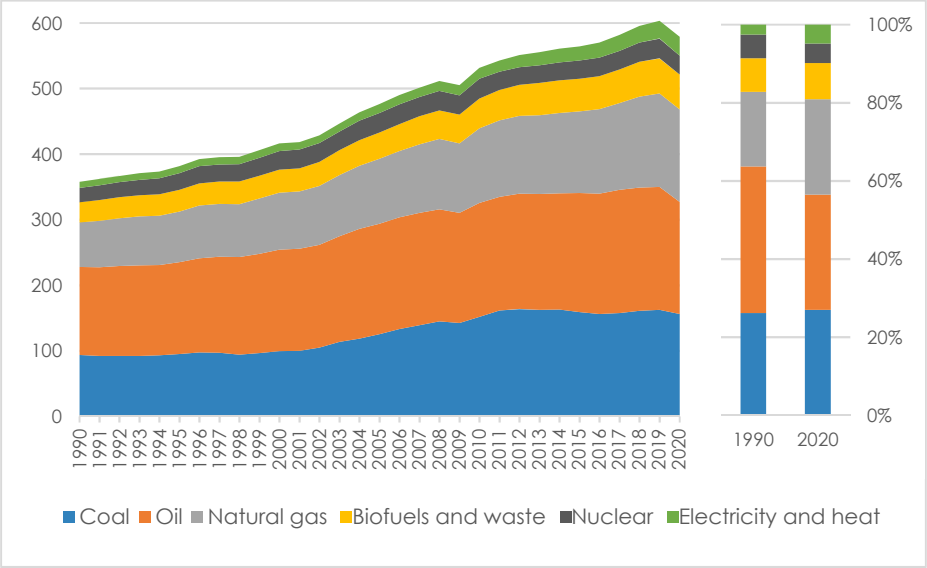
7. Total energy supply by region, 1990, 2000, 2010 and 2020

Exajoules

Region	1990	2000	2010	2020
Africa	15.9	20.9	28.0	33.5
Northern America (excl. US)	8.9	10.6	10.9	11.9
United States	80.3	95.3	92.9	85.5
Latin America and the Caribbean	19.6	25.5	33.1	32.4
Asia (excl. China)	63.3	97.8	131.5	154.7
China	30.4	42.5	101.6	140.2
Europe	126.3	106.7	112.0	101.0
Oceania	4.4	5.5	6.5	6.8
International bunkers	*8.7*	*11.2*	*14.9*	*12.5*
World	**357.7**	**416.0**	**531.3**	**578.6**

8. World total energy supply by source, 1990 – 2020

Exajoules and percentage



9. World total energy supply by source, 1990, 2000, 2010 and 2020

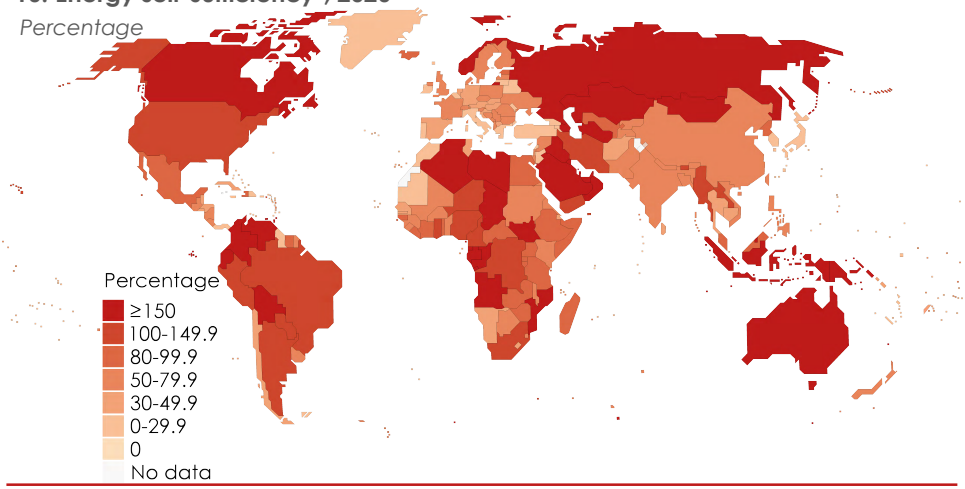
Exajoules

Source	1990	2000	2010	2020
Coal	93.5	99.3	151.4	156.0
Oil	134.3	154.8	173.9	170.8
Natural gas	68.2	86.9	113.9	140.9
Biofuels and waste	30.7	35.3	45.6	53.4
Nuclear	21.8	28.0	29.8	28.9
Electricity and heat	9.3	11.7	16.7	28.5
Total	**357.7**	**416.0**	**531.3**	**578.6**

Primary energy production

10. Energy self-sufficiency[3], 2020

Percentage



Source: UN Energy Statistics Database / UN Geospatial. 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).

FACTS AND FIGURES

World primary production reached 587 EJ in 2020, a 4.2% decline compared to 2019, while having increased by 62.3% compared to 1990, corresponding to an average compounded yearly growth of 1.6%. The yearly drop was due in particular to the three largest energy sources, namely oil (-7.3%) coal (-4.8%), and natural gas (-2.6%), which represented 81.2% of the world total primary energy production in 2020.

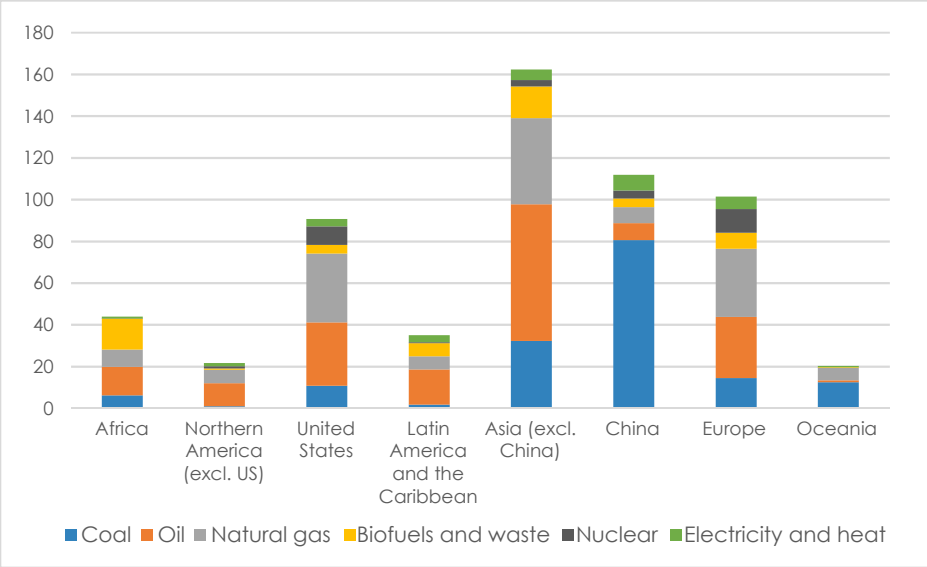
A significant share of 2020 primary energy production occurred in a handful of countries:

- Six countries produced almost 7/8 of all primary coal (87.4%), with China alone producing more than half (50.5%) of the world coal. Among the major producers, the United States had the most substantial decline (-25.5%);
- The United States topped the oil producers with around 17.3% of the world production. Five countries concentrated more than half of all primary oil production (52.8%), but in all of them production diminished in 2020. Iraq oil production contracted by 13.7%;
- Four countries (United States, Russian Federation, Iran and China) produced more than half of all natural gas (52.0%). Of the major four producers, only China increased its natural gas production in 2020 (+9.7%).

(3) See notes on pages 68-73.

11. Primary energy production by region and source, 2020

Exajoules



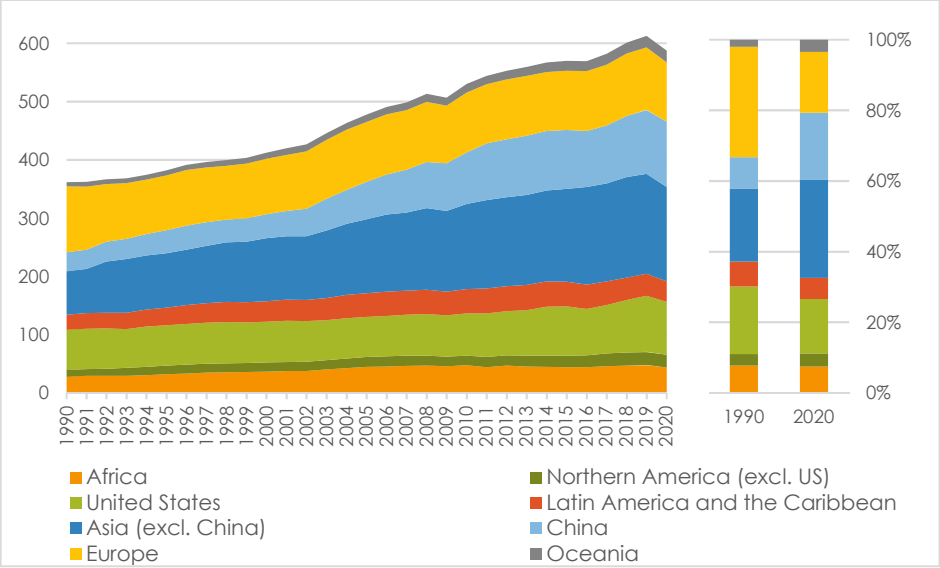
12. Primary energy production by region and source, 2020

Exajoules

Region	Coal	Oil	Natural gas	Biofuels and waste	Nuclear	Electricity and heat	Total
Africa	6.2	13.6	8.3	14.8	0.1	0.9	43.9
Northern America (excl. US)	1.0	11.0	6.5	0.5	1.1	1.5	21.7
United States	10.8	30.4	33.0	4.0	8.9	3.5	90.6
Latin America and the Caribbean	1.7	16.8	6.4	6.3	0.4	3.5	35.1
Asia (excl. China)	32.2	65.5	41.3	15.1	3.2	5.1	162.3
China	80.5	8.2	7.7	4.1	4.0	7.4	111.7
Europe	14.5	29.2	32.7	7.6	11.4	6.0	101.4
Oceania	12.4	0.9	6.0	0.3	-	0.6	20.3
World	**159.4**	**175.6**	**141.8**	**52.8**	**28.9**	**28.5**	**587.0**

13. Total primary energy production by region, 1990 – 2020

Exajoules and percentage



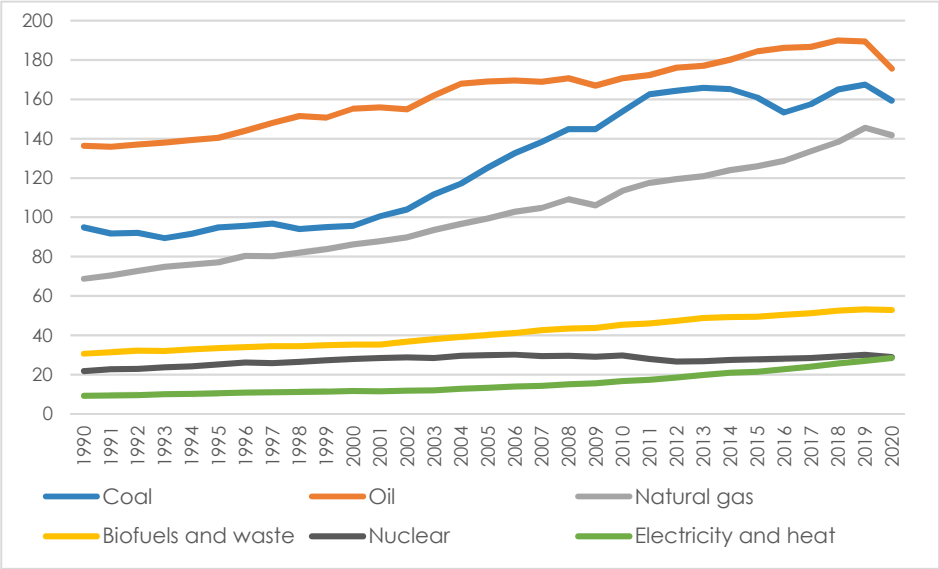
14. Total primary energy production by region, 1990, 2000, 2010 and 2020

Exajoules

Region	1990	2000	2010	2020
Africa	28.1	36.5	47.3	43.9
Northern America (excl. US)	11.6	15.7	16.6	21.7
United States	69.1	69.7	72.3	90.6
Latin America and the Caribbean	25.8	35.4	41.8	35.1
Asia (excl. China)	74.2	108.3	146.1	162.3
China	32.7	40.8	88.6	111.7
Europe	112.9	95.0	102.7	101.4
Oceania	7.4	10.6	14.5	20.3
World	**361.7**	**412.1**	**530.0**	**587.0**

15. World primary energy production by source, 1990 – 2020

Exajoules



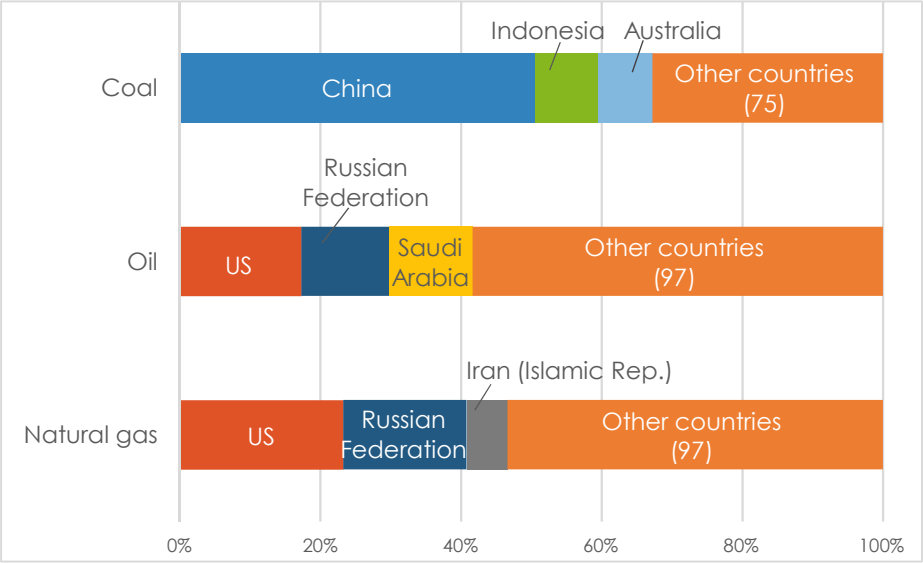
16. World primary energy production by source, 1990, 2000, 2010 and 2020

Percentage

Source	1990	2000	2010	2020
Coal	26.2%	23.2%	29.0%	27.2%
Oil	37.7%	37.7%	32.2%	29.9%
Natural gas	19.0%	20.9%	21.4%	24.2%
Biofuels and waste	8.5%	8.6%	8.6%	9.0%
Nuclear	6.0%	6.8%	5.6%	4.9%
Electricity and heat	2.6%	2.8%	3.2%	4.8%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

17. Primary production of coal, oil, and natural gas, major countries, 2020

Percentage

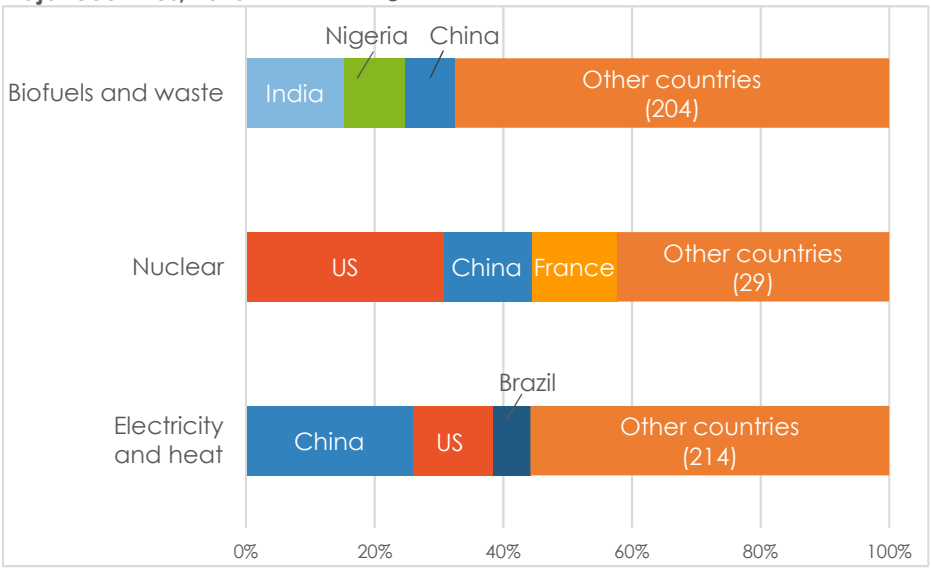


18. Primary production of coal, oil, and natural gas, major countries, 2020

Exajoules

Coal		Oil		Natural gas	
China	80.5	United States	30.4	United States	33.0
Indonesia	14.3	Russian Federation	21.9	Russian Federation	24.8
Australia	12.3	Saudi Arabia	20.8	Iran (Islamic Republic of)	8.2
India	11.6	Canada	11.0	China	7.7
United States	10.8	Iraq	8.5	Canada	6.5
Russian Federation	9.7	China	8.2	Qatar	6.2
South Africa	5.8	United Arab Emirates	7.5	Australia	5.3
Kazakhstan	1.9	Brazil	6.7	Saudi Arabia	4.8
Others	12.4	Others	60.6	Others	45.3
World	**159.4**	**World**	**175.6**	**World**	**141.8**

19. Primary production of biofuels and waste, nuclear, and electricity and heat, major countries, 2020 *– Percentage*

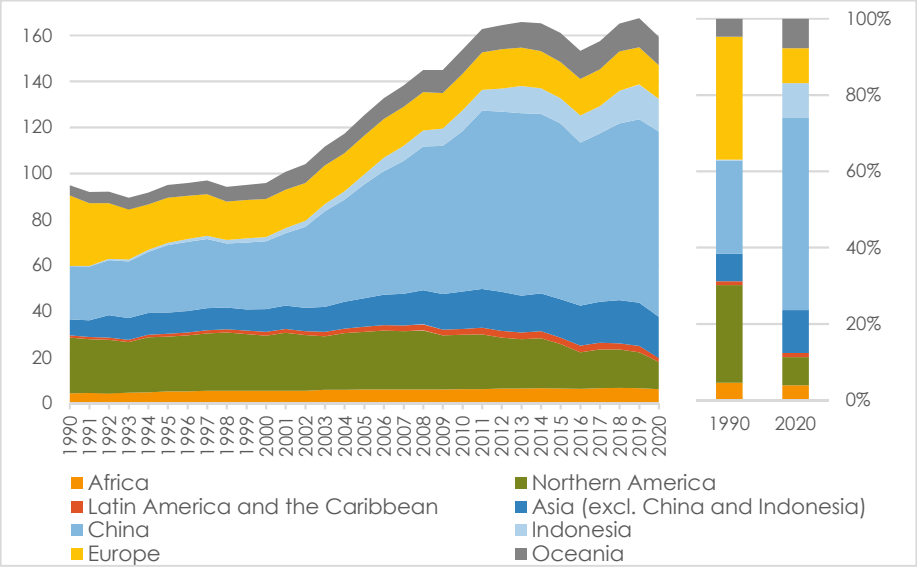


20. Primary production of biofuels and waste, nuclear, and electricity and heat, major countries, 2020 *– Exajoules*

Biofuels and waste		Nuclear		Electricity and heat	
India	8.0	United States	8.9	China	7.4
Nigeria	5.0	China	4.0	United States	3.5
China	4.1	France	3.8	Brazil	1.7
Brazil	4.0	Russian Federation	2.3	Canada	1.5
United States	4.0	Republic of Korea	1.7	India	1.0
Indonesia	1.6	Canada	1.1	Türkiye	0.9
Ethiopia	1.4	Ukraine	0.8	Russian Federation	0.8
Germany	1.3	Germany	0.7	Germany	0.8
Others	23.3	Others	5.6	Others	10.9
World	**52.8**	**World**	**28.9**	**World**	**28.5**

21. Primary production of coal by region, 1990 – 2020

Exajoules and percentage



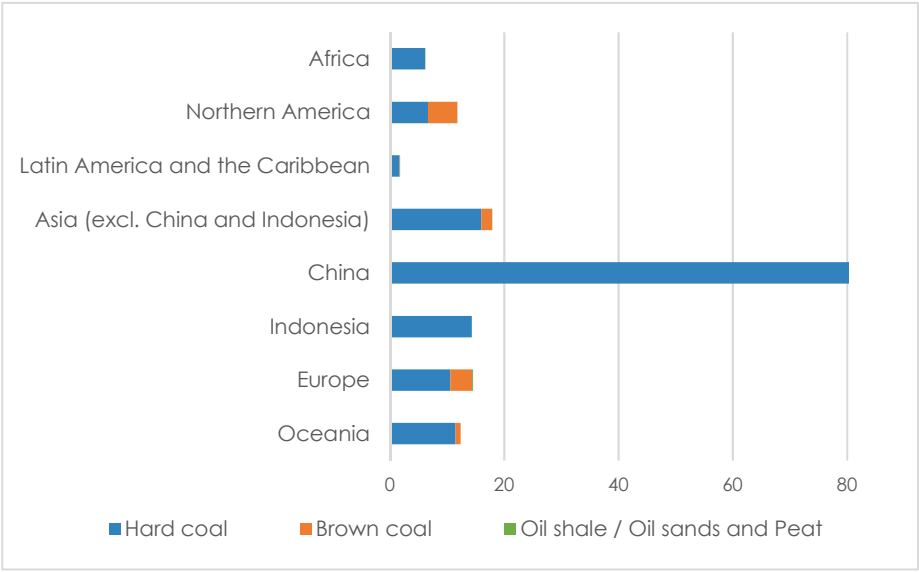
22. Primary production of coal by region, 1990, 2000, 2010 and 2020

Exajoules

Region	1990	2000	2010	2020
Africa	4.3	5.5	6.1	6.2
Northern America	24.3	23.9	23.7	11.8
Latin America and the Caribbean	0.9	1.6	2.5	1.7
Asia (excl. China and Indonesia)	6.9	9.9	16.2	17.9
China	23.1	29.5	69.7	80.5
Indonesia	0.2	1.9	9.2	14.3
Europe	30.6	16.5	15.9	14.5
Oceania	4.5	7.0	10.6	12.4
World	**94.8**	**95.7**	**153.9**	**159.4**

23. Primary production of coal by region and type of fuel, 2020

Exajoules



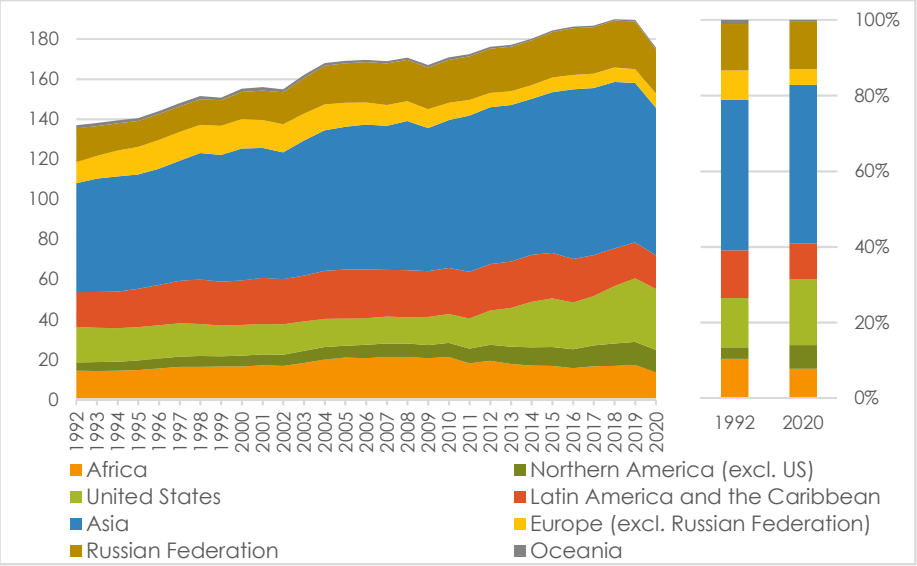
24. Primary production of coal by region and type of fuel, 2020

Exajoules

Region	Hard coal	Brown coal	Oil shale/ Peat	Total
Africa	6.2	-	0+	6.2
Northern America	6.7	5.1	-	11.8
Latin America and the Caribbean	1.7	0.1	0+	1.7
Asia (excl. China and Indonesia)	16.0	1.8	0+	17.9
China	80.5	-	-	80.5
Indonesia	14.3	-	-	14.3
Europe	10.6	3.8	0.2	14.5
Oceania	11.5	0.9	-	12.4
World	**147.5**	**11.7**	**0.2**	**159.4**

25. Primary production of oil by region, 1992 – 2020

Exajoules and percentage



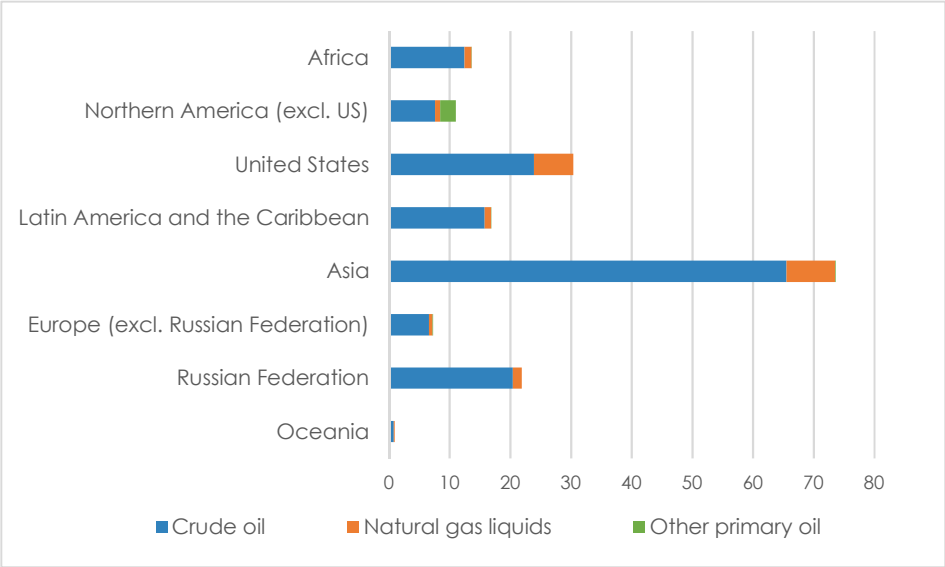
26. Primary production of oil by region, 1992, 2000, 2010 and 2020

Exajoules

Region	1992	2000	2010	2020
Africa	14.2	16.4	21.1	13.6
Northern America (excl. US)	4.1	5.4	7.0	11.0
United States	17.8	15.3	14.4	30.4
Latin America and the Caribbean	17.3	22.3	23.1	16.8
Asia	54.4	65.8	73.9	73.6
Europe (excl. Russian Federation)	10.7	14.7	8.6	7.3
Russian Federation	16.8	13.6	21.4	21.9
Oceania	1.5	1.7	1.2	0.9
World	**137.0**	**155.2**	**170.8**	**175.6**

27. Primary production of oil by region and type of fuel, 2020

Exajoules



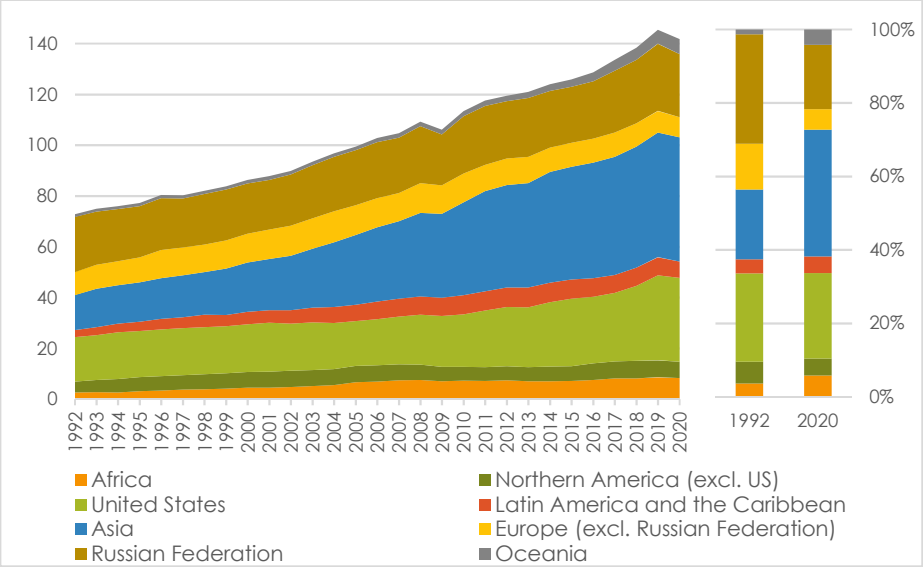
28. Primary production of oil by region and type of fuel, 2020

Exajoules

Region	Crude oil	Natural gas liquids	Other primary oil	Total
Africa	12.4	1.2	0.01	13.6
Northern America (excl. US)	7.6	0.8	2.6	11.0
United States	23.9	6.5	-	30.4
Latin America and the Caribbean	15.8	1.1	0.01	16.8
Asia	65.5	8.1	0.1	73.6
Europe (excl. Russian Federation)	6.6	0.6	0.1	7.3
Russian Federation	20.4	1.5	-	21.9
Oceania	0.8	0.1	-	0.9
World	**153.0**	**19.9**	**2.8**	**175.6**

29. Production of natural gas by region, 1992 – 2020

Exajoules and percentage



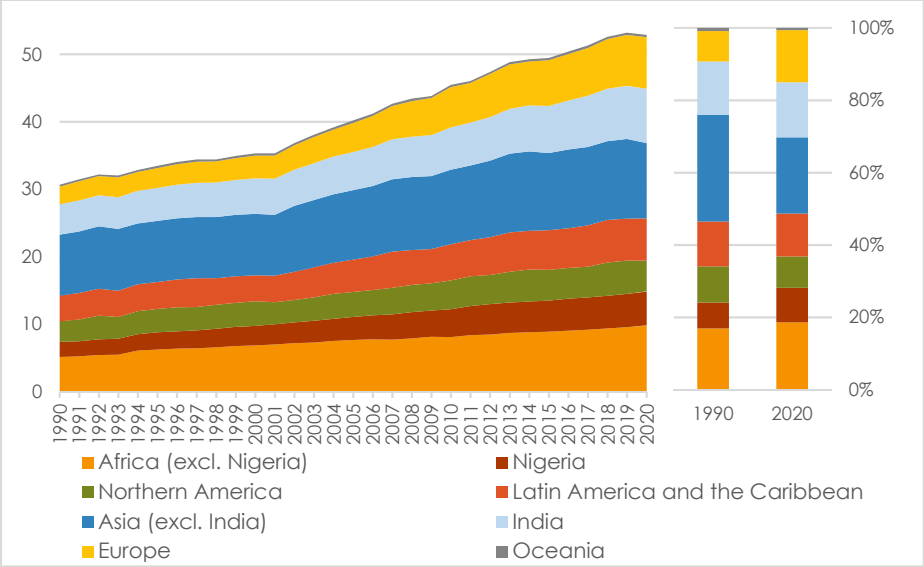
30. Production of natural gas by region, 1992, 2000, 2010 and 2020

Exajoules

Region	1992	2000	2010	2020
Africa	2.6	4.5	7.3	8.3
Northern America (excl. US)	4.3	6.2	5.4	6.5
United States	17.5	18.7	20.7	33.0
Latin America and the Caribbean	2.8	5.0	7.5	6.4
Asia	13.8	19.4	36.6	49.0
Europe (excl. Russian Federation)	9.0	11.4	11.3	7.9
Russian Federation	21.7	19.7	22.6	24.8
Oceania	1.0	1.4	2.0	6.0
World	**72.8**	**86.3**	**113.5**	**141.8**

31. Primary production of biofuels and waste by region, 1990 – 2020

Exajoules and percentage



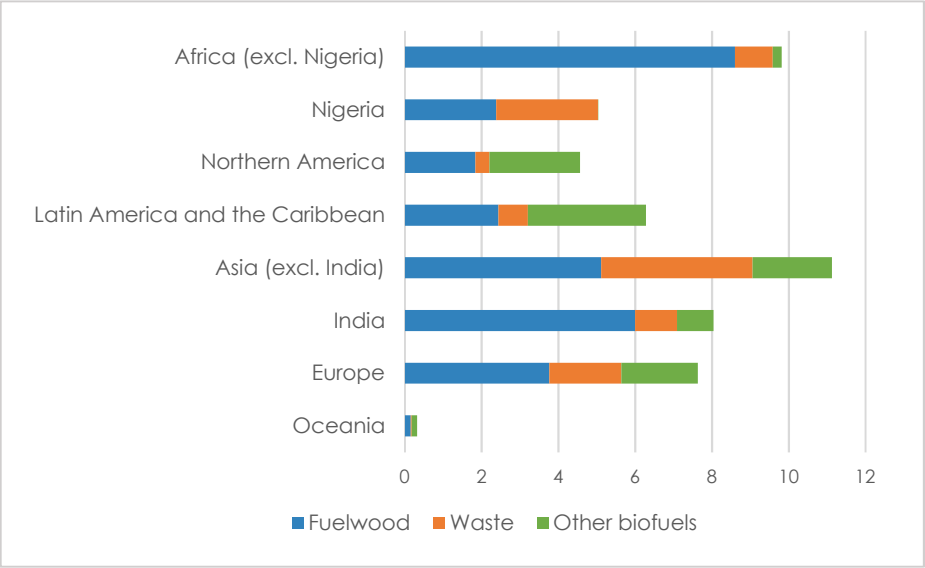
32. Primary production of biofuels and waste by region, 1990, 2000, 2010 and 2020

Exajoules

Region	1990	2000	2010	2020
Africa (excl. Nigeria)	5.2	6.8	8.1	9.8
Nigeria	2.2	2.9	4.1	5.0
Northern America	3.1	3.6	4.3	4.6
Latin America and the Caribbean	3.8	3.8	5.4	6.3
Asia (excl. India)	9.0	9.1	11.0	11.1
India	4.5	5.3	6.3	8.0
Europe	2.6	3.3	6.0	7.6
Oceania	0.3	0.3	0.3	0.3
World	**30.6**	**35.3**	**45.5**	**52.8**

33. Primary production of biofuels and waste by region and type of fuel, 2020

Exajoules



34. Primary production of biofuels and waste by region and type of fuel, 2020

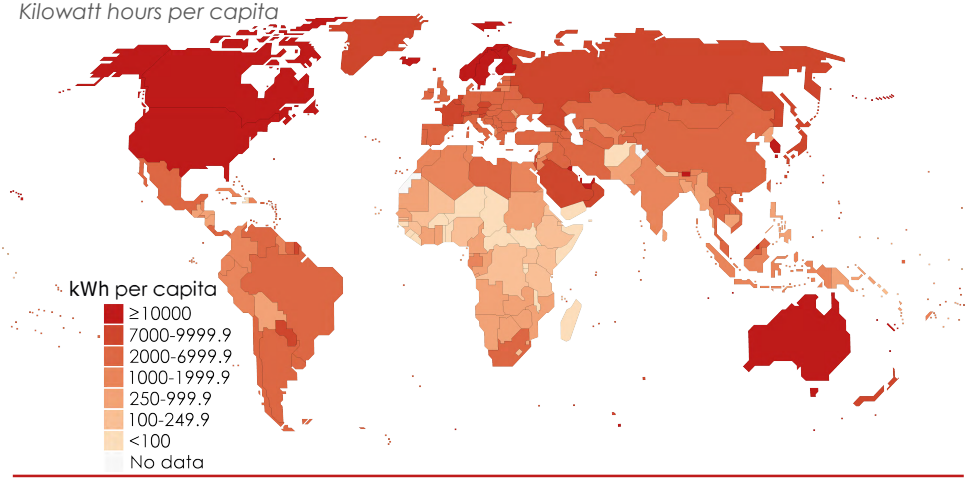
Exajoules

Region	Fuelwood	Waste	Other biofuels	Total
Africa (excl. Nigeria)	8.6	1.0	0.2	9.8
Nigeria	2.4	2.6	0+	5.0
Northern America	1.8	0.4	2.4	4.6
Latin America and the Caribbean	2.4	0.8	3.1	6.3
Asia (excl. India)	5.1	3.9	2.1	11.1
India	6.0	1.1	1.0	8.0
Europe	3.8	1.9	2.0	7.6
Oceania	0.2	0.03	0.1	0.3
World	**30.3**	**11.7**	**10.8**	**52.8**

Electricity

35. Electricity generation per capita, 2020

Kilowatt hours per capita



Source: UN Energy Statistics Database / UN Geospatial. 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).

FACTS AND FIGURES

In 2020, total electricity generation was 26.8 PWh, slightly decreasing compared to 2019 (-0.6%); overall, electricity from renewable sources kept increasing in 2020 – for example, solar grew by 20.6% and wind by 11.9% - while electricity generated from thermal sources declined by 2.5% compared to 2019.

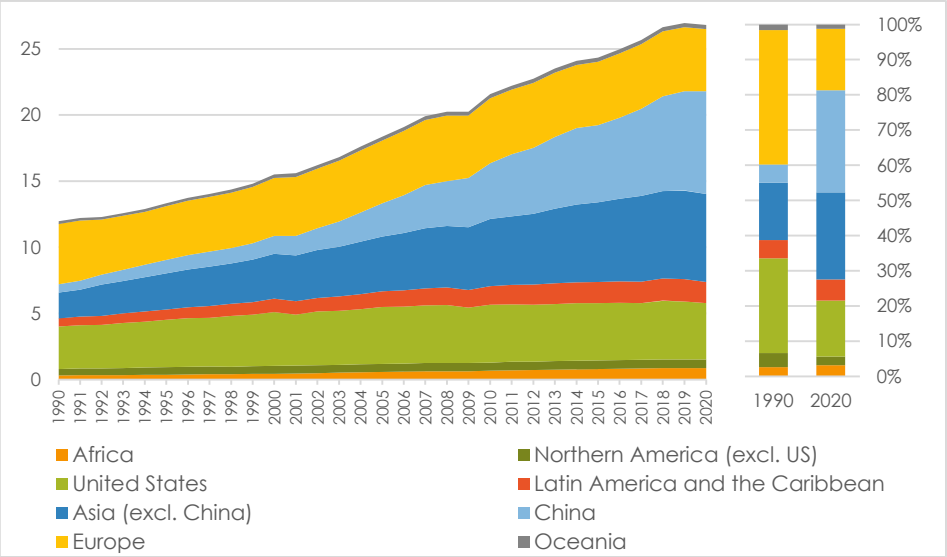
In the long run, electricity increased by 124.0% between 1990 and 2020; the largest absolute growth was observed for electricity generated from coal (5,022 TWh or +113.1%) and natural gas (4,619 TWh or +258.8%), while the fastest growth was visible for electricity generated from solar, wind and other sources[4] (+4,067% or 2,501 TWh).

In 2020, 72.0% of all electricity was generated from non-renewable sources, mainly from non-renewable thermal (61.9% or 16,603 TWh) and nuclear sources (10.0% or 2,674 TWh). However, renewable electricity accounted for 61.7% of global electricity capacity additions over the last decade, growing to 2,929 GW in 2020 and reaching 37.7% of total electricity capacity.

(4) See notes on pages 68-73.

36. Total electricity generation by region, 1990-2020

Petawatt hours and percentage



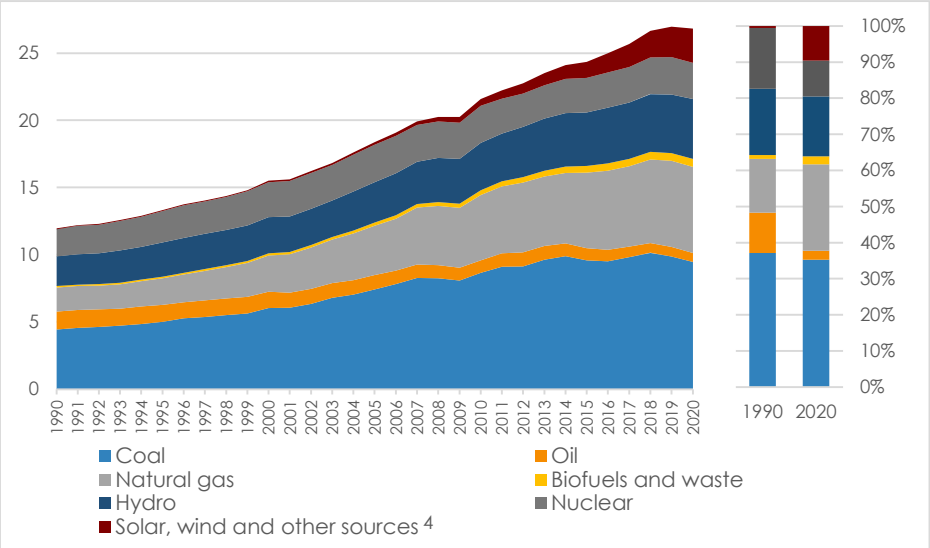
37. Total electricity generation by region, 1990, 2000, 2010 and 2020

Terawatt hours

Region	1990	2000	2010	2020
Africa	311.6	437.3	677.6	848.0
Northern America (excl. US)	482.9	606.6	604.3	653.1
United States	3,218.6	4,052.7	4,378.4	4,260.0
Latin America and the Caribbean	624.6	1,010.6	1,405.5	1,610.0
Asia (excl. China)	1,947.5	3,396.2	5,091.1	6,652.9
China	621.2	1,355.6	4,207.2	7,779.1
Europe	4,571.5	4,386.8	4,913.7	4,690.7
Oceania	192.8	257.9	308.1	322.1
World	**11,970.7**	**15,503.8**	**21,585.9**	**26,815.9**

38. World electricity generation by source, 1990-2020

Petawatt hours and percentage



39. World electricity generation by source, 1990, 2000, 2010 and 2020

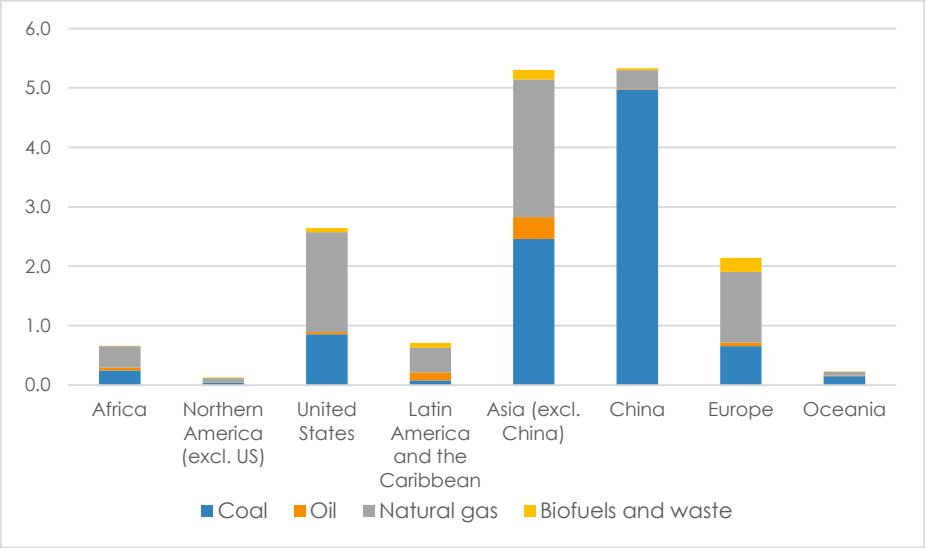
Terawatt hours

Source	1990	2000	2010	2020
Thermal	7,696.4	10,104.1	14,790.1	17,131.9
- Coal	4,441.7	6,042.0	8,659.4	9,464.0
- Oil	1,339.2	1,198.8	918.3	663.7
- Natural gas	1,785.0	2,699.7	4,870.0	6,403.8
- Biofuels and waste	130.5	163.7	342.3	600.4
Nuclear	2,019.8	2,589.0	2,756.3	2,673.9
Hydro	2,193.0	2,706.8	3,528.7	4,447.7
Solar, wind and other sources[4]	61.5	103.8	510.8	2,562.4
Total	**11,970.7**	**15,503.8**	**21,585.9**	**26,815.9**

(4) See notes on pages 68-73.

40. Thermal electricity generation by region and source, 2020

Petawatt hours



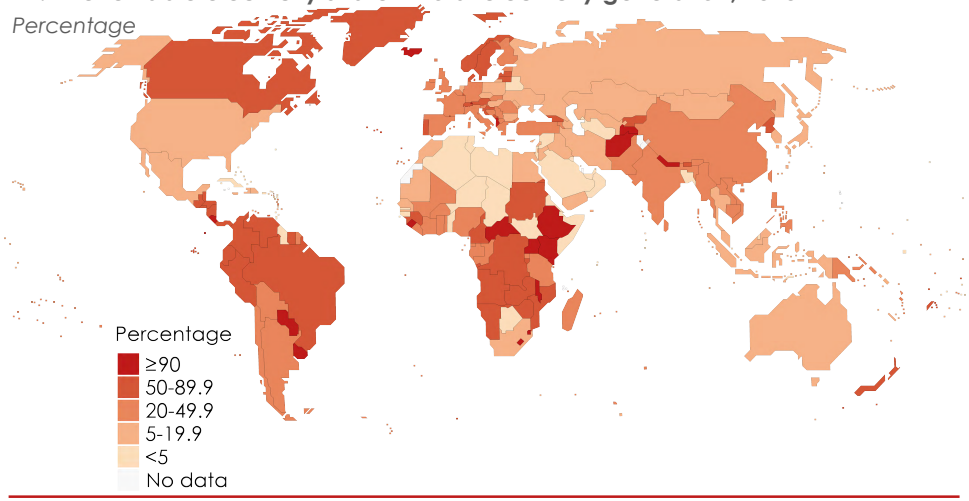
41. Thermal electricity generation by region and source, 2020

Terawatt hours

Region	Coal	Oil	Natural gas	Biofuels and waste	Total
Africa	247.0	49.5	349.7	2.9	649.1
Northern America (excl. US)	38.7	5.8	72.4	10.2	127.1
United States	855.8	37.4	1,680.1	70.5	2,643.8
Latin America and the Caribbean	77.2	134.0	415.5	80.9	707.6
Asia (excl. China)	2,462.2	361.3	2,318.5	162.4	5,304.4
China	4,976.4	8.6	313.5	31.7	5,330.2
Europe	657.4	55.6	1,191.7	237.5	2,142.2
Oceania	149.4	11.5	62.4	4.2	227.4
World	**9,464.0**	**663.7**	**6,403.8**	**600.4**	**17,131.9**

42. Renewable electricity share in total electricity generation, 2020

Percentage



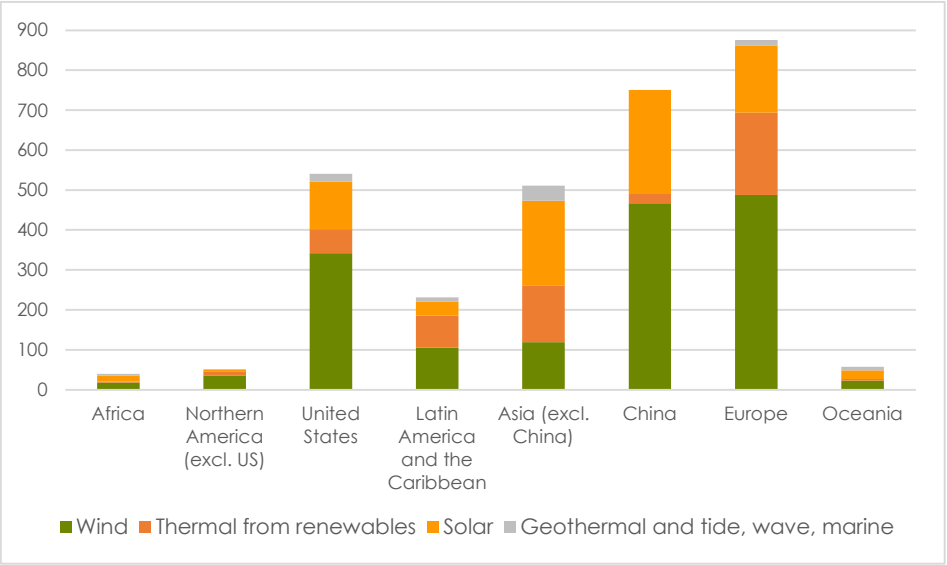
Source: UN Energy Statistics Database / UN Geospatial. The designations employed and the presentation of material on the maps in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, 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).

43. Renewable electricity generation by type (hydro, wind, total), major countries, 2020 - *Terawatt hours*

Country	Hydro	Country	Wind	Country	Total renewables
China	1,355.2	China	466.5	China	2,105.9
Brazil	396.3	United States	341.8	United States	848.5
Canada	386.6	Germany	132.1	Brazil	522.9
United States	308.2	United Kingdom	75.4	Canada	437.2
Russian Fed.	214.4	India	67.4	India	353.3
India	160.9	Brazil	57.1	Germany	256.7
Others	1,626.1	Others	456.1	Others	2,979.1
World	**4,447.7**	**World**	**1,596.3**	**World**	**7,503.6**

44. Electricity from non-hydro renewable sources by region and type, 2020

Terawatt hours



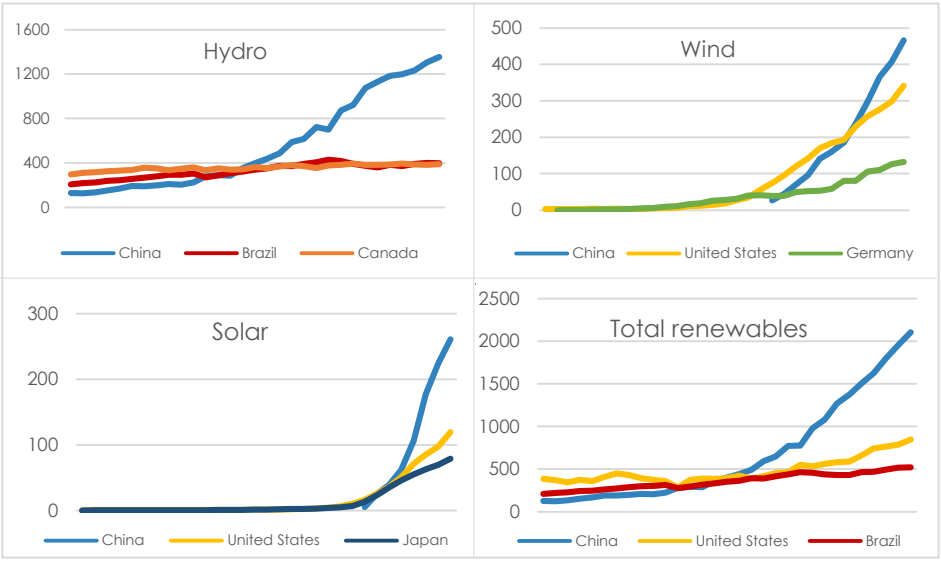
45. Electricity from non-hydro renewable sources by region and type, 2020

Terawatt hours

Region	Wind	Thermal (ren.)	Solar	Geoth. & tide	Total
Africa	17.7	2.9	14.3	5.1	39.9
Northern America (excl. US)	35.6	10.1	4.8	-	50.6
United States	341.8	60.3	119.3	18.8	540.2
Latin America and the Caribbean	104.9	80.8	34.9	10.2	230.8
Asia (excl. China)	119.2	141.2	212.8	37.7	510.9
China	466.5	23.4	260.9	-	750.7
Europe	487.8	206.1	168.1	13.6	875.6
Oceania	22.8	4.2	21.5	8.7	57.2
World	**1,596.3**	**528.8**	**836.6**	**94.1**	**3,055.9**

46. Renewable electricity by type, major countries in 2020, 1990-2020

Terawatt hours



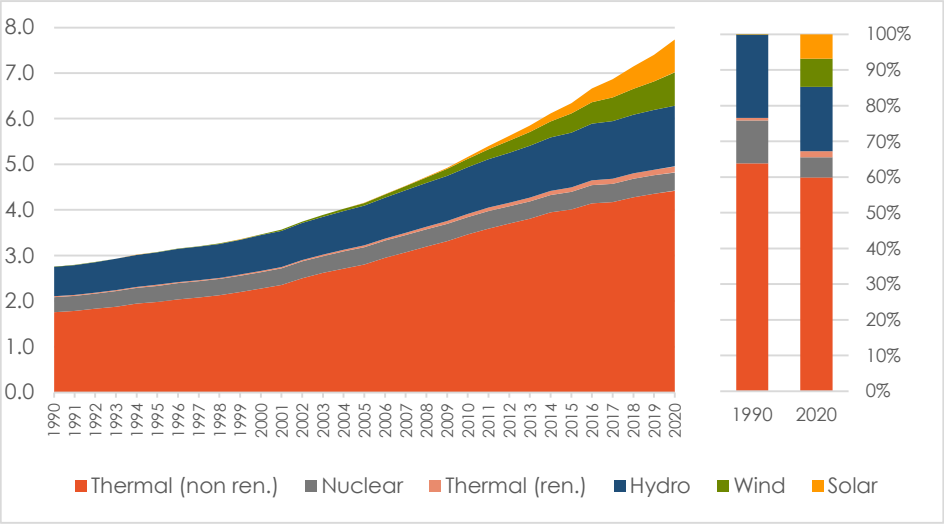
47. Renewable electricity by type, major countries in 2020, 1990 and 2020, and share in total electricity generation, 2020

Gigawatt hours and percentage

Hydro	1990	2020	%2020	Wind	1990	2020	%2020
China	126,720	1,355,210	17.4%	China	-	466,470	6.0%
Brazil	206,708	396,328	63.8%	US	3,066	341,818	8.0%
Canada	296,848	386,617	59.3%	Germany	215 [1991]	132,102	23.1%
Solar	**1990**	**2020**	**%2020**	**Total renewables**	**1990**	**2020**	**%2020**
China	-	260,857	3.4%	China	126,720	2,105,915	27.1%
US	666	119,329	2.8%	US	385,049	848,460	19.9%
Japan	67	79,087	7.8%	Brazil	210,567	522,870	84.2%

48. World electricity capacity by type[5], 1990-2020

Terawatt and percentage



49. World electricity capacity by type[5], 1990, 2000, 2010 and 2020

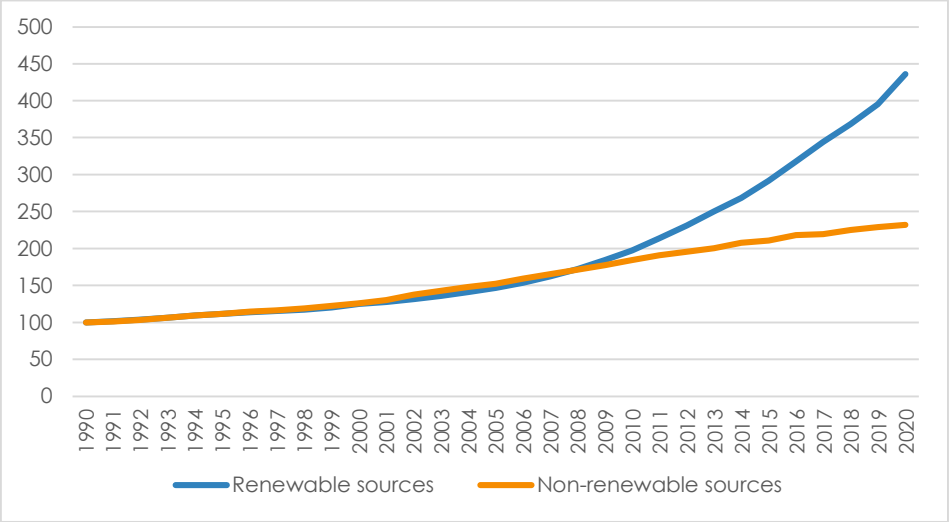
Gigawatt

Type	1990	2000	2010	2020
Non-renewable, of which	2,089.2	2,632.4	3,851.6	4,848.4
- Thermal (non-ren.)	1,758.7	2,273.8	3,461.1	4,420.5
- Nuclear	330.4	358.3	381.8	400.0
Renewable, of which	671.4	838.6	1,324.9	2,928.5
- Thermal (ren.)	19.0	29.2	65.9	132.5
- Hydro	643.6	782.6	1,026.9	1,329.4
- Wind	2.4	17.1	180.8	733.7
- Solar	0.4	1.2	40.7	718.0
Total	**2,760.5**	**3,471.0**	**5,176.5**	**7,776.9**

(5) See notes on pages 68-73.

50. World electricity capacity by type, 1990-2020

Index number (1990=100)



51. World electricity capacity by type[5], 1990, 2000, 2010 and 2020, and share in 2020

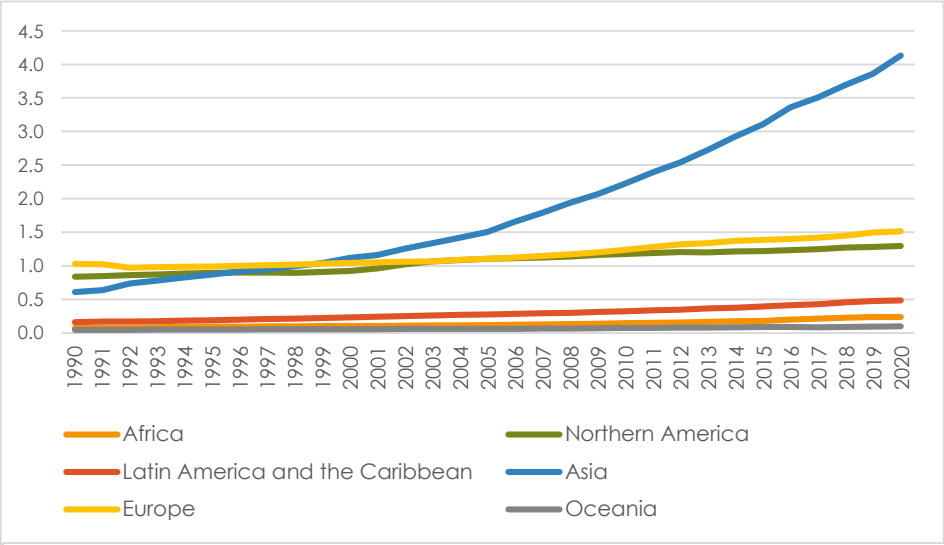
Index number (1990=100) and percentage

Type	1990	2000	2010	2020	%2020
Non-renewable, *of which*	100	126	184	232	62.3%
- Thermal (non-ren.)	100	129	197	251	56.8%
- Nuclear	100	108	116	121	5.1%
Renewable, *of which*	100	125	197	436	37.7%
- Thermal (ren.)	100	153	347	698	1.7%
- Hydro	100	122	160	207	17.1%
- Wind	100	728	7,679	31,154	9.4%
- Solar	100	337	11,420	201,687	9.2%
Total	**100**	**126**	**188**	**282**	**100.0%**

(5) See notes on pages 68-73.

52. Total electricity capacity by region, 1990-2020

Terawatt



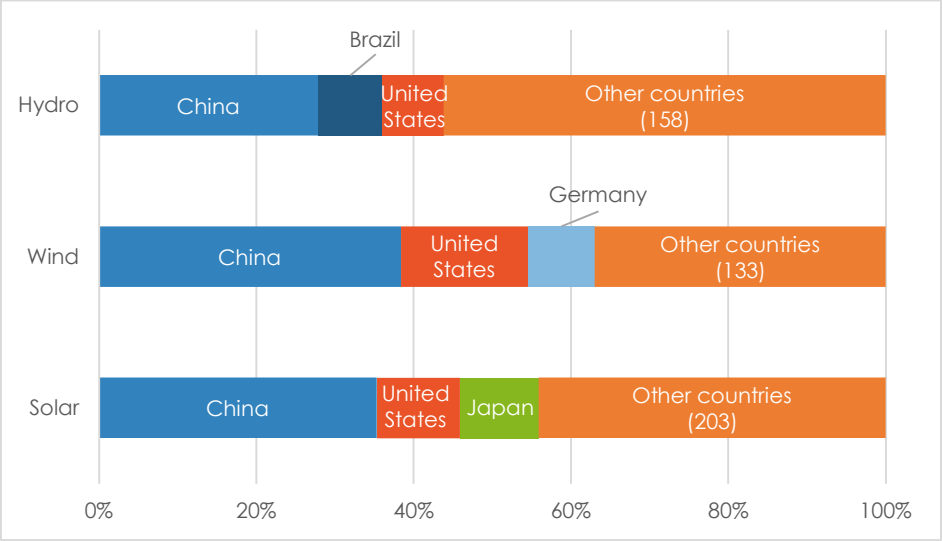
53. Total electricity capacity by region, 1990, 2000, 2010 and 2020

Gigawatt

Region	1990	2000	2010	2020
Africa	74.7	101.5	143.2	239.3
Northern America	838.0	923.0	1,174.9	1,298.5
Latin America and the Caribbean	162.4	231.1	324.1	487.8
Asia	611.8	1,119.4	2,222.7	4,134.3
Europe	1,026.6	1,040.2	1,238.3	1,516.3
Oceania	47.0	55.8	73.3	100.6
World	**2,760.5**	**3,471.0**	**5,176.5**	**7,776.9**

54. Electricity capacity by type (hydro, wind, solar), major countries, 2020

Percentage



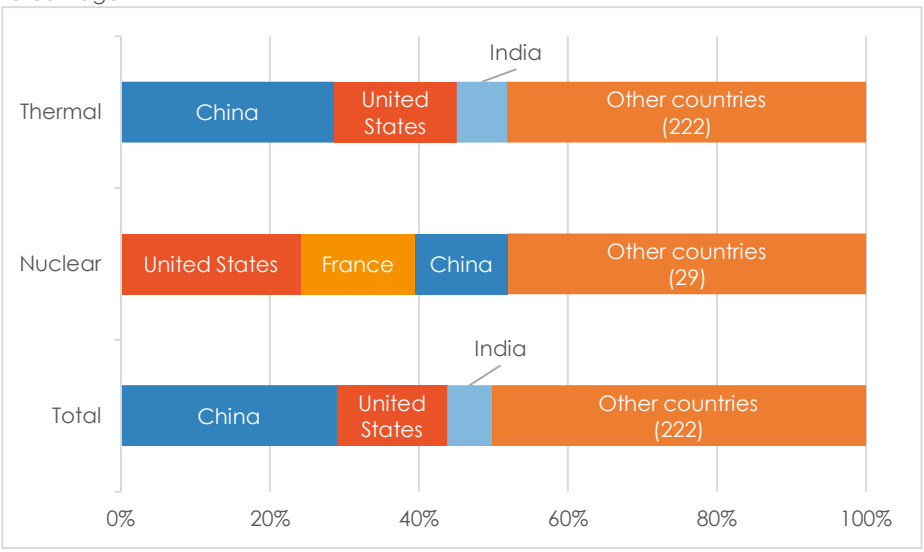
55. Electricity capacity by type (hydro, wind, solar), major countries, 2020

Gigawatt

Country	Hydro	Country	Wind	Country	Solar
China	370.3	China	281.7	China	253.6
Brazil	109.3	United States	118.5	United States	75.8
United States	103.0	Germany	62.2	Japan	71.9
Canada	81.6	India	42.8	Germany	53.7
Russian Fed.	52.9	Spain	26.8	India	40.3
Japan	50.0	United Kingdom	24.5	Italy	21.7
Others	562.3	Others	177.3	Others	201.1
World	**1,329.4**	**World**	**733.7**	**World**	**718.0**

56. Electricity capacity by type (thermal, nuclear, total), major countries, 2020

Percentage



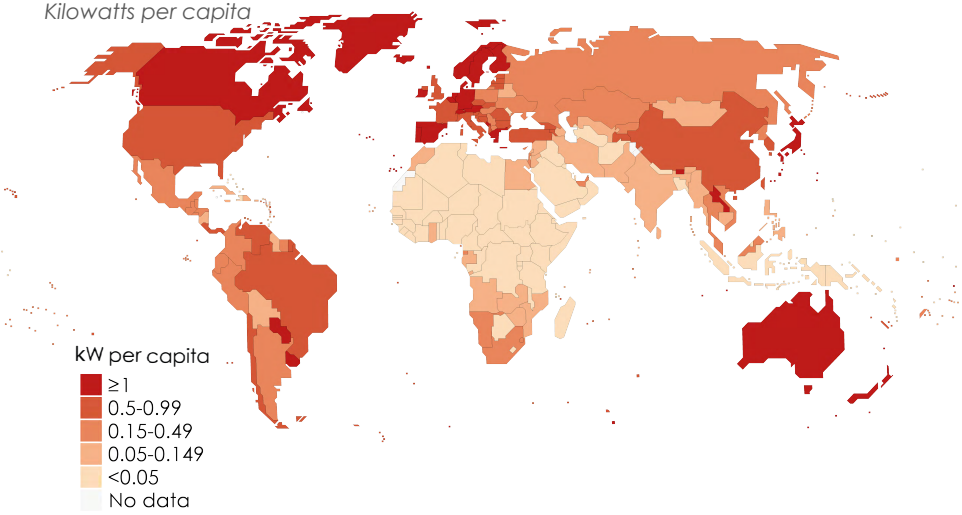
57. Electricity capacity by type (thermal, nuclear, total), major countries, 2020

Gigawatt

Country	Thermal	Country	Nuclear	Country	Total
China	1,302.8	United States	96.5	China	2,258.3
United States	750.1	France	61.4	United States	1,147.9
India	307.1	China	49.9	India	458.4
Russian Fed.	215.2	Japan	33.1	Japan	353.7
Japan	191.8	Russian Fed.	30.3	Russian Fed.	300.5
Germany	98.3	Rep. of Korea	23.3	Germany	233.7
Others	1,687.7	Others	105.6	Others	3,024.4
World	**4,553.0**	**World**	**400.0**	**World**	**7,776.9**

58. Renewable electricity capacity per capita, 2020

Kilowatts per capita



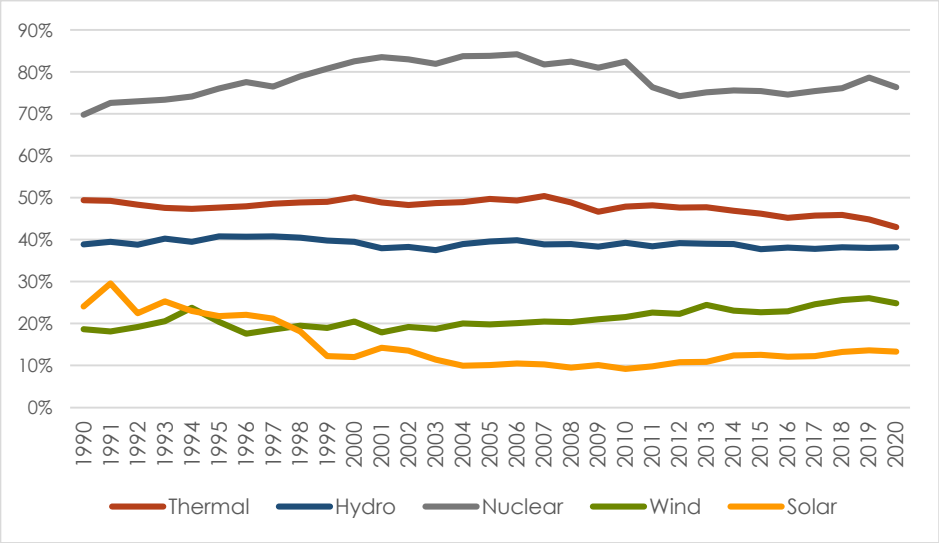
Source: UN Energy Statistics Database / UN Geospatial. The designations employed and the presentation of material on the maps in this publication do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, 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).

59. Renewable electricity capacity (total and per capita) and share of total capacity, major countries, 2020 - *Gigawatt, kilowatt per capita and percentage*

Country	Renewable capacity	Country	REN capacity per capita	Country	% REN in total capacity
China	929.1	Iceland	7.83	Paraguay	100.0%
US	312.2	Norway	7.06	Bhutan	99.7%
Brazil	150.0	Sweden	3.08	Lesotho	99.3%
India	140.0	Bhutan	3.02	Ethiopia	97.7%
Germany	137.1	Luxembourg	2.74	Norway	97.4%
Japan	130.6	Canada	2.67	Nepal	96.6%
Canada	101.2	Austria	2.37	Liechtenstein	96.5%
World	**2,928.5**	**World**	**0.37**	**World**	**37.7%**

60. Utilization of electricity capacity by type, 1990-2020

Percentage



61. Utilization of electricity capacity by type, 1990, 2000, 2010 and 2020

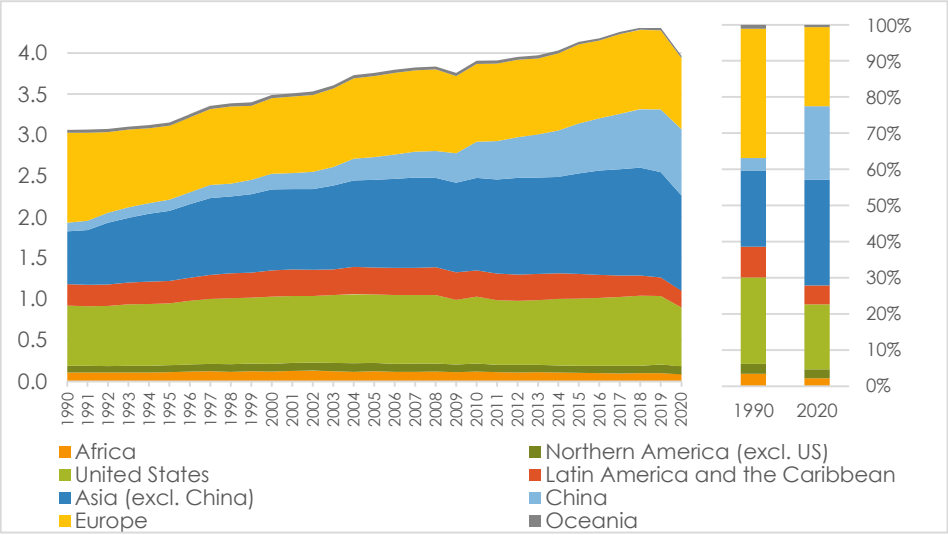
Percentage

Type	1990	2000	2010	2020
Thermal	49%	50%	48%	43%
Hydro	39%	39%	39%	38%
Nuclear	70%	82%	82%	76%
Wind	19%	20%	22%	25%
Solar	24%	12%	9%	13%
Total	**50%**	**51%**	**48%**	**39%**

Refinery output

62. Total refinery output by region, 1990-2020

Billion metric tons



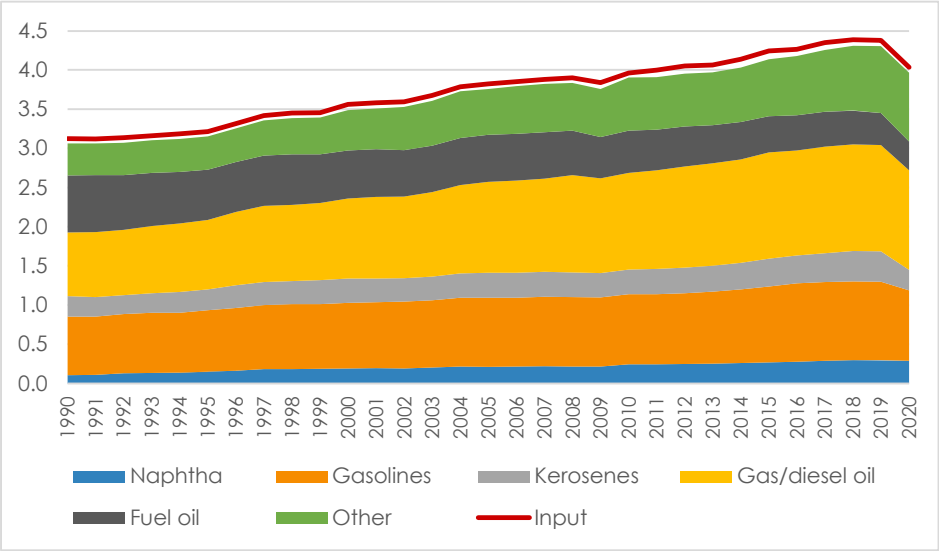
63. Total refinery output by region, 1990, 2000, 2010 and 2020

Million metric tons

Region	1990	2000	2010	2020
Africa	106.3	118.3	119.0	86.1
Northern America (excl. US)	84.2	93.7	96.1	97.9
United States	730.6	817.9	815.8	714.3
Latin America and the Caribbean	261.8	319.4	318.4	205.5
Asia (excl. China)	644.0	985.5	1,127.5	1,158.5
China	106.0	191.8	440.5	808.5
Europe	1,094.3	919.7	947.7	865.1
Oceania	35.5	41.8	36.8	27.2
World	**3,062.7**	**3,488.0**	**3,901.8**	**3,963.1**

64. World total refinery input and refinery output by type of fuel, 1990-2020

Billion metric tons

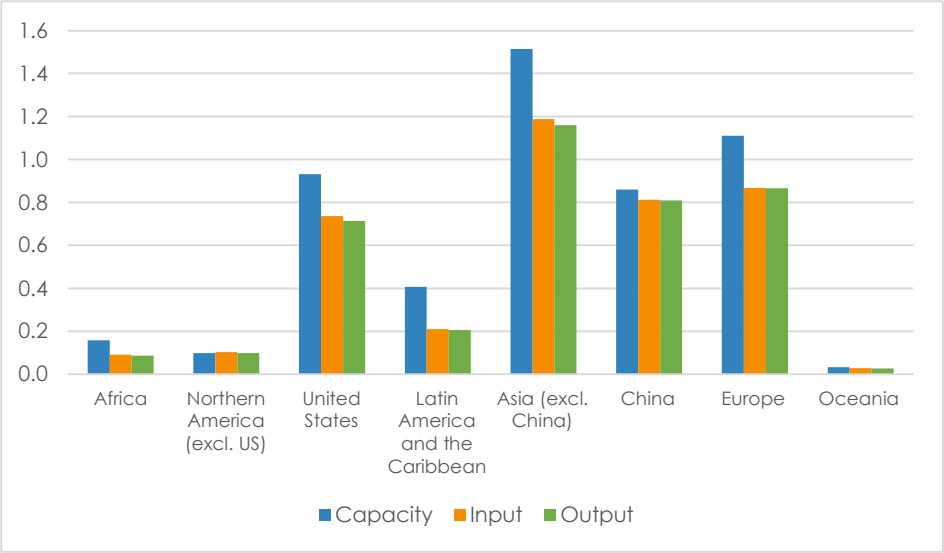


65. World total refinery input and refinery output by type of fuel, 1990, 2000, 2010 and 2020 - *Million metric tons*

Refinery input and output	1990	2000	2010	2020
Total refinery input	**3,123.4**	**3,559.0**	**3,962.9**	**4,033.5**
Total refinery output	**3,062.7**	**3,488.0**	**3,901.8**	**3,963.1**
- Naphtha	104.8	192.5	242.6	288.8
- Gasolines	749.1	833.7	894.5	897.5
- Kerosenes	258.1	310.8	316.2	260.6
- Gas/diesel oil	814.9	1,023.0	1,232.6	1,273.1
- Fuel oil	727.7	614.4	538.4	365.5
- Other	408.1	513.6	677.5	877.6

66. Total refinery capacity, input and output by region, 2020

Billion metric tons



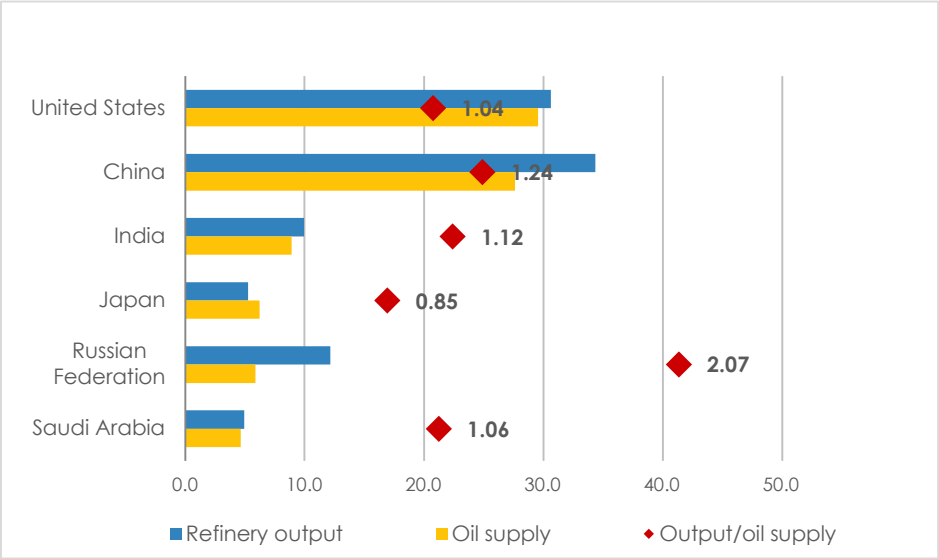
67. Total refinery capacity, input and output by region, 2020

Million metric tons

Region	Capacity	Input	Output
Africa	158.4	90.5	86.1
Northern America (excl. US)	98.7	102.1	97.9
United States	930.8	736.7	714.3
Latin America and the Caribbean	406.4	210.4	205.5
Asia (excl. China)	1,514.1	1,187.1	1,158.5
China	860.0	812.7	808.5
Europe	1,110.6	866.5	865.1
Oceania	32.0	27.6	27.2
World	**5,111.0**	**4,033.5**	**3,963.1**

68. Total refinery output and total oil supply, largest oil supply countries, 2020

Exajoules and ratio between total refinery output and total oil supply



69. Total refinery output and total oil supply[6], largest oil supply countries, 2020

Exajoules and ratio between total refinery output and total oil supply

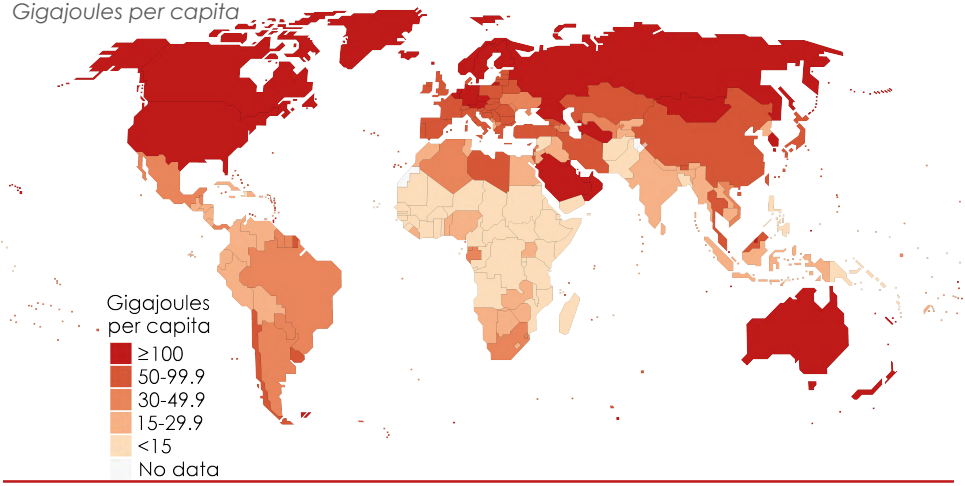
Country	Refinery output	Oil supply[6]	Output/ oil supply
United States	30.6	29.6	1.04
China	34.3	27.6	1.24
India	10.0	8.9	1.12
Japan	5.3	6.2	0.85
Russian Federation	12.1	5.9	2.07
Saudi Arabia	4.9	4.7	1.06
Others	72.7	75.4	0.96
World	**170.0**	**170.8**	**-**

(6) See notes on pages 68-73.

Total final consumption

70. Total final consumption per capita, 2020

Gigajoules per capita



Source: UN Energy Statistics Database / UN Geospatial. 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).

FACTS AND FIGURES

World total final consumption[7] (TFC) amounted to 398.7 EJ in 2020, a decrease by 4.2% compared to 2019. The largest drop occurred in the Americas (-8.0%) and Europe (-4.7%) while in Asia consumption remained almost constant (-0.3%).

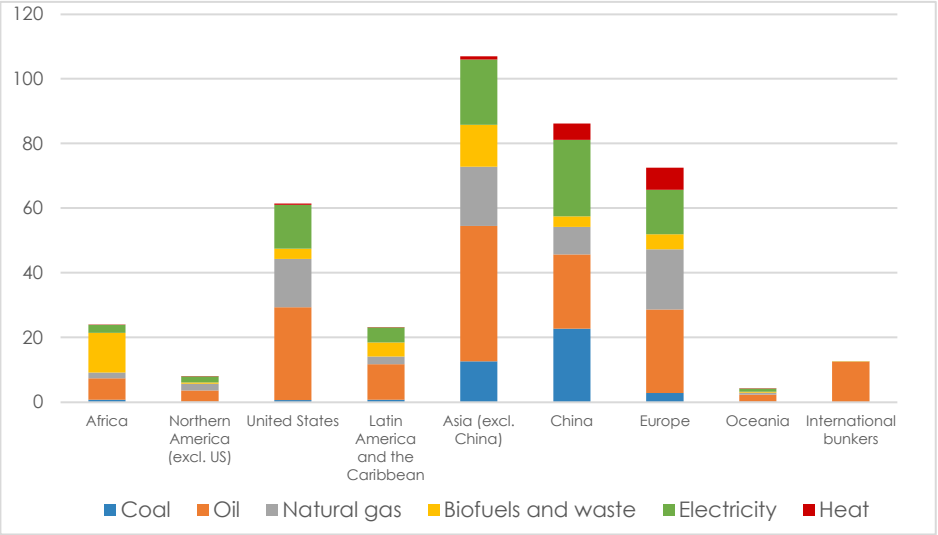
The most significant reduction affected the domestic transport sector (-10.6%), and the international marine and aviation bunkers (-27.3%); industry consumption declined by 1.6% while consumption by households remained almost constant (+0.7%). Despite the decrease, industry and transport were still the two leading sectors in terms of TFC in 2020, accounting for a combined 55.3% of total energy use.

In 2020, 79.3% of coal TFC (or 32.0 EJ) occurred in the industry sector, while 50.2% of oil TFC (almost 78 EJ) was used for domestic transportation. Most of natural gas was consumed in industry (38.3% or 25.8 EJ) and households (29.5% or 19.8 EJ). The largest share of electricity end use was accounted for by the industry sector (42.4%). Households were the major users of biofuels and waste, accounting for almost 57% of all TFC of these energy sources, and for 27.9% of household TFC worldwide.

(7) See notes on pages 68-73.

71. Total final consumption by region and source, 2020

Exajoules



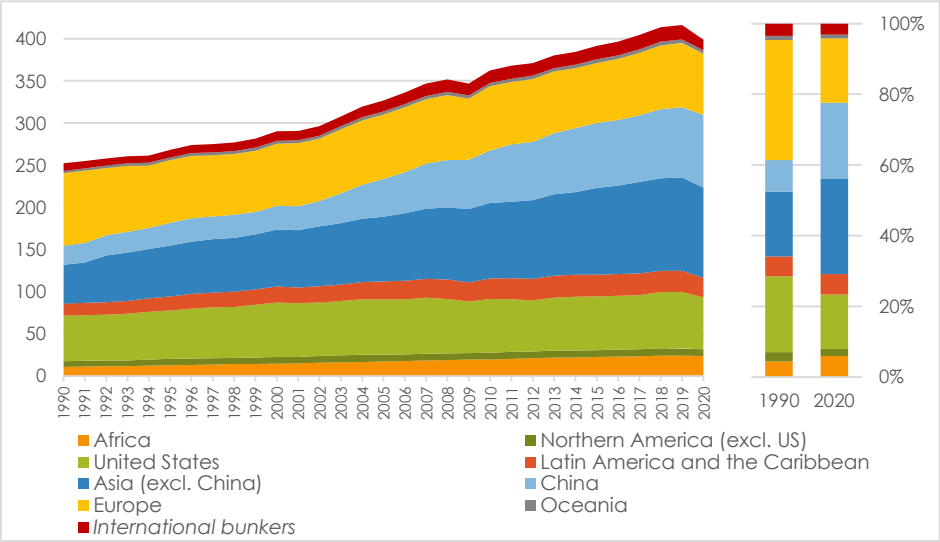
72. Total final consumption by region and source, 2020

Exajoules

Region	Coal	Oil	Natural gas	Biofuels and waste	Elec-tricity	Heat	Total
Africa	0.7	6.6	1.8	12.3	2.4	0.01	23.9
Northern America (excl. US)	0.1	3.5	2.1	0.4	1.9	0.02	8.0
United States	0.6	28.8	14.9	3.1	13.6	0.4	61.4
Latin America and the Caribbean	0.7	11.0	2.4	4.3	4.7	0.02	23.1
Asia (excl. China)	12.6	41.9	18.3	13.0	20.1	1.0	106.9
China	22.7	23.0	8.5	3.3	23.6	5.1	86.2
Europe	2.8	25.9	18.5	4.7	13.7	6.9	72.5
Oceania	0.1	2.1	0.7	0.3	1.0	0.03	4.2
International bunkers	-	12.5	0.01	0.02	-	-	12.5
World	40.3	155.1	67.2	41.6	81.1	13.4	**398.7**

73. Total final consumption by region, 1990-2020

Exajoules



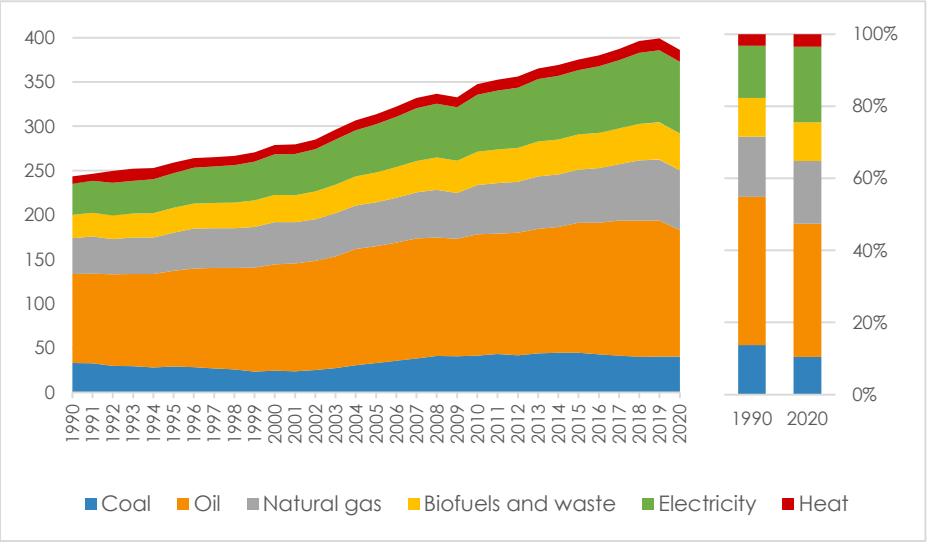
74. Total final consumption by region, 1990, 2000, 2010 and 2020

Exajoules

Region	1990	2000	2010	2020
Africa	11.2	14.9	19.9	23.9
Northern America (excl. US)	6.6	7.8	7.8	8.0
United States	54.0	64.6	63.7	61.4
Latin America and the Caribbean	14.2	18.7	24.2	23.1
Asia (excl. China)	46.1	67.6	89.4	106.9
China	22.6	28.2	62.2	86.2
Europe	85.7	73.5	76.2	72.5
Oceania	2.9	3.6	3.9	4.2
International bunkers	8.7	11.2	14.9	12.5
World	**252.0**	**290.1**	**362.2**	**398.7**

75. World total final consumption by source, 1990-2020

Exajoules



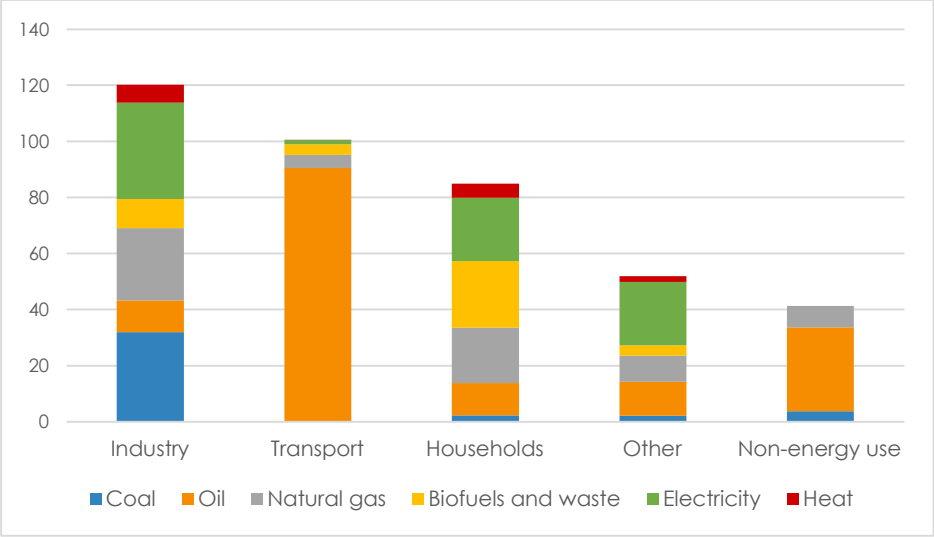
76. World total final consumption by source, 1990, 2000, 2010 and 2020

Exajoules

Source	1990	2000	2010	2020
Coal	33.3	24.4	41.5	40.3
Oil	108.8	131.1	151.5	155.1
Natural gas	40.7	47.8	55.4	67.2
Biofuels and waste	26.2	30.5	37.5	41.6
Electricity	35.3	45.9	64.4	81.1
Heat	7.8	10.5	11.9	13.4
Total	**252.0**	**290.1**	**362.2**	**398.7**

77. World total final consumption by sector and source, 2020

Exajoules



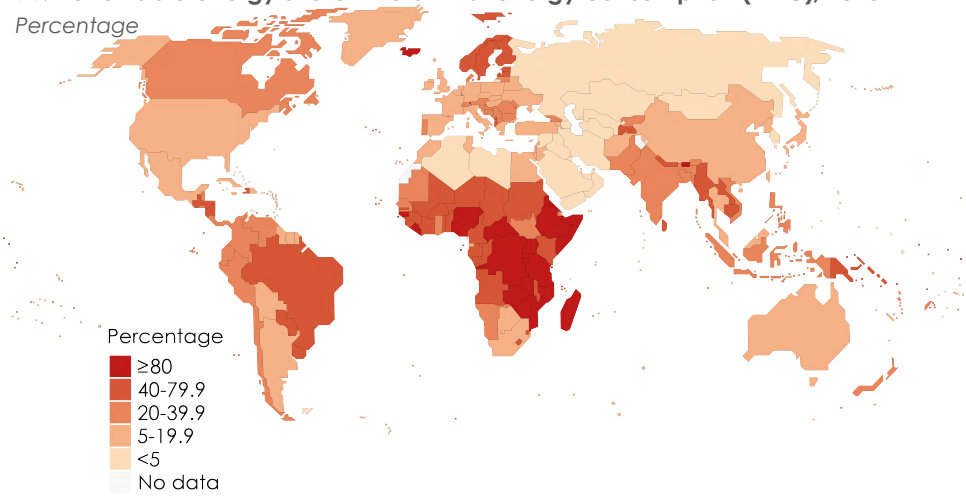
78. World total final consumption by sector and source, 2020

Exajoules

Sector	Coal	Oil	Natural gas	Biofuels and waste	Elec-tricity	Heat	Total
Total final consumption	**40.3**	**155.1**	**67.2**	**41.6**	**81.1**	**13.4**	**398.7**
- Total energy consumption	36.5	125.2	59.6	41.6	81.1	13.4	357.4
- Industry	32.0	11.3	25.8	10.4	34.4	6.3	120.1
- Transport	0.1	90.4	4.7	3.8	1.5	0.04	100.5
- of which intl. bunkers	-	12.5	0.01	0.02	-	-	12.5
- Households	2.3	11.5	19.8	23.6	22.6	5.0	84.8
- Other	2.2	12.1	9.3	3.7	22.6	2.1	52.0
- Non-energy use	3.8	29.9	7.6	-	-	-	41.3

79. Renewable energy share in total final energy consumption (TFEC), 2020

Percentage



Source: UN Energy Statistics Database / UN Geospatial. 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).

80. Final consumption (total[8] and per capita) and renewable energy share in TFEC, major countries, 2020

Exajoules, gigajoules per capita and percentage

Country	TFC[8]	Country	TFC per capita	Country	% REN in TFEC
China	86.2	Iceland	343.9	Dem. Rep. Congo	95.9%
United States	61.4	Qatar	326.6	Somalia	95.5%
India	27.2	Trinidad and Tobago	295.7	Liberia	93.0%
Russian Fed.	21.7	Gibraltar	284.2	Uganda	92.9%
Japan	11.1	United Arab Emirates	257.0	Central African Rep.	90.9%
Brazil	9.6	Luxembourg	222.2	Bhutan	88.4%
Germany	9.0	Canada	210.4	Ethiopia	87.5%
Others	160.0	Others	48.0	Others	18.0%
World	**398.7**	**World**	**49.3**	**World**	18.7%

(8) See notes on pages 68-73.

Energy balance, 2020 (Exajoules)

World	Primary coal	Coal products	Primary oil	Oil products
Primary production	159.4	-	175.6	-
Imports	31.4	0.7	91.4	54.4
Exports	-34.8	-0.7	-92.3	-55.4
Stock changes	-0.1	0.1	-1.6	-1.3
Total energy supply	155.9	0.1	173.1	-2.3
Statistical difference	3.3	-0.6	-1.4	-0.3
Transfers	-	-	8.8	-3.3
Transformation	-121.2	13.0	-181.9	169.1
Electricity plants	-82.8	-2.3	-1.4	-5.2
CHP and heat plants	-14.3	-0.8	-0.02	-1.0
Coke ovens	-21.1	23.0	-	-0.1
Oil refineries	-	-	-171.4	170.0
Other transformation	-3.0	-6.8	-9.1	5.3
Energy industries own use	-3.5	-1.3	-0.4	-9.3
Losses	-0.01	-0.1	-0.3	-0.01
Final consumption	27.9	12.5	0.7	154.4
Final energy consumption	24.9	11.6	0.2	125.0
Industry	20.6	11.4	0.2	11.1
Iron and steel	3.8	8.7	0^+	0.2
Chemical and petrochemical	0.7	0.9	0.1	2.3
Non-ferrous metals	0.2	0.03	0^+	0.2
Non-metallic minerals	1.8	0.1	0^+	1.6
Other industries	14.0	1.6	0.1	6.7
Transport[9]	0.1	0^+	0^+	90.4
of which Road	-	-	-	69.4
of which Aviation	-	-	-	8.6
Households	2.1	0.2	-	11.5
Commerce, public services	0.4	0.04	-	2.4
Other energy use	1.8	0.02	0^+	9.6
Non-energy use	3.0	0.8	0.5	29.4

(9) - (10) See notes on pages 68-73.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which: renewables[10]
141.8	52.8	28.9	24.3	4.1	587.0	79.4
42.2	1.6	-	2.7	0+	224.5	1.5
-43.5	-1.0	-	-2.7	0-	-230.4	-1.0
0.5	-0.02	-	-	-	-2.5	0.0
140.9	53.4	28.9	24.4	4.1	578.6	79.9
3.0	-0.1	-	-0.1	0.1	3.9	24.7
-	-0.2	-	-	-	5.2	-0.2
-57.3	-11.1	-28.9	71.8	12.0	-134.6	-13.0
-39.9	-4.0	-28.7	64.5	-4.6	-104.5	-6.3
-15.0	-3.7	-0.2	7.2	16.7	-11.0	-3.2
0-	0-	-	-	-	1.8	-
-0.1	-	-	-	-	-1.6	-
-2.2	-3.4	-	-	-	-19.2	-3.4
-12.2	-0.6	-	-8.2	-1.8	-37.2	-0.5
-1.3	-0.01	-	-7.0	-0.8	-9.5	-0.01
67.2	41.6	-	81.1	13.4	398.7	41.4
59.6	41.6	-	81.1	13.4	357.4	41.4
25.8	10.4	-	34.4	6.3	120.1	9.9
2.5	0.2	-	4.4	0.5	20.5	0.2
6.8	0.2	-	4.4	2.9	18.2	0.1
0.5	0.01	-	1.6	0.03	2.7	0.01
1.9	0.5	-	0.8	0.1	6.8	0.2
14.0	9.5	-	23.1	2.7	71.9	9.4
4.7	3.8	-	1.5	0.04	100.5	3.8
2.3	3.7	-	0.2	-	75.6	3.7
-	-	-	-	-	8.6	-
19.8	23.6	-	22.6	5.0	84.8	23.9
7.5	1.2	-	14.9	1.5	27.8	1.3
1.9	2.5	-	7.7	0.6	24.1	2.6
7.6	-	-	-	-	41.3	-

Energy balance, 2020 (Petajoules)

Africa	Primary coal	Coal products	Primary oil	Oil products
Primary production	6,186.1	-	13,603.2	-
Imports	455.5	22.1	1,333.2	4,872.5
Exports	-1,939.2	-5.6	-10,446.2	-1,644.3
International bunkers	-	-	-	-430.5
Stock changes	-0.8	0+	-67.9	24.8
Total energy supply	4,701.7	16.6	4,422.2	2,822.6
Statistical difference	22.9	0.2	-1.9	111.3
Transfers	-	-	-150.6	189.5
Transformation	-3,371.0	39.7	-4,210.6	3,799.6
Electricity plants	-3,051.0	-	-33.9	-445.1
CHP and heat plants	-0.2	-	-	-
Coke ovens	-54.6	49.7	-	-
Oil refineries	-	-	-3,836.5	3,693.1
Other transformation	-265.2	-10.0	-340.2	551.5
Energy industries own use	-640.9	-1.5	-32.9	-79.5
Losses	-	-2.0	-29.2	-3.4
Final consumption	666.9	52.6	0.9	6,617.5
Final energy consumption	630.9	52.6	0.9	6,272.8
Industry	479.9	52.5	-	646.9
Iron and steel	68.3	40.4	-	3.3
Chemical and petrochemical	36.1	3.3	-	3.7
Non-ferrous metals	69.6	1.1	-	3.6
Non-metallic minerals	128.5	0.1	-	89.4
Other industries	177.5	7.6	-	546.9
Transport	0.1	-	0.9	4,621.2
of which Road	-	-	-	4,475.6
Households	95.7	0.01	-	610.5
Commerce, public services	43.7	-	-	70.0
Other energy use	11.5	0.1	-	324.0
Non-energy use	36.0	-	-	344.7

(10) See notes on pages 68-73.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which: renewables[10]
8,279.2	14,849.9	107.0	626.8	226.3	43,878.6	15,696.6
409.2	179.1	-	134.6	-	7,406.3	179.1
-3,112.2	-11.0	-	-133.5	-	-17,292.0	-11.0
-	-	-	-	-	-430.5	-
-	0[-]	-	-	-	-43.9	0[-]
5,576.2	15,018.0	107.0	628.0	226.3	33,518.5	15,864.6
189.3	-10.7	-	-22.7	0[-]	288.4	645.3
-	-	-	-	-	38.9	-
-2,988.9	-2,702.6	-107.0	2,407.3	-218.5	-7,351.9	-2,888.3
-2,865.7	-49.5	-107.0	2,402.9	-218.5	-4,367.7	-235.3
-2.4	-5.1	-	4.3	-	-3.4	-5.1
-	-	-	-	-	-4.9	-
-	-	-	-	-	-143.3	-
-120.8	-2,648.1	-	-	-	-2,832.7	-2,648.0
-624.5	-0.2	-	-184.9	-	-1,564.5	-0.2
-17.7	-1.4	-	-447.4	-	-501.0	-1.4
1,755.8	12,324.4	-	2,425.6	7.8	23,851.5	12,329.4
1,341.0	12,324.4	-	2,425.6	7.8	23,056.1	12,329.4
748.3	668.4	-	915.6	0[+]	3,511.8	665.6
111.2	-	-	83.3	-	306.4	-
68.8	0.5	-	42.5	-	154.9	0.1
1.5	0[+]	-	112.2	-	188.0	0[+]
167.7	6.5	-	43.2	-	435.3	4.0
399.2	661.5	-	634.5	0[+]	2,427.1	661.4
45.5	2.4	-	17.9	-	4,688.0	2.4
19.7	2.4	-	0.2	-	4,497.9	2.4
497.2	10,816.0	-	869.7	2.6	12,891.7	10,818.5
19.8	451.3	-	439.9	0.1	1,024.8	451.4
30.2	386.3	-	182.5	5.2	939.8	391.5
414.8	-	-	-	-	795.4	-

Energy balance, 2020 (Petajoules)

Northern America	Primary coal	Coal products	Primary oil	Oil products
Primary production	11,793.1	-	41,427.3	-
Imports	266.4	25.1	14,478.0	4,640.1
Exports	-2,461.6	-20.1	-15,319.6	-10,000.5
International bunkers	-	-	-	-1,336.6
Stock changes	99.0	1.9	-479.5	56.2
Total energy supply	9,696.9	6.9	40,106.2	-6,640.9
Statistical difference	-100.5	-2.9	-751.3	-916.8
Transfers	-	-	435.7	-424.6
Transformation	-9,361.4	254.0	-40,913.0	39,698.3
Electricity plants	-8,626.5	-2.6	-	-341.1
CHP and heat plants	-201.1	-19.9	-	-94.1
Coke ovens	-429.0	398.5	-	-
Oil refineries	-	-	-36,157.0	34,819.8
Other transformation	-104.7	-122.0	-4,756.0	5,313.6
Energy industries own use	-0.3	-35.2	-	-1,655.5
Losses	-	-	-	-0.1
Final consumption	435.7	228.7	380.2	31,894.1
Final energy consumption	433.9	228.1	-	26,063.4
Industry	419.5	228.1	-	1,003.2
Iron and steel	14.7	201.9	-	5.3
Chemical and petrochemical	63.3	-	-	67.3
Non-ferrous metals	9.0	0.4	-	8.0
Non-metallic minerals	166.2	0.7	-	52.8
Other industries	166.2	25.2	-	869.8
Transport	-	-	-	23,213.7
of which Road	-	-	-	20,661.4
Households	-	-	-	653.9
Commerce, public services	13.9	-	-	533.5
Other energy use	0.5	-	-	659.0
Non-energy use	1.7	0.6	380.2	5,830.7

(10) See notes on pages 68-73.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which: renewables[10]
39,472.5	4,568.5	9,950.5	4,220.2	845.6	112,277.7	9,445.3
3,301.4	123.0	-	256.5	-	23,090.6	123.0
-7,695.3	-193.0	-	-293.6	-	-35,983.7	-193.0
-	-13.4	-	-	-	-1,350.0	-13.4
-261.1	-9.7	-	-	-	-593.3	-9.7
34,817.5	4,475.4	9,950.5	4,183.1	845.6	97,441.3	9,352.1
363.8	-7.1	-	-62.1	1.0	-1,476.0	4,293.2
-	-	-	-	-	11.1	-
-13,048.0	-927.5	-9,950.5	13,390.2	-237.5	-21,095.4	-1,402.4
-11,053.2	-624.7	-9,950.5	12,281.4	-714.9	-19,032.1	-1,127.9
-1,744.1	-281.2	-	1,108.8	477.5	-754.3	-252.9
-	-	-	-	-	-30.5	-
-	-	-	-	-	-1,337.2	-
-250.7	-21.6	-	-	-	58.6	-21.6
-4,134.5	-2.7	-	-1,317.8	-152.6	-7,298.7	-2.7
-261.0	-	-	-831.3	-55.4	-1,147.7	-
17,010.2	3,552.3	-	15,486.3	399.2	69,386.5	3,653.8
16,500.1	3,552.3	-	15,486.3	399.2	62,663.3	3,653.8
6,334.2	1,565.1	-	3,218.7	214.0	12,982.8	1,541.7
446.7	0.2	-	204.8	7.3	880.8	0.2
2,517.7	11.3	-	510.0	131.2	3,301.0	3.7
177.3	0.02	-	323.6	3.9	522.2	0.02
388.9	31.0	-	149.8	0.1	789.6	24.3
2,803.6	1,522.6	-	2,030.4	71.5	7,489.3	1,513.5
1,179.3	1,266.0	-	64.1	-	25,723.1	1,266.0
50.4	1,246.6	-	24.7	-	21,983.1	1,246.6
5,188.3	567.4	-	5,968.0	55.5	12,433.0	622.4
3,697.5	91.7	-	5,096.3	127.1	9,560.1	159.9
100.8	62.1	-	1,139.2	2.6	1,964.2	63.9
510.1	-	-	-	-	6,723.3	-

Energy balance, 2020 (Petajoules)

Latin America and the Caribbean	Primary coal	Coal products	Primary oil	Oil products
Primary production	1,737.6	-	16,831.0	-
Imports	1,004.0	68.8	1,037.1	5,914.7
Exports	-1,971.4	-71.3	-8,913.5	-1,802.6
International bunkers	-	-	-	-800.7
Stock changes	799.5	6.1	136.6	13.2
Total energy supply	1,569.7	3.6	9,091.2	3,324.7
Statistical difference	-69.6	-3.6	-339.6	-155.4
Transfers	-	-	230.3	-153.1
Transformation	-1,281.8	405.4	-9,645.6	8,149.2
Electricity plants	-880.9	-24.6	-28.8	-1,176.5
CHP and heat plants	-	-	-	-12.6
Coke ovens	-401.0	449.7	-	-40.1
Oil refineries	-	-	-8,997.1	8,756.1
Other transformation	-	-19.6	-619.6	622.3
Energy industries own use	-	-45.2	-13.4	-521.8
Losses	-1.5	-2.7	-1.3	-0.7
Final consumption	356.0	364.9	0.7	10,953.6
Final energy consumption	356.0	362.6	0.7	10,071.2
Industry	353.5	359.6	0.4	1,177.9
Iron and steel	92.1	343.8	-	13.5
Chemical and petrochemical	11.0	0.01	-	106.8
Non-ferrous metals	31.1	11.2	-	54.6
Non-metallic minerals	47.7	2.2	-	279.9
Other industries	171.6	2.5	0.4	723.1
Transport	-	-	0.3	7,203.5
of which Road	-	-	-	6,873.8
Households	2.4	2.0	-	838.7
Commerce, public services	0^{+}	-	-	158.8
Other energy use	0.1	0.9	-	692.4
Non-energy use	0.1	2.3	-	882.4

(10) See notes on pages 68-73.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which: renewables[10]
6,380.4	6,283.1	355.2	3,092.1	387.4	35,066.8	9,760.5
3,071.1	32.3	-	180.4	-	11,308.4	32.3
-1,136.6	-69.6	-	-155.9	-	-14,120.9	-69.6
-2.7	-	-	-	-	-803.4	-
7.2	-5.6	-	-	-	957.0	-5.6
8,319.4	6,240.2	355.2	3,116.6	387.4	32,408.0	9,717.5
1,323.7	7.2	-	57.3	0+	820.0	3,135.9
-	-222.5	-	-	-	-145.3	-222.5
-3,011.5	-1,156.6	-355.2	2,702.6	-366.6	-4,560.0	-1,485.1
-2,841.9	-759.5	-355.2	2,575.7	-366.6	-3,858.2	-1,088.0
-148.4	-214.7	-	126.9	-	-248.9	-214.7
-	-	-	-	-	8.6	-
-	-	-	-	-	-241.0	-
-21.1	-182.4	-	-	-	-220.5	-182.4
-1,401.3	-510.4	-	-238.4	-	-2,730.5	-510.4
-173.7	-4.9	-	-835.9	-	-1,020.7	-4.9
2,409.2	4,338.7	-	4,687.5	20.8	23,131.4	4,358.7
2,008.4	4,338.7	-	4,687.5	20.8	21,845.9	4,358.7
1,261.8	1,839.8	-	1,975.5	1.3	6,969.8	1,840.4
214.9	154.9	-	113.6	-	932.7	154.9
245.6	2.8	-	116.9	-	483.1	2.8
14.7	0.5	-	115.9	-	227.9	0.5
106.8	85.3	-	90.1	-	612.1	85.2
679.9	1,596.4	-	1,539.1	1.3	4,714.1	1,597.0
210.9	909.6	-	18.8	-	8,343.1	909.6
174.6	905.0	-	2.8	-	7,956.3	905.0
458.6	1,372.7	-	1,389.3	9.9	4,073.7	1,382.6
75.7	32.6	-	1,011.7	6.7	1,285.4	39.2
1.4	184.0	-	292.2	2.9	1,173.9	186.9
400.8	-	-	-	-	1,285.5	-

Energy balance, 2020 (Petajoules)

Asia	Primary coal	Coal products	Primary oil	Oil products
Primary production	112,718.2	-	73,632.3	-
Imports	25,867.4	322.9	52,035.6	22,087.6
Exports	-12,186.5	-222.3	-41,470.8	-22,256.0
International bunkers	-	-	-	-6,299.5
Stock changes	-1,125.2	51.1	-1,120.9	-1,094.3
Total energy supply	125,273.9	151.8	83,076.2	-7,562.2
Statistical difference	3,686.2	-604.3	-52.1	761.5
Transfers	-	-	6,358.4	-1,276.5
Transformation	-93,585.2	10,183.7	-88,872.6	79,295.3
Electricity plants	-65,711.0	-2,099.9	-1,326.8	-2,889.7
CHP and heat plants	-9,152.1	-463.1	-	-356.2
Coke ovens	-16,741.1	18,874.5	-	-14.7
Oil refineries	-	-	-84,461.7	84,269.2
Other transformation	-1,981.0	-6,127.8	-3,084.0	-1,713.2
Energy industries own use	-2,861.3	-825.3	-336.9	-5,092.8
Losses	-10.5	-9.1	-35.5	-0.6
Final consumption	25,130.7	10,105.3	241.6	64,601.7
Final energy consumption	22,249.5	9,319.2	213.0	47,719.1
Industry	18,592.0	9,133.5	212.9	6,026.6
Iron and steel	3,442.0	6,649.9	-	182.0
Chemical and petrochemical	482.6	896.8	71.4	1,398.1
Non-ferrous metals	75.1	10.5	0.1	141.6
Non-metallic minerals	1,204.3	15.6	0.2	878.2
Other industries	13,388.1	1,560.7	141.2	3,426.7
Transport	86.2	-	0.1	26,619.5
of which Road	-	-	-	22,249.6
Households	1,631.9	132.7	-	7,297.4
Commerce, public services	222.1	33.5	-	1,013.5
Other energy use	1,717.3	19.6	-	6,762.0
Non-energy use	2,881.2	786.1	28.6	16,882.6

(10) See notes on pages 68-73.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which: renewables[10]
48,951.3	19,173.2	7,124.7	10,901.1	1,540.5	274,041.3	30,972.5
18,483.2	125.9	-	460.1	-	119,382.7	124.6
-12,434.6	-74.1	-	-385.7	-	-89,029.9	-74.1
-	-	-	-	-	-6,299.5	-
112.1	0.3	-	-	-	-3,176.8	0.3
55,112.0	19,225.4	7,124.7	10,975.5	1,540.5	294,917.8	31,023.5
885.0	-33.1	-	-56.1	80.1	4,667.2	11,013.0
-	-	-	-	-	5,081.9	-
-22,939.2	-2,908.2	-7,124.7	40,861.5	5,641.3	-79,448.1	-3,705.0
-19,814.3	-1,580.4	-7,124.7	39,705.4	-2,656.6	-63,498.0	-2,473.1
-1,653.4	-818.7	-	1,156.1	8,297.9	-2,989.6	-727.7
-	-4.9	-	-	-	2,113.8	-
-110.3	-	-	-	-	-302.9	-
-1,361.1	-504.2	-	-	-	-14,771.4	-504.2
-3,930.9	-6.2	-	-4,491.1	-939.5	-18,484.0	-6.2
-517.0	-	-	-3,615.7	-98.9	-4,287.4	-
26,839.9	16,344.0	-	43,786.3	6,063.3	193,113.0	16,299.2
23,378.0	16,344.0	-	43,786.3	6,063.3	169,072.6	16,299.2
11,939.0	4,804.5	-	22,664.5	3,645.3	77,018.3	4,650.2
887.6	32.9	-	3,338.5	214.5	14,747.5	31.0
2,625.1	89.4	-	2,806.1	1,831.7	10,201.3	65.5
45.0	4.8	-	209.3	6.9	493.3	3.7
316.6	97.3	-	220.2	2.2	2,734.5	21.5
8,064.7	4,580.1	-	16,090.3	1,589.9	48,841.8	4,528.5
2,070.7	819.0	-	817.0	39.0	30,451.5	819.0
1,939.2	818.7	-	145.9	-	25,153.4	818.7
6,268.3	8,642.5	-	10,123.5	1,822.4	35,918.7	8,763.3
1,626.9	337.7	-	4,463.4	111.1	7,808.2	319.3
1,473.2	1,740.3	-	5,717.9	445.5	17,875.8	1,747.4
3,461.9	-	-	-	-	24,040.4	-

Energy balance, 2020 (Petajoules)

Europe	Primary coal	Coal products	Primary oil	Oil products
Primary production	14,537.7	-	29,190.6	-
Imports	3,752.3	276.9	21,728.8	15,321.3
Exports	-5,707.8	-377.8	-15,531.2	-19,509.5
International bunkers	-	-	-	-3,387.1
Stock changes	362.2	29.0	-103.8	-318.7
Total energy supply	12,944.3	-71.9	35,284.3	-7,894.0
Statistical difference	-234.1	-33.9	-161.4	-200.5
Transfers	-	-	1,790.5	-1,691.0
Transformation	-11,988.7	2,066.3	-36,936.5	36,893.3
Electricity plants	-3,053.6	-202.6	-1.4	-281.6
CHP and heat plants	-4,909.1	-323.6	-18.6	-502.9
Coke ovens	-3,392.9	3,112.9	-	-10.8
Oil refineries	-	-	-36,798.6	37,279.9
Other transformation	-633.1	-520.4	-117.9	408.7
Energy industries own use	-46.1	-303.9	-3.8	-1,724.7
Losses	-1.0	-44.6	-225.5	-1.2
Final consumption	1,142.7	1,679.8	70.4	25,782.8
Final energy consumption	1,110.1	1,621.0	2.0	20,478.3
Industry	637.6	1,576.3	1.5	1,987.8
Iron and steel	216.7	1,455.8	0.1	35.2
Chemical and petrochemical	106.2	11.0	1.2	746.8
Non-ferrous metals	15.5	3.1	0.1	21.0
Non-metallic minerals	188.0	84.3	0^{+}	274.3
Other industries	111.2	22.0	0.1	910.5
Transport	0.6	0.02	-	14,715.5
of which Road	-	-	-	13,797.5
Households	355.9	37.9	-	2,075.2
Commerce, public services	78.6	3.8	-	611.0
Other energy use	37.4	3.1	0.5	1,088.8
Non-energy use	32.5	58.8	68.4	5,304.5

(10) See notes on pages 68-73.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which: renewables[10]
32,735.6	7,636.2	11,366.1	5,175.0	799.7	101,440.9	12,527.0
16,770.9	1,092.9	-	1,698.9	0.2	60,642.3	1,072.8
-14,822.4	-647.9	-	-1,703.3	-0.1	-58,300.0	-646.2
-10.0	-9.6	-	-	-	-3,406.8	-9.6
637.0	-1.7	-	-	-	604.0	-3.3
35,311.2	8,069.8	11,366.1	5,170.6	799.9	100,980.3	12,940.7
107.7	-8.3	0[-]	17.0	-0.6	-514.2	5,278.1
-	-	-	-	-	99.5	-
-14,683.1	-3,328.0	-11,366.1	11,550.1	7,505.0	-20,287.9	-3,149.7
-2,895.6	-960.9	-11,174.3	6,784.5	-371.8	-12,157.2	-1,091.3
-11,310.9	-2,289.6	-191.8	4,765.6	7,876.8	-6,904.2	-1,980.9
-0.7	-	-	-	-	-291.5	-
-	-	-	-	-	481.3	-
-476.0	-77.5	-	-	-	-1,416.1	-77.5
-1,659.9	-31.6	-	-1,785.1	-738.1	-6,293.2	-23.6
-319.3	-3.5	-	-1,215.3	-680.9	-2,491.3	-3.5
18,541.0	4,715.1	-	13,703.3	6,886.5	72,521.7	4,485.7
15,824.7	4,715.1	-	13,703.3	6,886.5	64,341.0	4,485.7
5,141.5	1,421.2	-	5,244.2	2,438.3	18,448.3	1,086.5
846.9	57.6	-	672.7	318.9	3,604.0	2.8
1,214.1	52.4	-	905.5	952.6	3,989.8	23.3
155.2	1.1	-	690.2	18.8	905.0	0.8
908.6	253.7	-	326.8	105.6	2,141.4	80.8
2,016.5	1,056.4	-	2,649.0	1,042.4	7,808.2	978.9
1,175.5	742.3	-	531.8	-	17,165.8	742.3
86.6	739.7	-	18.5	-	14,642.4	739.7
7,260.4	2,151.2	-	4,019.6	3,059.4	18,959.8	2,242.6
1,984.6	263.6	-	3,579.6	1,230.8	7,752.0	266.7
262.7	136.6	-	328.1	158.0	2,015.1	147.6
2,716.4	-	-	-	-	8,180.7	-

Energy balance, 2020 (Petajoules)

Oceania	Primary coal	Coal products	Primary oil	Oil products
Primary production	12,404.7	-	948.4	-
Imports	62.8	11.3	836.3	1,575.0
Exports	-10,492.4	-22.0	-638.3	-226.2
International bunkers	-	-	-	-226.4
Stock changes	-217.5	-	-8.9	22.2
Total energy supply	1,757.5	-10.7	1,137.5	1,144.5
Statistical difference	-10.0	-	-103.3	84.6
Transfers	-	-	99.3	35.1
Transformation	-1,648.9	70.8	-1,338.7	1,224.3
Electricity plants	-1,501.5	-	-	-105.3
CHP and heat plants	-20.3	-7.3	-	-0.8
Coke ovens	-127.2	108.4	-	-
Oil refineries	-	-	-1,194.0	1,179.8
Other transformation	-	-30.3	-144.7	150.6
Energy industries own use	-0.4	-39.1	-1.5	-200.2
Losses	-	-0.3	-	-
Final consumption	118.1	20.7	-	2,119.1
Final energy consumption	112.8	20.7	-	1,931.9
Industry	109.2	20.7	-	236.7
Iron and steel	0.1	12.3	-	0.9
Chemical and petrochemical	6.4	0.5	-	4.8
Non-ferrous metals	43.9	3.2	-	12.6
Non-metallic minerals	23.3	0.1	-	9.7
Other industries	35.5	4.5	-	208.7
Transport	-	-	-	1,531.5
of which Road	-	-	-	1,319.5
Households	0.3	-	-	22.5
Commerce, public services	1.6	0.04	-	39.1
Other energy use	1.7	-	-	102.0
Non-energy use	5.3	-	-	187.2

(10) See notes on pages 68-73.

Natural gas	Biofuels and waste	Nuclear	Electricity	Heat	Total	of which: renewables[10]
5,967.8	321.0	-	307.7	340.2	20,289.8	965.2
161.8	2.9	-	-	-	2,650.0	2.9
-4,343.0	0⁻	-	-	-	-15,721.9	0⁻
-	-	-	-	-	-226.4	-
-0.5	0⁺	-	-	-	-204.8	0⁺
1,786.1	323.9	-	307.7	340.2	6,786.8	968.2
101.0	-0.1	-	1.1	0⁻	73.4	339.0
-	-	-	-	-	134.5	-
-587.8	-66.0	-	850.3	-313.4	-1,809.4	-348.0
-451.1	-21.6	-	782.3	-312.3	-1,609.3	-301.7
-136.7	-44.0	-	68.0	-1.1	-142.4	-45.9
-	-	-	-	-	-18.7	-
-	-	-	-	-	-14.2	-
-0.04	-0.4	-	-	-	-24.8	-0.4
-427.0	-	-	-141.4	-	-809.6	-
-3.4	-	-	-53.9	-	-57.6	-
666.9	258.0	-	961.6	26.8	4,171.2	281.2
576.4	258.0	-	961.6	26.8	3,888.2	281.2
331.2	123.2	-	349.4	4.7	1,175.0	124.2
8.8	-	-	16.2	-	38.3	-
83.9	4.0	-	15.3	-	114.8	0.4
118.6	1.0	-	142.0	-	321.3	1.0
44.2	2.7	-	11.8	-	91.8	2.7
75.7	115.5	-	164.1	4.7	608.8	120.1
20.4	4.6	-	23.4	-	1,579.8	4.6
2.9	4.6	-	0.3	-	1,327.3	4.6
163.9	80.9	-	274.1	18.7	560.5	99.6
58.6	10.7	-	293.1	3.0	406.2	13.7
2.3	38.7	-	21.6	0.4	166.8	39.1
90.5	-	-	-	-	283.0	-

Energy indicators[11], 2020

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	**578,569**	**73.8**	**4.6**	**101.5**	**18.75**	**2,871.4**
Africa	**33,518**	**25.0**	**5.3**	**130.9**	**55.87**	**502.6**
Northern Africa	8,631	34.3	3.7	129.9	9.1	1,186.6
Sub-Saharan Africa	24,888	22.9	6.2	131.3	70.0	344.8
Americas	**129,849**	**126.7**	**4.1**	**113.5**	**17.42**	**5,468.8**
Latin America & Caribbean	32,408	49.8	3.3	108.2	32.3	2,001.0
Northern America	97,441	260.6	4.5	115.2	12.2	11,503.3
Asia	**294,918**	**63.2**	**5.0**	**92.9**	**15.51**	**2,607.6**
Central Asia	5,971	79.9	6.8	199.2	4.7	2,164.0
Eastern Asia	173,972	104.6	5.5	67.8	11.7	4,994.8
South-eastern Asia	29,230	43.6	3.6	113.1	23.4	1,501.4
Southern Asia	56,346	28.6	4.6	74.4	27.2	845.9
Western Asia	29,399	102.6	4.5	235.3	4.6	3,564.2
Europe	**100,980**	**134.9**	**3.7**	**100.5**	**15.94**	**5,085.2**
Eastern Europe	45,902	156.8	6.2	148.4	7.6	4,195.3
Northern Europe	12,989	122.7	2.6	131.2	30.8	6,588.8
Southern Europe	13,912	91.2	2.7	32.6	21.1	4,445.1
Western Europe	28,177	142.8	2.9	41.7	18.1	6,093.7
Oceania	**6,787**	**154.5**	**4.4**	**299.0**	**14.92**	**6,079.9**
Australia and New Zealand	6,449	209.9	4.4	305.1	13.4	8,312.8
Melanesia	296	24.7	5.5	205.8	43.5	716.2
Micronesia	15	29.0	7.5	6.9	6.8	3,780.5
Polynesia	27	37.5	3.0	10.4	12.8	1,495.4

Country or area	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	197.4	5.1	2.6	36.2	17.6	147.8
Albania	86.5	30.2	2.3	72.8	40.9	2,201.7
Algeria	2,387.9	55.0	5.1	230.6	0.2	1,389.8
American Samoa	4.3	92.3	-	0.4	0.5	3,193.1
Andorra	7.5	96.1	-	10.1	21.9	5,748.1
Angola	504.9	15.1	2.5	644.3	58.1	422.8
Anguilla	2.0	126.3	-	0.6	0.8	5,163.9
Antigua and Barbuda	8.7	93.8	5.1	0.5	0.7	3,315.1
Argentina	3,087.8	68.6	3.5	100.7	10.5	2,764.9
Armenia	152.4	54.3	4.1	27.5	10.2	2,099.5
Aruba	12.8	120.1	4.1	5.1	8.7	7,881.0
Australia	5,514.2	214.8	4.4	343.7	10.9	8,441.2
Austria	1,321.3	148.3	2.9	38.0	35.7	6,870.8
Azerbaijan	642.9	62.5	4.6	375.1	1.3	1,849.2
Bahamas	31.4	77.1	2.9	1.0	1.4	4,824.4
Bahrain	666.6	451.2	9.4	156.8	0.1	21,536.8
Bangladesh	2,079.0	12.4	2.2	70.1	38.1	477.4
Barbados	16.8	59.8	4.4	12.7	4.6	3,184.5
Belarus	1,051.8	109.2	5.8	17.8	9.6	3,202.9
Belgium	2,096.7	181.4	3.7	27.2	12.3	6,841.2
Belize	15.2	38.5	6.5	43.5	30.2	1,303.0
Benin	231.5	18.3	5.7	53.7	46.2	100.4
Bermuda	6.9	107.2	1.4	8.8	0.9	8,086.7
Bhutan	67.5	87.4	8.3	135.4	88.4	2,538.1
Bolivia (Plurinational State of)	324.4	27.2	3.5	220.6	16.9	700.9
Bonaire, Sint Eustatius and Saba	1.7	66.1	-	6.9	10.4	4,240.4

Country or area	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	297.7	89.7	6.2	73.7	37.6	2,994.2
Botswana	83.7	32.9	2.4	61.0	8.3	1,291.2
Brazil	11,927.3	55.9	4.0	112.3	47.2	2,385.4
British Virgin Islands	2.3	74.3	-	0.9	1.4	4,594.0
Brunei Darussalam	163.3	369.7	6.0	369.4	0.3	10,783.8
Bulgaria	732.0	104.9	4.7	61.9	20.9	4,098.3
Burkina Faso	199.8	9.3	4.4	66.7	67.5	81.8
Burundi	67.4	5.5	7.8	83.3	83.5	24.1
Cabo Verde	8.9	15.2	2.6	18.3	23.4	513.2
Cambodia	357.2	21.8	5.1	45.2	51.3	676.5
Cameroon	422.7	16.0	4.3	131.5	79.2	260.1
Canada	11,907.5	314.3	6.8	182.0	23.7	13,804.7
Cayman Islands	9.2	136.3	2.0	-	0.01	9,881.0
Central African Republic	38.0	7.1	8.4	91.0	90.9	26.2
Chad	101.8	6.1	4.1	365.4	73.6	15.2
Chile	1,583.7	82.1	3.6	33.8	26.9	3,860.8
China	140,212.6	98.4	6.1	79.7	13.0	4,609.0
China, Hong Kong SAR	513.8	68.5	1.2	-	0.04	5,892.7
China, Macao SAR	36.4	53.8	1.0	9.4	11.0	7,677.3
Colombia	1,680.6	33.0	2.5	239.5	26.5	1,289.7
Comoros	9.3	11.5	3.6	41.6	48.3	120.9
Congo	136.3	23.9	7.1	569.8	71.9	262.1
Cook Islands	1.0	60.0	-	11.0	13.1	2,182.3
Costa Rica	206.6	40.3	2.0	55.9	36.1	1,933.4
Côte d'Ivoire	460.0	17.2	3.4	93.8	63.2	303.7
Croatia	346.3	84.5	3.2	45.2	32.3	3,713.9

Country or area	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[12]	340.9	30.2	1.2	49.9	12.1	1,324.8
Curaçao	29.9	157.9	9.8	2.6	2.8	3,858.3
Cyprus	89.4	72.2	2.6	7.8	14.8	3,536.7
Czechia	1,680.9	159.6	4.1	58.7	17.2	5,415.3
Democratic People's Rep. of Korea[12]	626.3	24.2	6.0	92.9	12.7	439.4
Democratic Rep. of the Congo	1,308.2	14.1	13.5	100.6	95.9	104.8
Denmark	645.5	110.8	2.0	59.6	39.3	5,360.8
Djibouti	9.7	8.9	1.9	38.5	31.9	474.3
Dominica	2.4	32.7	3.2	5.9	8.3	1,786.8
Dominican Republic	344.2	31.3	1.9	12.9	15.7	1,414.5
Ecuador	526.3	29.9	2.9	221.8	20.6	1,445.1
Egypt	3,702.2	34.5	3.0	98.7	7.7	1,465.0
El Salvador	179.2	28.5	3.5	48.4	21.8	951.8
Equatorial Guinea	88.1	55.2	3.6	626.1	7.0	795.9
Eritrea	39.2	11.0	-	78.9	80.8	86.8
Estonia	187.9	141.4	4.0	97.5	40.1	5,400.8
Eswatini	45.7	38.7	4.7	66.3	66.0	1,147.6
Ethiopia	1,624.8	13.9	6.2	88.7	87.5	95.8
Falkland Islands (Malvinas)	0.6	159.3	-	12.6	4.7	4,571.7
Faroe Islands	11.0	210.5	-	5.1	5.3	7,072.2
Fiji	20.6	22.4	2.0	30.2	31.8	949.6
Finland	1,321.6	239.0	5.0	57.5	47.0	13,907.5
France	9,109.7	136.3	3.2	54.6	16.8	6,154.6
French Polynesia[12]	12.8	42.3	2.6	6.6	8.1	2,064.1
Gabon	107.8	47.0	3.4	478.8	77.4	991.7
Gambia	16.8	6.5	3.2	42.7	49.7	126.2

Country or area	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	208.1	55.3	4.0	21.0	23.3	3,048.2
Germany	11,646.4	139.8	2.7	34.6	18.5	5,758.1
Ghana	490.2	15.2	2.9	143.6	39.5	513.7
Gibraltar	10.5	320.8	-	0+	0.02	6,228.4
Greece	815.8	77.6	2.8	23.4	19.9	4,521.3
Greenland	9.3	166.8	-	17.3	11.5	6,184.4
Grenada	4.4	35.7	2.7	7.4	10.4	1,578.2
Guam[13]	0.2	1.3	-	86.4	3.6	9,001.3
Guatemala	558.4	32.2	3.9	64.5	60.6	597.9
Guernsey[13]	1.2	19.9	-	0.1	1.6	5,377.9
Guinea	185.0	14.0	5.4	64.6	65.8	151.8
Guinea-Bissau	31.7	15.7	8.7	85.5	87.2	41.7
Guyana	38.9	48.8	2.6	9.7	12.0	1,105.3
Haiti	177.4	15.7	5.3	80.1	76.1	37.2
Honduras	224.0	22.1	4.4	45.1	43.6	668.4
Hungary	1,098.6	112.7	3.6	40.9	14.7	4,096.0
Iceland	362.4	988.2	18.9	92.5	82.5	48,732.7
India	38,177.5	27.3	4.5	61.8	32.0	846.6
Indonesia	10,344.7	38.1	3.3	197.8	26.3	975.1
Iran (Islamic Republic of)	11,073.5	126.9	8.8	125.5	1.9	3,047.0
Iraq	1,895.8	44.5	5.0	470.3	1.1	1,007.2
Ireland	555.4	112.3	1.2	26.2	14.0	5,791.6
Isle of Man[13]	4.8	57.3	-	11.5	2.1	4,283.4
Israel	884.3	101.0	2.5	55.9	5.7	6,856.8
Italy	5,743.4	96.5	2.5	25.6	18.7	4,622.5
Jamaica	102.4	36.3	3.9	10.4	9.2	1,278.0

Country or area	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	16,145.0	128.9	3.2	11.2	8.7	7,245.0
Jersey[13]	3.0	27.4	-	25.6	18.1	5,682.8
Jordan	347.0	31.8	3.5	9.6	11.1	1,699.2
Kazakhstan	2,759.2	145.4	5.8	241.0	1.8	3,694.7
Kenya	1,031.9	19.9	4.4	75.3	61.5	172.3
Kiribati	1.6	12.6	6.5	37.3	42.8	206.4
Kosovo	112.1	67.1	5.9	71.0	25.7	2,929.2
Kuwait	1,530.2	350.9	8.0	415.2	0.2	13,696.0
Kyrgyzstan	149.6	23.3	4.8	68.5	29.9	1,897.0
Lao People's Democratic Rep.	246.0	33.6	4.3	120.8	49.9	992.9
Latvia	179.7	94.7	3.1	63.0	43.5	3,438.9
Lebanon	310.5	54.8	4.2	3.3	5.1	2,887.3
Lesotho	42.1	18.7	8.1	38.7	41.4	298.6
Liberia	98.7	19.4	14.0	90.9	93.0	59.8
Libya	679.2	102.1	6.0	196.4	3.1	2,621.3
Liechtenstein[13]	3.4	87.0	-	42.5	55.2	10,380.3
Lithuania	309.8	109.9	3.0	26.6	32.5	3,671.7
Luxembourg	145.2	230.4	2.0	8.7	21.9	9,707.3
Madagascar	381.1	13.5	9.4	86.8	84.8	70.8
Malawi	91.3	4.7	3.2	77.0	70.3	81.9
Malaysia	3,881.5	116.9	4.5	98.9	6.9	4,576.5
Maldives	23.6	45.8	3.4	1.0	1.3	1,467.6
Mali	244.5	11.5	5.4	67.5	63.8	136.6
Malta	28.8	55.9	1.4	3.9	8.7	4,568.8
Marshall Islands	2.3	52.1	9.7	8.8	12.0	1,407.4
Mauritania	81.0	18.0	3.4	26.6	23.8	264.5

Country or area	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	57.3	44.2	2.3	14.5	8.8	2,067.1
Mexico	7,486.8	59.4	3.2	83.9	12.3	2,054.4
Micronesia (Federated States of)	2.2	19.3	5.6	2.0	2.0	420.5
Mongolia	428.5	130.1	11.1	272.8	1.7	2,069.2
Montenegro	43.9	69.8	3.9	71.4	39.2	4,509.5
Montserrat	0.3	76.7	-	0.5	0.7	2,593.3
Morocco	892.1	24.0	3.4	11.2	12.5	883.4
Mozambique	453.0	14.5	11.8	164.6	81.0	395.8
Myanmar	957.2	17.9	3.6	119.9	57.8	359.3
Namibia	77.0	30.9	3.4	37.2	32.4	1,510.2
Nauru	0.7	60.9	5.1	1.1	1.4	2,610.3
Nepal	633.8	21.6	5.7	73.3	75.8	253.3
Netherlands	2,883.5	165.4	3.0	39.4	10.7	6,255.6
New Caledonia[12]	63.1	220.4	14.1	3.3	6.0	11,055.1
New Zealand	935.1	184.8	4.4	77.8	28.5	7,662.0
Nicaragua	162.4	24.0	4.6	58.1	52.0	540.7
Niger	113.7	4.7	3.8	100.8	74.0	55.5
Nigeria	6,638.5	31.9	6.5	149.6	82.6	133.3
Niue	0.1	55.4	-	17.1	22.7	1,698.4
North Macedonia	116.9	55.4	3.6	42.8	24.6	2,948.5
Northern Mariana Islands	5.5	110.2	-	0.2	0.3	4,638.3
Norway	1,138.9	211.7	3.3	766.3	60.9	21,064.2
Oman	1,126.7	248.0	7.5	296.5	0.1	7,289.1
Other Asia	4,460.1	187.2	-	10.4	3.4	10,578.1
Pakistan	3,685.0	16.2	3.2	60.2	29.2	474.0
Palau	2.9	163.5	10.5	0.7	0.9	4,896.5

Country or area	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	174.1	40.5	1.6	23.7	25.4	2,149.8
Papua New Guinea	200.4	20.6	5.5	297.2	54.3	447.6
Paraguay	291.6	44.1	3.3	100.6	60.6	2,072.7
Peru	882.5	26.5	2.4	100.9	29.1	1,370.6
Philippines	2,380.8	21.2	2.7	51.6	28.4	742.0
Poland	4,285.5	111.5	3.5	56.5	16.2	3,573.4
Portugal	847.6	82.3	2.6	30.0	31.3	4,491.5
Puerto Rico[13]	49.7	15.2	0.5	3.5	2.5	4,901.4
Qatar	1,753.3	635.2	7.1	525.7	0.1	15,609.9
Republic of Korea	11,549.4	222.8	5.3	18.8	3.8	9,889.0
Republic of Moldova	115.4	37.4	3.6	24.7	26.5	1,234.1
Romania	1,354.8	69.7	2.4	69.4	24.2	2,264.4
Russian Federation	31,452.7	216.0	8.1	190.9	3.6	5,147.8
Rwanda	104.9	8.0	3.9	84.5	81.7	54.4
Saint Helena	0.2	45.5	-	6.3	7.4	1,757.1
Saint Kitts and Nevis	3.3	70.2	2.6	0.9	1.4	3,715.1
Saint Lucia	7.6	42.4	3.4	7.9	10.0	1,877.3
Saint Pierre and Miquelon	0.9	148.1	-	0.6	1.1	8,250.9
Saint Vincent and the Grenadines	3.7	35.4	2.6	4.1	4.9	1,327.4
Samoa	5.3	24.5	4.1	32.4	37.5	729.5
Sao Tome and Principe	3.0	13.9	3.4	35.3	41.6	314.1
Saudi Arabia	9,444.8	262.4	6.1	271.2	0.1	7,721.3
Senegal	194.6	11.8	3.5	44.1	38.9	278.9
Serbia	657.2	89.3	5.2	69.6	26.4	3,789.2
Seychelles	8.4	79.8	3.2	0.8	1.3	4,564.6
Sierra Leone	70.9	8.6	5.4	79.2	75.1	21.1

Country or area	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	1,135.0	192.1	2.1	2.3	1.0	8,589.1
Sint Maarten (Dutch part)[14]	10.4	237.7	8.3	-	0.1	5,880.1
Slovakia	683.2	125.2	4.1	41.0	17.6	4,364.0
Slovenia	270.0	127.5	3.5	55.8	22.5	6,115.8
Solomon Islands	7.6	10.9	4.4	44.3	49.0	127.6
Somalia	159.2	9.6	8.5	94.7	95.5	21.5
South Africa	5,510.3	93.7	7.3	114.6	10.6	3,216.7
South Sudan	31.9	3.0	-	1,123.9	33.3	47.8
Spain	4,528.3	95.6	2.6	31.1	19.3	4,637.6
Sri Lanka	408.5	18.8	1.5	36.9	43.4	665.4
State of Palestine	81.8	16.3	3.2	11.4	15.0	1,290.2
Sudan	519.5	11.7	3.0	78.0	48.4	308.5
Suriname	45.1	74.4	4.9	95.0	12.2	2,230.9
Sweden	1,827.1	176.2	3.5	77.2	57.5	11,871.7
Switzerland	971.1	112.4	1.6	53.5	26.7	6,449.4
Syrian Arab Republic[12]	368.1	17.7	10.7	52.0	1.1	564.5
Tajikistan	204.5	21.4	5.9	75.6	55.1	1,568.1
Thailand	5,242.8	73.4	4.4	49.6	17.0	2,752.1
Timor-Leste	9.4	7.2	1.8	2,103.8	11.4	284.8
Togo	151.3	17.9	8.7	83.4	76.5	163.3
Tonga	2.7	25.3	4.0	2.0	1.9	619.5
Trinidad and Tobago	614.8	405.0	17.7	199.5	0.2	5,574.6
Tunisia	449.6	37.0	3.7	46.1	12.7	1,352.8
Türkiye	6,131.0	72.9	2.6	29.8	14.0	3,075.1
Turkmenistan[12]	1,062.4	170.0	11.9	306.4	0.1	1,996.0
Turks and Caicos Islands	5.2	117.0	6.3	0.3	0.5	5,352.7

Country or area	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	12.4	2.6	5.2	6.7	630.9
Uganda	1,221.8	27.5	12.3	80.2	92.9	73.6
Ukraine	3,447.0	78.5	6.7	67.6	8.5	2,585.1
United Arab Emirates	3,637.0	391.6	5.8	260.2	0.9	12,729.6
United Kingdom	6,440.1	96.0	2.2	76.0	13.5	4,182.7
United Republic of Tanzania	1,006.4	16.3	6.6	88.2	84.1	109.2
United States	85,516.7	254.6	4.3	105.9	10.7	11,245.4
United States Virgin Islands[13]	0.1	1.2	-	100.0	5.1	5,475.7
Uruguay	218.6	63.7	2.9	60.4	61.4	3,309.0
Uzbekistan	1,795.6	53.6	7.1	96.3	1.3	1,549.5
Vanuatu	3.8	12.3	4.3	24.0	26.0	234.4
Venezuela (Bolivarian Rep. of)[12]	1,012.4	35.5	2.0	204.4	24.7	1,753.7
Viet Nam	4,512.0	46.7	4.5	55.6	23.4	2,232.2
Wallis and Futuna Islands	0.4	34.1	-	2.2	3.5	1,850.7
Yemen[12]	128.7	4.0	2.0	127.7	3.5	68.2
Zambia	467.9	24.7	7.8	86.6	81.3	607.8
Zimbabwe	435.2	27.8	13.7	86.7	84.4	468.0

(11) - (12) - (13) - (14) See notes on pages 68-73.

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.

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).

Maps in this Pocketbook were created based on a worldwide geospatial dataset provided by UN Geospatial (https://www.un.org/geospatial).

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 mostly from the World Bank (GDP, PPP, constant 2017 international $) and are available at: https://data.worldbank.org/indicator/NY.GDP.MKTP.PP.KD (downloaded on 14/11/2022). For some countries GDP PPP data were not available from the World Bank, but estimates were available from the CHELEM database. For these countries - namely: Cuba, the Democratic People's Republic of Korea, French Polynesia, New Caledonia, the Syrian Arab Republic, Turkmenistan and Venezuela (Bolivarian Republic of) – the estimates from the CHELEM database were used (http://www.cepii.fr/CEPII/en/bdd_modele/bdd_modele_item.asp?id=17, downloaded on 22/11/2022). For countries where 2020 GDP PPP from these sources is not available,

energy intensity corresponds to the official SDG indicator 7.3.1 (https://unstats.un.org/sdgs) if available.

Data on thermal renewable electricity capacity are mostly from IRENA and are available at: https://www.irena.org/Data/Downloads/Tools.

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/2020/05gn.pdf.

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

Concepts and definitions

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 (available at: https://unstats.un.org/unsd/energystats/pubs/balance) under the chapter "Concepts and Definitions".

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.

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.

Per *capita* data are calculated by dividing energy values (total energy supply, electricity generation, electricity consumption, total final consumption) by population.

Energy intensity is calculated by dividing total energy supply by GDP, PPP (constant 2017 international $). It corresponds to SDG indicator 7.3.1.

Energy 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.

Chapter notes and definitions

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 section *Concepts and definitions*.

Note (2), page 2

For the definition of energy intensity, please refer to the section *Concepts and definitions*.

Primary energy production

Note (3), page 6

For the definition of energy self-sufficiency, please refer to the section *Concepts and definitions*.

The category *Other primary oil* (chart 27 and table 28) refers 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.

Electricity

Note (4), pages 19, 21
The category *Solar, wind and other sources* refers to solar, wind, geothermal, chemical heat, tide, wave and marine, and other non-specified sources.

Note (5), pages 26, 27
Electricity capacities from geothermal, tide, wave and marine and from other non-specified sources are not shown in tables 49 and 51. They are negligible compared to the world total (42.7 GW in 2020) and are not included in chart 48.

The categories *Renewable electricity generation* (Facts and figures box, map 42, table 43 and 47, chart 46) and *Renewable electricity capacity* (Facts and figures box, tables 49, 51 and 59, chart 50 and map 58) refer to hydro, wind, solar, geothermal, tide, wave and marine, as well as renewable thermal, i.e. electricity from biofuels and renewable waste.

The category *Non-renewable electricity generation* (Facts and figures box, tables 49 and 51 and chart 50) 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. *Non-renewable electricity capacity* (tables 49 and 51, chart 50) refers to thermal from non-renewable fuels, nuclear, and other non-specified capacities.

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.

Refinery output

Note (6), page 36
World oil energy supply includes international aviation and marine bunkers; conversely, bunkers are excluded from oil energy supply calculated for 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 69. For further explanations, please refer to the section *Concepts and definitions*.

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 *Other* (chart 64 and table 65) 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.

Total final consumption

Note (7), page 37

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 and heat generation are not accounted directly in TFC, but accounted for indirectly as final electricity and heat consumption. For coal specifically, around 64% of TES in 2020 is used as input for electricity and heat generation worldwide.

Note (8), page 42

World total final consumption includes international aviation and marine bunkers; conversely, bunkers are excluded from total final consumption calculated for 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 total final consumption and the sum of the country values in table 80. For further explanations, please refer to the section *Concepts and definitions*.

The category *Other* (chart 77 and table 78) 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.

For the definition of *Renewable energy share in total final energy consumption* (map 79 and table 80), please refer to the section *Concepts and definitions*.

Energy balances

Note (9), page 44
Transport Includes international aviation and marine bunkers.

Note (10), all balances, starting from page 44
The category *of which: renewables* follows the convention used in the Energy Balances publication 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.

Indicators

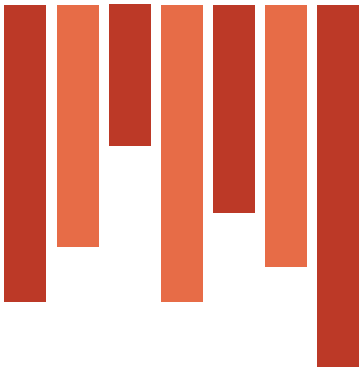
Note (11), page 58
World total energy supply includes international aviation and marine bunkers; conversely, bunkers are excluded from total energy supply calculated for countries and regions. For further explanations, and for definitions of per capita indicators, energy intensity, energy self-sufficiency and renewable energy share in total final energy consumption, please refer to the section *Concepts and definitions*.

Note (12), starting from page 58
Energy intensity for this country is calculated using GDP PPP data from the CHELEM database

Note (13), starting from page 58
Energy statistics for this country are partially covered by another country (see geographical notes at https://unstats.un.org/unsd/energystats/pubs/yearbook/2020/05gn.pdf). Therefore, indicators should be interpreted with caution.

Note (14), starting from page 58
Energy intensity for this country corresponds to the official SDG 7.3.1. indicator.

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 978-92-1-259224-4

22-28479