

2019 TRACKING SDG 7

THE ENERGY PROGRESS REPORT



EXECUTIVE SUMMARY



A joint report of the custodian agencies



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PARTNERS

The Energy Progress Report is a product of exceptional collaboration among the five SDG 7 custodian agencies, specially constituted in a Steering Group:

- International Energy Agency (IEA) (2019 chair)
- International Renewable Energy Agency (IRENA)
- United Nations Statistics Division (UNSD)
- World Bank (WB)
- World Health Organization (WHO)

Technical Advisory Group chaired by United Nations Department of Economics and Social Affairs (UN DESA), and composed as follows:

- African Development Bank (AfDB)
- Clean Cooking Alliance
- Denmark (Ministry of Foreign Affairs)
- European Commission
- FIA Foundation
- Food and Agricultural Organization (FAO)
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- International Institute for Applied Systems Analysis
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- The Netherlands (Ministry of Foreign Affairs)
- United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries, and Small Island Developing States (UN-OHRLS)
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- United Nations Human Settlements Programme (UN-Habitat)
- United Nations Industrial Development Organization (UNIDO)
- United Nations Institute for Training and Research (UNITAR)

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EXECUTIVE SUMMARY



OVERALL MESSAGES

According to the latest data, the world is making progress towards achieving Sustainable Development Goal 7 (SDG 7), but will fall short of meeting the targets by 2030 at the current rate of ambition. The SDG Target 7.1 is to ensure universal access to affordable, reliable, and modern energy services (7.1.1 focuses on the proportion of the population with access to electricity and 7.1.2, on the proportion relying primarily on clean fuels and technologies for cooking). Target 7.2 is to increase substantially the share of renewable energy in the global energy mix. Target 7.3 is to double the global rate of improvement in energy efficiency.

In recent years, pronounced progress in expanding access to electricity was made in several countries, notably India, Bangladesh, and Kenya. As a result, the global population without access to electricity decreased to about 840 million in 2017 from 1.2 billion in 2010 (figure ES1). Those still lacking access are increasingly concentrated in Sub-Saharan Africa.

Meanwhile, the population without access to clean cooking solutions totaled almost 3 billion in 2016 and was distributed across both Asia and Africa. The widespread use of polluting fuels and technologies for cooking continues to pose serious health and socioeconomic concerns.

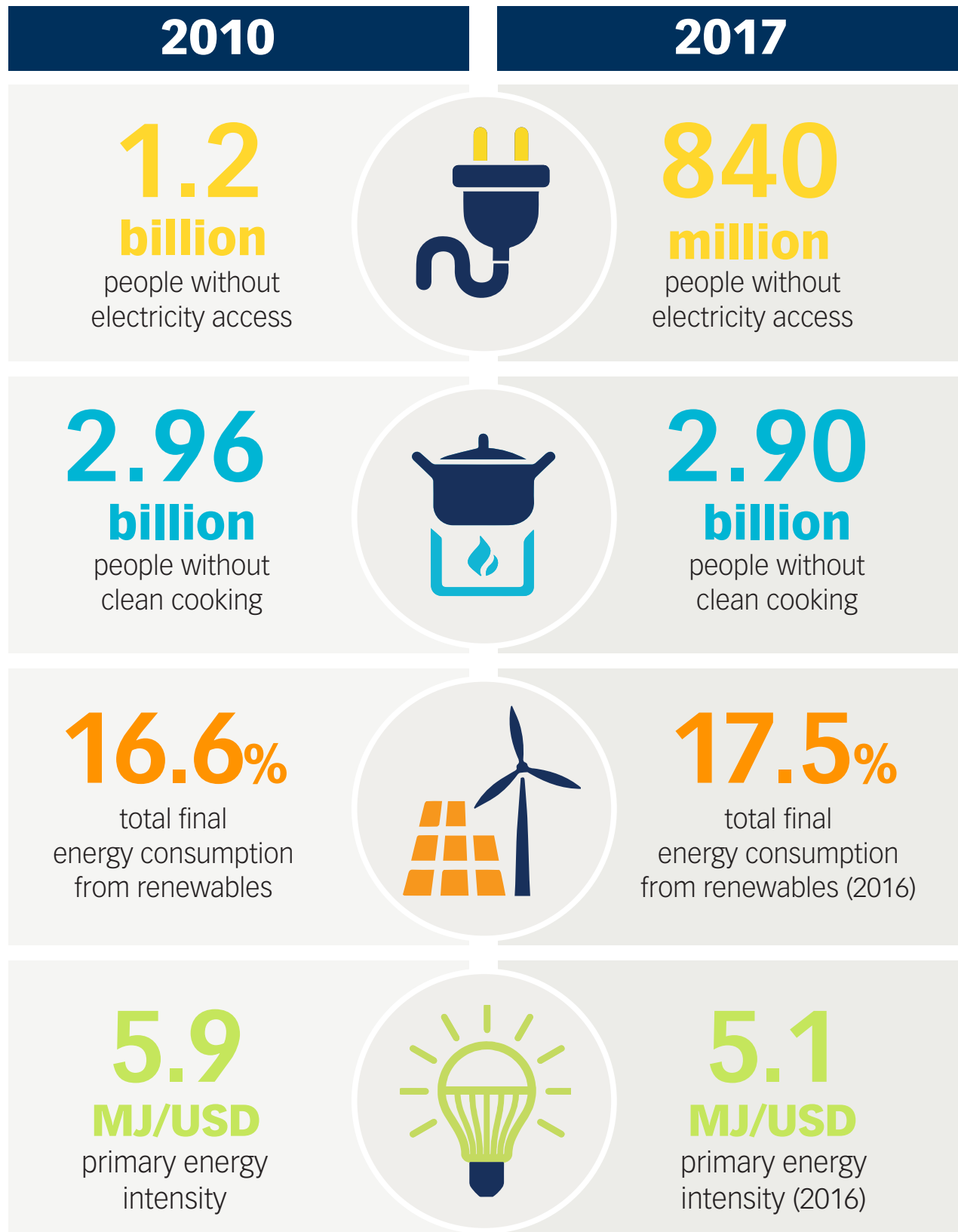
Renewable energy accounted for 17.5% of global total energy consumption in 2016. The use of renewables (i.e., sources of renewable energy) to generate electricity increased rapidly, but less headway was made in heat and transport. A substantial further increase of renewable energy is needed for energy systems to become affordable, reliable, sustainable, focusing on modern uses.

Finally, with respect to energy efficiency, global primary energy intensity was 5.1 megajoules per U.S. dollar (MJ/USD) (2011 purchasing power parity) in 2016. Energy efficiency improvements have increased steadily in recent years, thanks to concerted policy efforts in major economies, including China. However, the global rate of improvement in primary energy intensity still lags behind SDG target 7.3, and estimates suggest that improvements slowed in 2017 and 2018.

Additional effort will be essential in ensuring progress toward not only SDG 7 but also the broader Sustainable Development Agenda. In particular, SDG 7 and climate mitigation (SDG 13) are closely related and complementary. According to scenarios put forward by both the International Energy Agency (IEA) and the International Renewable Energy Agency (IRENA), energy sector investment related to all SDG 7 targets will need to more than double in order to achieve these goals. Between 2018 and 2030, annual average investment will need to reach approximately \$55 billion to expand energy access, about \$700 billion to increase renewable energy, and \$600 billion to improve energy efficiency.

This report identifies best practices that have proven successful in recent years, as well as key approaches that policy makers may deploy in coming years. Recommendations applicable to all SDG 7 targets include recognizing the importance of political commitment and long-term energy planning, stepping up private financing, and supplying adequate incentives for the deployment of clean technology options. The following sections review progress in electricity access, access to clean cooking solutions, renewable energy, and energy efficiency.

FIGURE ES1 • LATEST DATA ON PRIMARY INDICATORS OF GLOBAL PROGRESS TOWARD SDG 7 TARGETS



Source: IEA, IRENA, World Bank, WHO, and UNSD 2019.
Note: MJ/USD = megajoules per U.S. dollar.

BOX ES1 • WHAT IS THE ENERGY PROGRESS REPORT?

The Energy Progress Report chronicles progress toward Sustainable Development Goal (SDG) 7 at the global, regional, and country levels. It is a joint effort of the International Energy Agency (IEA), the International Renewable Energy Agency (IRENA), the United Nations Statistics Division (UNSD), the World Bank, and the World Health Organization (WHO), all appointed by the United Nations as global custodian agencies responsible for collecting and reporting data related to the energy targets of SDG 7.

The Energy Progress Report reviews progress to 2017 for energy access and to 2016 for renewable energy and energy efficiency, against a baseline year of 2010. Its methodology is detailed at the end of each chapter.

ELECTRICITY ACCESS

Thanks to significant efforts across the developing world, the global electrification rate reached 89% in 2017 (from 83% in 2010), still leaving about 840 million people without access. The progress amounts to an average annual electrification rate of 0.8 percentage points, and newly gained access for more than 920 million people since 2010.

The electrification trend began to accelerate in 2015. An additional 153 million people were electrified yearly between 2015 and 2017, at an annual rate of more than 1 percentage point. However, the momentum remained uneven across regions; difficult-to-reach populations, particularly in Sub-Saharan Africa, where many remain without access.

Electrification efforts have been particularly successful in Central and Southern Asia, where 91% of the population had access to electricity in 2017 (figure ES2)¹. Access rates in Latin America and the Caribbean, as well as Eastern and Southeastern Asia, climbed to 98% in 2017. Among the 20 countries with the largest populations lacking access to electricity, India, Bangladesh, Kenya, and Myanmar made the most significant progress since 2010.

Sub-Saharan Africa remains the region with the largest access deficit: here, 573 million people—more than one in two—lack access to electricity. The region is also home to the 20 countries with the lowest electrification rates (figure ES3). Burundi, Chad, Malawi, the Democratic Republic of Congo, and Niger were the four countries with the lowest electrification rates in 2017.

Progress in electrifying inner cities has been slow, and most informal settlements are still supplied through fragile distribution networks. The rural access rate of 79% in 2017 was lower than the urban access rate of 97%. To reach remote areas, off-grid solutions are essential; these include solar lighting systems, solar home systems, and—increasingly—mini-grids.

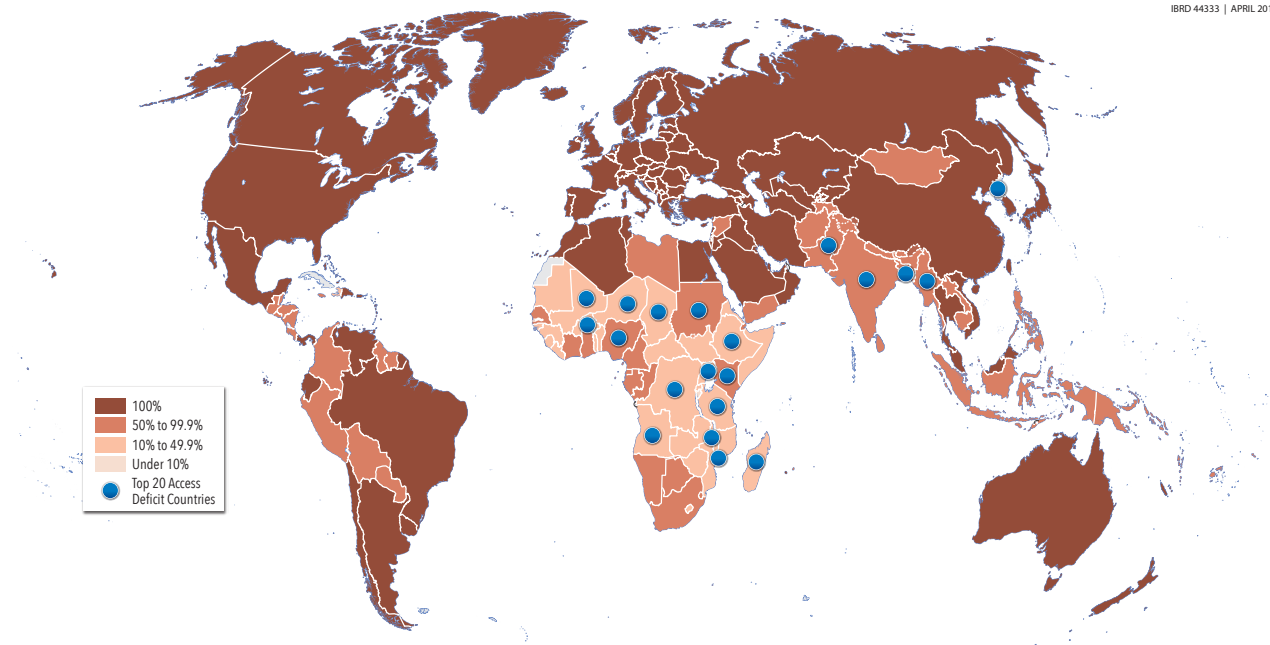
SDG target 7.1 calls for universal access to affordable, reliable, and modern energy services. Reliability and affordability remain challenging elements in many countries, even as the number of household connections increases. In 2017, one-third of access-deficit countries faced more than one weekly disruption in electricity supply that lasted over four minutes. A basic, subsistence level of electricity consumption (30 kilowatt-hours per month) was unaffordable for 40% of households in about half of these countries. Access also has a gender dimension. In key access-deficit countries analyzed under the World Bank's Multi-Tier Framework for Energy, found significant variability in household access rates based on gender of head of household.

If the rate of progress in expanding access to electricity remained at the same level as that between 2015 and 2017, universal access could be reached by 2030. However, connecting the last of the unserved populations may be more challenging than past electrification efforts, since many such populations live in remote locales or overburdened cities. A projected 650 million people are likely to remain without access to electricity in 2030, and 9 out of 10 such people will be in Sub-Saharan Africa.

Key strategies for closing this gap will include data-based decision-making and advanced policy-planning frameworks, private sector financing, versatile solutions that include decentralized renewables, and efforts to both extend rural electrification and cope with urban densification.

FIGURE ES2 • SHARE OF POPULATION WITH ACCESS TO ELECTRICITY IN 2017

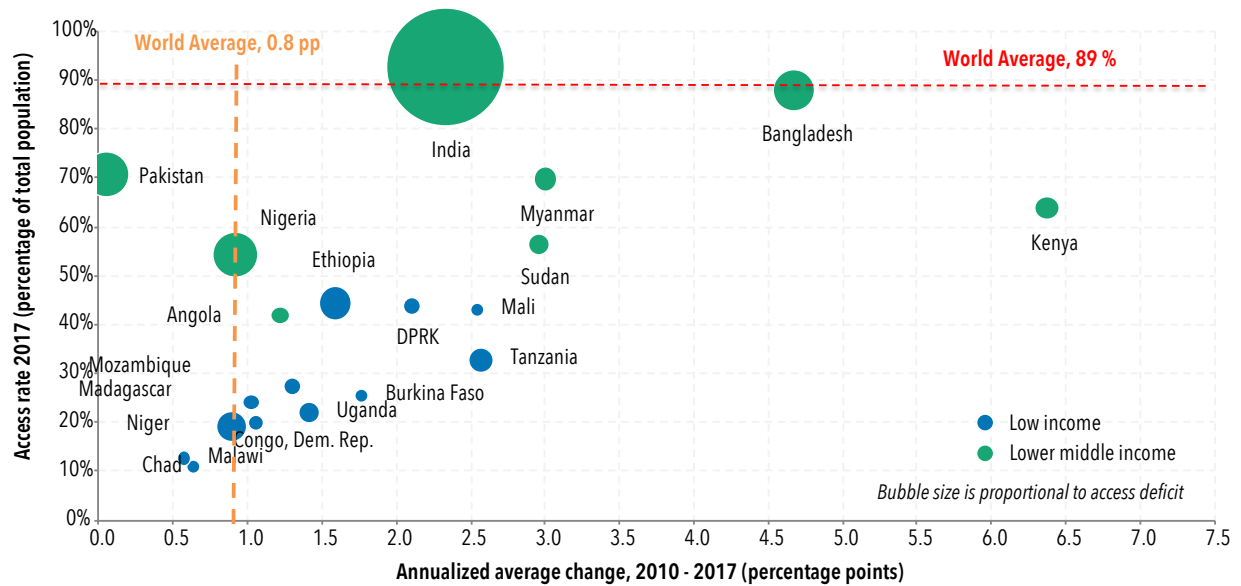
IBRD-44333 | APRIL 2019



Source: World Bank.

Note: This map is without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries, and to the name of any territory, city or area.

FIGURE ES3 • THE 20 COUNTRIES WITH THE LARGEST ACCESS DEFICIT OVER THE 2010-2017 TRACKING PERIOD



Source: World Bank.

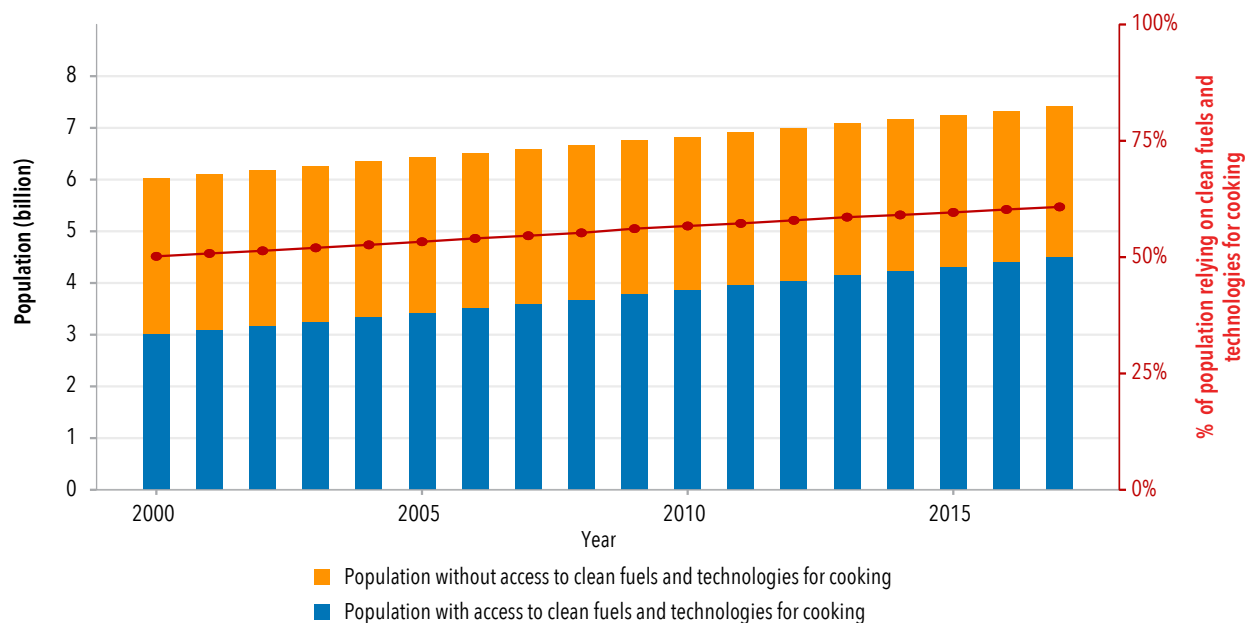
Note: DPRK = Democratic People's Republic of Korea.

ACCESS TO CLEAN COOKING SOLUTIONS

The share of the global population with access to clean fuels and technologies for cooking increased from 57% [51, 62] in 2010 to 61% [54, 67] in 2017. However, because population growth is outpacing annual growth in access, especially in Sub-Saharan Africa, the population without access to clean cooking remains just under 3 billion (figure ES4).

Between 2010 and 2017, the percentage of the population relying on clean cooking solutions grew by an annual average of 0.5 percentage points [-0.5, 1.6]², though annual progress slowed in 2008. During this period, global improvements were driven by gains in the regions of Central and Southern Asia and Eastern and Southeastern Asia, which posted average annual increases of 1.2 and 0.9 percentage points, respectively. To reach universal clean cooking targets by 2030 and outpace population growth, the annual average increase in access must rise to 3 percentage points, from the rate of 0.5 percentage points observed between 2010 and 2017.

FIGURE ES4 • CHANGE OVER TIME IN THE ABSOLUTE NUMBER OF PEOPLE WITH AND WITHOUT ACCESS TO CLEAN COOKING (LEFT AXIS) AND PERCENTAGE OF THE GLOBAL POPULATION WITH ACCESS TO CLEAN COOKING (RIGHT AXIS), 2000-2017



Source: WHO.

Looking at individual countries, in absolute terms, India and China account for the largest shares of the global population without access to clean cooking, at 25% and 20%, respectively (figure ES5). These two countries alone are home to 1.3 billion people without access to clean cooking solutions. Meanwhile, in 6 of the 20 countries with the largest access deficits—the Democratic Republic of Congo, Ethiopia, Madagascar, Mozambique, Uganda, and Tanzania—less than 5% of the population uses clean fuels and technologies as their primary means of cooking.

In most access-deficit regions, the use of wood is steadily declining, but this trend is offset by an increase in charcoal usage, primarily in Sub-Saharan Africa. An inverse relationship between kerosene and cleaner gaseous fuels (liquid petroleum gas, natural gas, and biogas) has also been observed: as kerosene use declines, reliance on cleaner gaseous fuels for cooking increases. The uptake of cleaner fuels remains slow in rural Africa, in large part due to issues of affordability and supply.

The business as usual pathway will not meet the universal access goal by 2030. Based on the projections of current and planned policies, the IEA estimates that 2.2 billion people will still be dependent on inefficient and polluting energy sources for cooking. Most of this population will reside in Asia and Sub-Saharan Africa. To achieve univer-

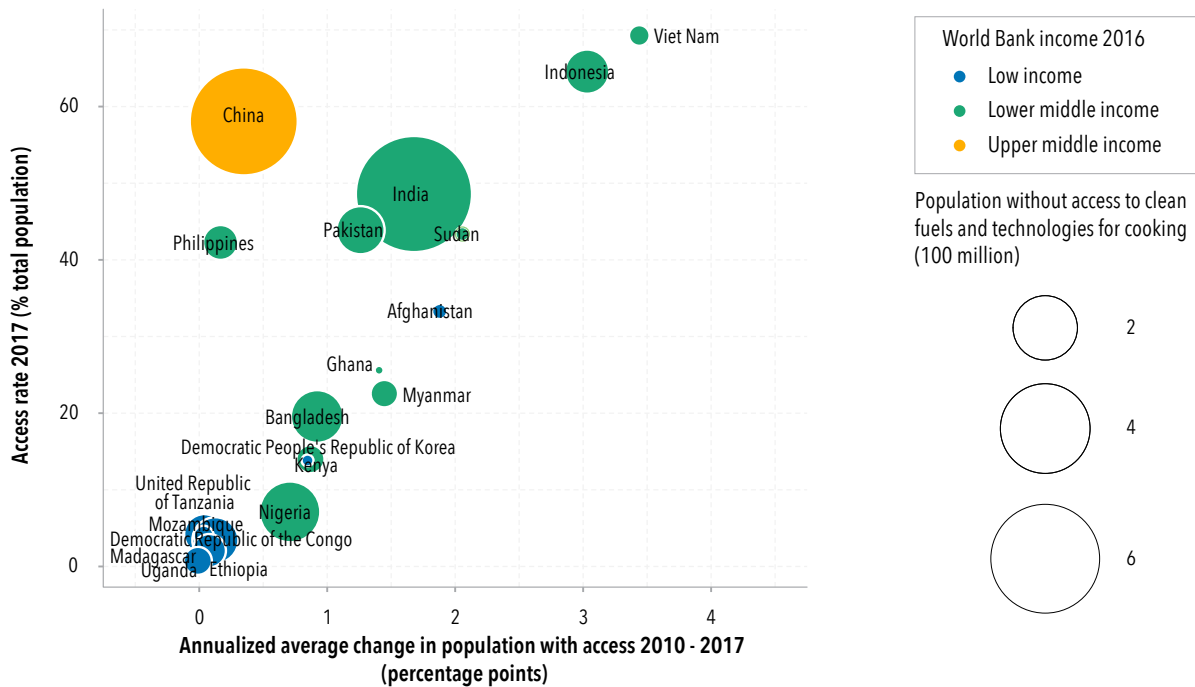
sal access by 2030, greater use of liquid petroleum gas would be appropriate in urban areas (accounting for an estimated 92% of new connections) since population density justifies the necessary investment in infrastructure. Meanwhile, improved biomass cookstoves, which represent 37% of clean cooking solutions, would be particularly suited for rural or more remote areas.

Cleaner household energy is closely linked with other development goals, including those touching on human health, the environment, and gender equality. Universal access to clean cooking solutions would help prevent some 3.8 million premature deaths each year, primarily among women and children, from exposure to household air pollution. It would also save time spent collecting fuel (wood or other biomass) and tending fires—time that could otherwise be used for learning, earning, and social activities. Clean cooking solutions reduce deforestation and lower climate-changing emissions. For these and other co-benefits to be realized, however, clean cooking must be integrated into national policy, by scaling up solutions, increasing public and private investment in clean cooking, and enhancing multi-sectoral collaboration.

Transitioning to clean cooking requires tailored policies and programs that focus on key barriers to the adoption of clean cooking solutions, such as their affordability, lack of supply, and social acceptability. Particularly successful programs to date have addressed behavioral patterns, cultural norms, and regional variations. Because women are typically responsible for cooking, they often have a comparative advantage in reaching out to other users of clean cookstoves. Other success factors are enhanced multisectoral collaboration and greater public and private investment in clean cooking.

FIGURE ESS • THE 20 COUNTRIES WITH THE LARGEST CLEAN COOKING ACCESS DEFICIT, 2010-2017

Source: WHO.



RENEWABLE ENERGY

In 2016, the share of renewables in total final energy consumption increased at the fastest rate since 2012 and reached almost 17.5%. Renewables are essential in the drive towards universal access to affordable, sustainable, reliable and modern energy, except for the traditional uses of biomass (e.g. for cooking) which is linked to significant negative health impacts. In 2016, the share of modern renewables (that is, excluding these traditional uses of bioenergy) in total energy consumption reached 10.2%, up from 8.6% in 2010, while the share of traditional uses of biomass declined to 7.3% from 7.9%.

Of the three end uses of renewables—electricity, heat, and transport—the use of renewables grew fastest with respect to electricity (figure ES7), driven by the rapid expansion of wind and solar technologies.

The share of renewables in electricity consumption increased by 1 percentage point to 24% in 2016. This was the fastest growth since 1990, more than double that of 2015. It was driven by three key developments: (i) drought recovery in Latin America and an associated increase in hydropower generation, (ii) China's record-level wind capacity additions in 2015, which became fully operational in 2016, and (iii) rapid expansion of solar capacity in China and the United States. Hydropower remains the largest source of renewable electricity, accounting for 68% in 2016. It is followed by wind, bioenergy, solar, and geothermal.

The share of renewables in heat remains the highest among the three end uses. That share surpassed 24% in 2016, an increase of 0.5% year on year. However, most of the share reflects traditional uses of biomass. Only 9% of heat was generated from modern renewables in 2016.

The share of renewable energy in transport remains lowest: it increased by 0.1% year on year to reach 3.3% in 2016. Biofuels constitute the majority of renewable energy used for transport in the United States, Brazil, and the European Union. Electricity generated from renewable sources also grew, linked to rail and the rapid increase of electric vehicles.

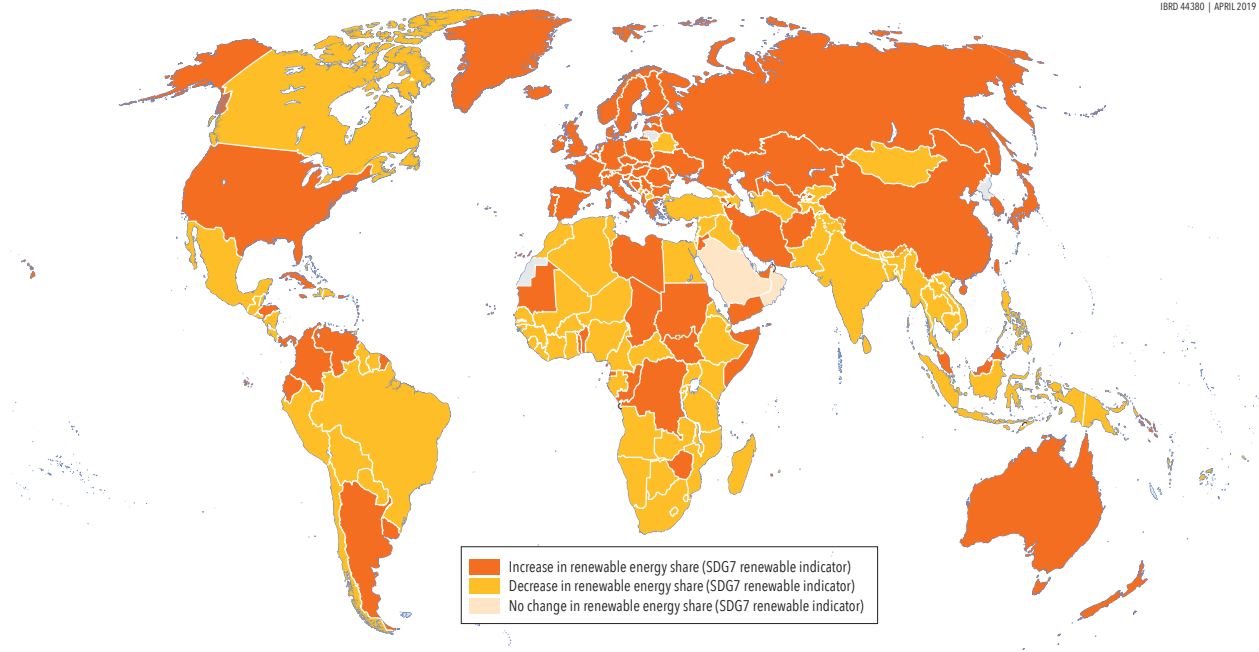
The top 20 energy-consuming countries in 2016 were responsible for three-quarters of global energy demand and two-thirds of global renewable energy consumption. In the six countries where consumption of renewables was above the global average, the trend was led by traditional uses of biomass (in India, Indonesia, Nigeria, and Pakistan), modern biomass (in Brazil), or hydropower (Canada).

Strong policy support and the increasing cost-competitiveness of solar photovoltaic and wind technologies are projected to bolster the deployment of renewable electricity across all regions. However, according to long-term scenarios developed by both IEA and IRENA, global renewable energy consumption needs to accelerate substantially to ensure access to affordable, reliable, sustainable and modern energy for all.

Despite remarkable progress over the past decade, renewables still face persistent financial, regulatory, and sometimes technological barriers. Policies have focused on renewable electricity so far, and fewer countries have implemented policies for renewables use for heating and transport. To foster an enabling environment, it is important that various policies work in tandem to integrate renewables into energy systems and directly support their deployment in all end uses. To ensure that the renewables-based energy transition is inclusive in all respects, gender considerations need to be mainstreamed in energy sector policies, education and training programmes, and private sector practices.

FIGURE ES6 • CHANGE IN RENEWABLE ENERGY'S SHARE OF TOTAL FINAL ENERGY CONSUMPTION BETWEEN 2010 AND 2016

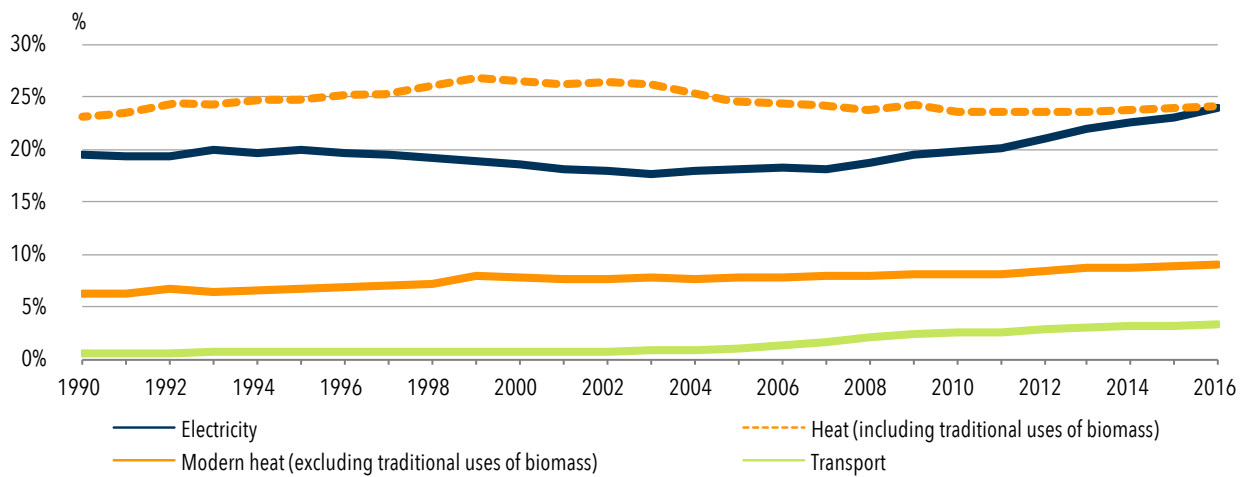
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Source: IEA and UNSD.

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FIGURE ES7 • RENEWABLES' SHARE OF ALL ENERGY CONSUMED, BY END USE, 1990-2016



Source: IEA and UNSD

ENERGY EFFICIENCY

Rates of improvement in global primary energy intensity—defined as the percentage drop in global total primary energy supply per unit of gross domestic product—were more sustained in 2010-2016 (falling by more than 10%) than they had been in 1990-2010 (figure ES8). Global primary energy intensity was 5.1 MJ/USD (2011 US dollar at purchasing power parity) in 2016, a 2.5% improvement from 2015. Yet this lags behind the annual rate of improvement to 2030 targeted by SDG 7.3, which now exceeds 2.7% and it is estimated that further declines in the rate of improvement have been observed in 2017 and 2018, with the rate of improvement in 2018 falling to a mere 1.3%.

To realize the significant cost savings to be gained from improved energy efficiency, more needs to be done. Concerted policy efforts, technology change, and changes in economic structure will contribute to improving global primary energy intensity. Recent progress has been more sustained than historical trends. In 2010-2016, the annual rate of primary energy intensity improvement accelerated in 16 of the world's 20 economies with the greatest energy demand. China saw the most significant improvement, with India, Indonesia, Japan, and the United Kingdom also recording strong progress.

Energy intensity has decreased at varied rates across end-use sectors. Progress has been fastest in industry and passenger transport, where the average annual rate of improvement exceeded 2%. Rates of efficiency improvement in the services, agriculture, and residential sectors exceeded 1.5%. Freight transport lagged slightly behind, but a changing policy landscape following the implementation of fuel economy standards for trucks in the United States, Canada, Japan, China and India, as well as proposed standards in Europe signals potential change in the coming years.

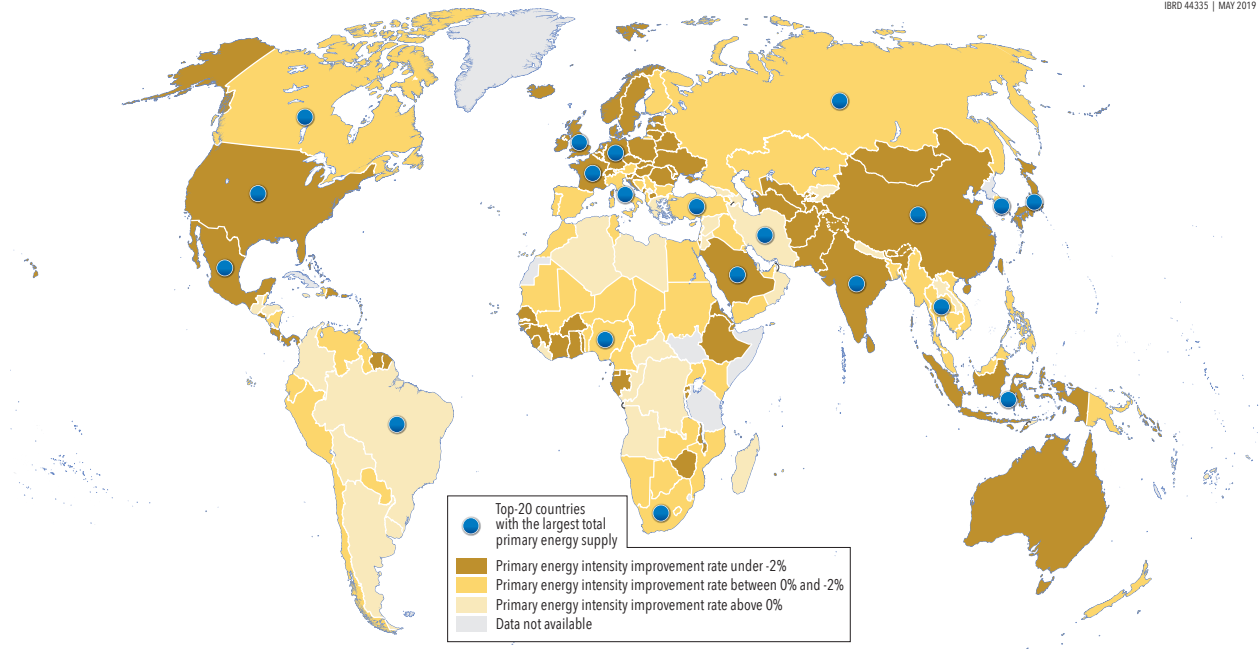
The rate of improvement in global primary energy intensity is also influenced by supply-side factors—chief among them efficiency in fossil fuel generation and reductions in the losses incurred in the transmission and distribution of electricity. Fossil fuel electricity generation has become steadily more efficient since 2000 - the efficiency level reached nearly 40% in 2016. Meanwhile, the modernization of electricity networks in the world's largest electricity-generating countries, including China and India, has reduced transmission and distribution losses.

Looking ahead, improvements in energy intensity are likely to fall short of the SDG 7.3 target, leaving a large portion of potential benefits unrealized. Given current and planned policies, energy intensity improvements are projected to average 2.4% per year between 2017 and 2030.

In the IEA's Sustainable Development Scenario, in which cost-effective energy efficiency potentials are maximized, the rate of intensity improvement between 2017 and 2030 reaches 3.6%. This highlights that it is still possible not only to meet but even to exceed SDG target 7.3. Key efforts that governments can undertake to realize this potential include strengthening mandatory energy efficiency policies, providing targeted fiscal or financial incentives, leveraging market-based mechanisms, and disseminating high-quality information about energy efficiency. The spread of digital technologies will also create new ways to harness efficiency improvements through improved devices and business models.

FIGURE ES8 • COMPOUND ANNUAL AVERAGE GROWTH RATE OF PRIMARY ENERGY INTENSITY, 2010-2016

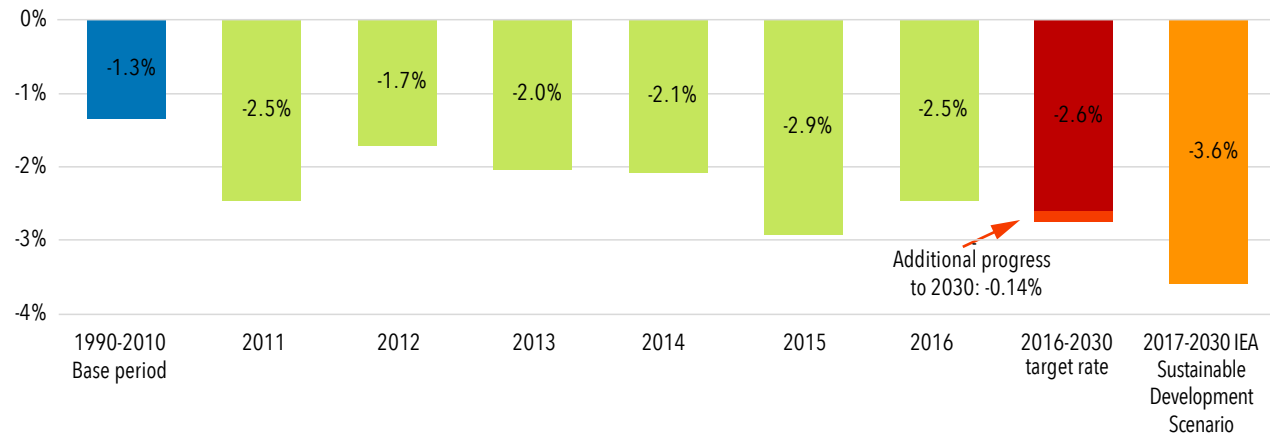
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Source: IEA, UNSD, and World Development Indicators.

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FIGURE ES9 • GROWTH RATE OF PRIMARY ENERGY INTENSITY BY PERIOD, TARGET RATE FOR 2016-2030, AND POTENTIAL FOR 2017-2030 IN IEA SUSTAINABLE DEVELOPMENT SCENARIO



Source: IEA, UNSD, and World Development Indicators.

ENDNOTES

- 1 South Asia has an access rate of 90% and Central Asia has an access rate of 99%.
- 2 Bracketed percentages represent the 95% confidence interval. The Methodology section at the end of Chapter 3 provides details.



DATA



TOTAL ELECTRICITY ACCESS RATE (%)

Country	Total electricity access rate (%)						Urban electricity access rate (%)		Rural electricity access rate (%) b		
	1990	2000	2010	2015	2017	2017	2017	2017	2017		
Afghanistan			43	d	72	d	98	g	100	g	97
Albania	100	m	100	m	100	m	100	m	100	m	100
Algeria			99		100		100		100		100
American Samoa											
Andorra	100	m	100	m	100	m	100	m	100	m	100
Angola			33		42	d	42		73		0
Anguilla		95	98		100		100		100		
Antigua and Barbuda			98		100	m	100	m	100	m	100
Argentina			99	e	100		100	m	100	m	100
Armenia		99	100	d	100		100	d	100		100
Aruba	100	m	92	e	100		100	m	100	m	100
Australia	100	m	100	m	100	m	100	m	100	m	100
Austria	100	m	100	m	100	m	100	m	100	m	100
Azerbaijan		99	100	c	100		100		100		100
Bahamas	100	m	100	m	100	m	100	m	100	m	100
Bahrain			100	m	100	m	100	m	100	m	100
Bangladesh		32	d	55	g	73	88	l	100	l	81
Barbados		100	m	100	m	100	100	m	100	m	100
Belarus	100	m	100	m	100	m	100	m	100	m	100
Belgium	100	m	100	m	100	m	100	m	100	m	100
Belize		79	e	90	e	92	92	c	98		98
Benin		21		34	g	40	43		73		17
Bermuda	100	m	100	m	100	m	100	m	100	m	100
Bhutan		31	g	73	c	96	98	e	99	e	97
Bolivia (Plurinational State of)		70	h	88		92	92	h	99	h	75

Country	Total electricity access rate (%)							Urban electricity access rate (%)		Rural electricity access rate (%) b	
	1990	2000	2010	2015	2017	2017	2017	2017	2017	2017	
Bosnia and Herzegovina	100	m	100	m	100	m	100	m	100	m	
Botswana		27	53	58	63		80		24		
Brazil	87	h	99	100	100	h	100		100		
British Virgin Islands				100	100	m	100	m	100	m	
Brunei Darussalam	100	m	100	100	100	m	100	m	100	m	
Bulgaria	100	m	100	100	100	m	100	m	100	m	
Burkina Faso		9	13	22	25	d	65		10		
Burundi		3	5	8	9	d	62	d	2		
Cambodia		17	31	69	89	d	99	l	86		
Cameroon		41	53	59	61	c	93		21		
Canada	100	m	100	100	100	m	100	m	100	m	
Cabo Verde			81	88	93	e	94		90		
Cayman Islands		100	100	100	100	m	100	m	100	m	
Central African Republic		6	10	24	30	c	52		15		
Chad		3	6	8	11	c	39		2		
Channel Islands											
Chile	92	h	99	100	100	h	100	m	100	m	
China			100	100	100	k	100		100		
Colombia	90	d	97	98	100	h	100		98		
Comoros		40	70	75	80		95		74		
Democratic Republic of the Congo		7	13	17	19	c	49		0		
Congo			42	60	66	c	87		24		
Cook Islands			99	100	100		100				
Costa Rica			99	99	100	h	100	h	99		
Côte d'Ivoire		48	58	63	66		94		37		
Croatia	100	m	100	100	100	m	100	m	100	m	
Cuba		97	98	99	100	k	100		100		

Country	Total electricity access rate (%)						Urban electricity access rate (%)		Rural electricity access rate (%) b	
	1990	2000	2010	2015	2017		2017	2017		
Curaçao			100	m	100	m	100	m	100	m
Cyprus	100	m	100	m	100	m	100	m	100	m
Czechia	100	m	100	m	100	m	100	m	100	m
Denmark	100	m	100	m	100	m	100	m	100	m
Djibouti		56	56	58	60	j	70	j	26	
Dominica		81	94	100	100		100		100	
Dominican Republic		89	98	h	99	h	100		100	
Ecuador		93	97	h	99	h	100		100	
Egypt		98	d	100	100		100		100	
El Salvador		85	h	92	h	95	h	99	100	
Equatorial Guinea				67	67		91		6	
Eritrea		29	40	46	48		77		30	
Estonia	100	m	100	m	100	m	100	m	100	m
Ethiopia		13	d	33	29	d	44	l	97	l
Faroe Islands	100	m	100	m	100	m	100	m	100	m
Fiji		76	89	95	96	e	100		91	
Finland	100	m	100	m	100	m	100	m	100	m
France	100	m	100	m	100	m	100	m	100	m
French Polynesia	100	m	100	m	100	m	100	m	100	m
Gabon		74	d	92	90		98		49	
Gambia		34	c	48	54	d	79	d	21	
Georgia			99	100	100		100		100	
Germany	100	m	100	m	100	m	100	m	100	m
Ghana		44	e	64	76		90	d	65	
Gibraltar	100	m	100	m	100	m	100	m	100	m
Greece	100	m	100	m	100	m	100	m	100	m
Greenland	100	m	100	m	100	m	100	m	100	m

Country	Total electricity access rate (%)					Urban electricity access rate (%)		Rural electricity access rate (%) b	
	1990	2000	2010	2015	2017	2017	2017	2017	2017
Grenada		86	90	93	95	93	96		
Guam		100	100	100	100	100	100	m	m
Guatemala		73	84	91	93	97	89		
Guinea		17	26	32	35	83	9		
Guinea-Bissau			6	g	20	48	9		
Guyana		75	82	88	91	97	89		
Haiti		34	37	41	44	78	3		
Honduras		67	81	90	h	98	72	l	
China, Hong Kong Special Administrative Region	100	100	100	100	m	100	100	m	m
Hungary	100	100	100	100	m	100	100	m	m
Iceland	100	100	100	100	m	100	100	m	m
India		59	76	g	88	99	89		
Indonesia		86	94	g	98	100	96		
Iran (Islamic Republic of)		98	99	d	100	100	100		
Iraq			98		100	100	100		
Ireland	100	100	100	100	m	100	100	m	m
Isle of Man	100	100	100	100	m	100	100	m	m
Israel	100	100	100	100	m	100	100	m	m
Italy	100	100	100	100	m	100	100	m	m
Jamaica	70	h	93	97	100	100	99		
Japan	100	100	100	100	m	100	100	m	m
Jordan	97	d	99	100	100	100	100		
Kazakhstan		99	99	100	c	100	100		
Kenya		15	19	d	42	81	58		
Kiribati			63	e	91	89	100		
Democratic People's Republic of Korea			29	40	44	39	52		

Country	Total electricity access rate (%)						Urban electricity access rate (%)		Rural electricity access rate (%) b	
	1990	2000	2010	2015	2017	2017	2017	2017	2017	
Republic of Korea		100	100	m	100	m	100	m	100	m
Kosovo	100	m	99	0	100	m	100	m	100	m
Kuwait	100	m	100	m	100	m	100	m	100	m
Kyrgyzstan		100	99	i	100	100	100	100	100	100
Lao People's Democratic Republic		43	71	e	90	94	c	100	c	91
Latvia	100	m	100	m	100	m	100	m	100	m
Lebanon		100	100	100	100	100	100	100	100	100
Lesotho		4	c	21	30	34	70	70	20	20
Liberia			5	15	21	21	36	36	7	7
Libya		100	k	81	73	70	70	70	70	70
Liechtenstein	100	m	100	m	100	m	100	m	100	m
Lithuania	100	m	100	m	100	m	100	m	100	m
Luxembourg	100	m	100	m	100	m	100	m	100	m
China, Macao Special Administrative Region		100	m	100	m	100	m	100	m	m
The former Yugoslav Republic of Macedonia	100	m	100	m	100	m	100	m	100	m
Madagascar		14	17	20	24	24	69	69	0	0
Malawi		5	d	9	d	11	d	58	d	4
Malaysia			99	100	100	100	100	100	100	100
Maldives		84	e	99	100	100	100	d	100	100
Mali		10	25	38	d	43	87	87	12	12
Malta	100	m	100	m	100	m	100	m	100	m
Marshall Islands		69	89	93	95	95	96	96	92	92
Mauritania			34	40	c	43	83	83	0	0
Mauritius		99	e	100	98	98	90	90	100	100
Mexico		98	h	99	99	d	100	100	100	100

Country	Total electricity access rate (%)						Urban electricity access rate (%)		Rural electricity access rate (%) ^b	
	1990	2000	2010	2015	2017	2017	2017	2017	2017	
Micronesia (Federated States of)		46	e	65	e	76	81	94	77	
Republic of Moldova	100	m	100	m	100	m	100	m	m	
Monaco	100	m	100	m	100	m	100	m	m	
Mongolia		67	e	79	c	83	86	100	56	
Montenegro	100	m	100	m	100	m	100	m	m	
Morocco		70		91		100	100	100	100	
Mozambique		7		18		24	27	73	2	
Myanmar				49	g	61	70	93	l	
Namibia		37	d	44		50	53	77	29	
Nauru				99		99	100	100		
Nepal		27		65		87	96	99	95	
Netherlands	100	m	100	m	100	m	100	m	m	
New Caledonia		100	m	100	m	100	100	100	100	
New Zealand	100	m	100	m	100	m	100	m	m	
Nicaragua		73		78		84	87	100	68	
Niger		6	c	13		17	20	67	11	
Nigeria	27	d	43	48	d	53	54	87	c	
Niue						100	100	100		
Northern Mariana Islands		100	m	100	m	100	100	100	m	
Norway	100	m	100	m	100	m	100	m	m	
Oman				100	m	100	100	100	m	
Pakistan		70		70		71	71	100	54	
Palau				98		99	100	100	m	
Panama	70	e	81	87	e	95	100	100	m	
Papua New Guinea		11		20	g	45	54	81	50	
Paraguay		89		97	h	99	99	100	h	

Country	Total electricity access rate (%)						Urban electricity access rate (%)		Rural electricity access rate (%) b	
	1990	2000	2010	2015	2017	2017	2017	2017	2017	
Peru		72	h	88	h	94	h	96	h	84
Philippines				85		89	f	93	d	90
Poland	100	m	100	100	m	100	m	100	m	100
Portugal	100	m	100	100	m	100	m	100	m	100
Puerto Rico			100	100	m	100	m	100	m	100
Qatar	100	m	100	100	m	100	m	100	m	100
Romania	100	m	100	100	m	100	m	100	m	100
Russian Federation	100	m	100	100	m	100	m	100	m	100
Rwanda		6	d	10	d	23	d	34	d	24
Samoa		87		97		100		97	e	96
San Marino	100	m	100	100	m	100	m	100	m	100
Sao Tome and Principe		53	c	60		68		73		45
Saudi Arabia			100	100	m	100	m	100	m	100
Senegal		38	c	55		61	d	62	d	35
Serbia	100	m	100	100	c	100	m	100	m	100
Seychelles		94		97	e	100	m	100	m	100
Sierra Leone				11	c	19		23	c	5
Singapore	100	m	100	100	m	100	m	100	m	100
Sint Maarten (Dutch part)			100	100	m	100	m	100	m	100
Slovakia	100	m	100	100	m	100	m	100	m	100
Slovenia	100	m	100	100	m	100	m	100	m	100
Solomon Islands		7		33		55	d	63		60
Somalia			21	29		29		33		9
South Africa		72		83	g	86	g	84	g	67
South Sudan			2	e		19		25		21
Spain	100	m	100	100	m	100	m	100	m	100

Country	Total electricity access rate (%)						Urban electricity access rate (%)		Rural electricity access rate (%) b	
	1990	2000	2010	2015	2017	2017	2017	2017	2017	
Sri Lanka			85	g	94	98	100	97		
Saint Kitts and Nevis			100		100	m	100	m	m	
Saint Lucia			94	e	97	99	97	99		
Sint Maarten (Dutch part)			100	m	100	m	100	m	m	
Saint Vincent and the Grenadines			80		99	100	98	100		
Sudan	33	d	36	c	49	56	83	43		
Suriname			97	c	95	97	100	91		
Swaziland			46	c	66	74	93	67		
Sweden	100	m	100	m	100	m	100	m	m	
Switzerland	100	m	100	m	100	m	100	m	m	
Syrian Arab Republic			93	g	90	90	100	78		
Tajikistan			98	c	100	99	99	d	99	
United Republic of Tanzania			10	d	27	33	65	17		
Thailand			82	d	100	f	100	c	100	
Timor-Leste			38	d	67	e	80	72		
Togo			17	c	31	c	45	48	d	
Tonga			85		92	96	99	98		
Trinidad and Tobago			91	e	100	m	100	m	m	
Tunisia			95	g	100	j	100	100	100	
Turkey			100		100	i	100	100	100	
Turkmenistan			100	d	100	i	100	c	100	
Turks and Caicos Islands	89	e	96	e	100	m	100	m	m	
Tuvalu			97		99	100	100	100	100	
Uganda			8		12	g	19	d	22	
Ukraine	100	m	100	m	100	m	100	m	100	
United Arab Emirates	100	m	100	m	100	m	100	m	m	

Country	Total electricity access rate (%)					Urban electricity access rate (%)		Rural electricity access rate (%) ^b	
	1990	2000	2010	2015	2017	2017	2017	2017	2017
United Kingdom of Great Britain and Northern Ireland	100	m	100	100	m	100	m	100	m
United States of America	100	m	100	100	m	100	m	100	m
Uruguay			99	100	h	100	m	100	m
Uzbekistan		100	100	100	100	100	100	100	100
Vanuatu		22	37	48	63	93	93	53	53
Venezuela (Bolivarian Republic of)		99	h	99	100	100	100	100	100
Viet Nam		86	98	100	100	100	100	100	100
United States Virgin Islands	100	m	100	100	m	100	m	100	m
State of Palestine		100	g	100	100	100	100	100	100
Yemen		50	66	74	79	g	98	69	69
Zambia	14	e	22	e	31	g	75	14	14
Zimbabwe		34	40	34	d	40	86	19	19

Source: World Bank

Note: Unless otherwise noted, data are World Bank estimates based on the statistical model described in chapter 1.

a. Most surveys report data on the percentage of households with access to electricity rather than on the percentage of the population with access.

b. Rural data are calculated based on the urban and total population with access and are not based on a statistical model.

c. Based on Multi-Indicator Cluster Survey (MICS)

d. Based on Demographic and Health Survey (DHS)

e. Based on Census

f. Based on Living Standards Measurement Survey (LSMS)

g. Based on other National Surveys conducted by national statistical agencies

h. Based on Socio-Economic Database for Latin America and the Caribbean (SEDLAC)

i. Based on Europe and Central Asia Poverty Database (ECAPOV)

j. Based on Middle East and North Africa Poverty Database (MNAPOV)

k. Based on other official sources

l. Based on Multi-Tier Framework (MTF)

m. Data from assumption: Countries considered "developed" by the UN are assumed to have an electrification rate of 100%. Countries that are classified as High Income Countries (HIC) are also assumed to have an electrification rate of 100% from the time the country first became a HIC, unless survey data was collected.

TOTAL ACCESS TO CLEAN FUELS AND TECHNOLOGIES FOR COOKING

Country	Total (%)				Urban (%)			Rural (%)				
	2000	2010	2016	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)
Afghanistan	7	19	32	21	34	45	71	88	>95	<5	12	28
Albania	41	65	78	49	80	95	70	92	>95	21	65	95
Algeria	88	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
American Samoa												
Andorra	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Angola	34	44	48	36	49	62	64	78	90	<5	8	15
Anguilla												
Antigua and Barbuda	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Argentina	>95	>95	>95	94	>95	>95	95	>95	>95	66	93	>95
Armenia	83	95	>95	88	>95	>95	95	>95	>95	76	>95	>95
Aruba												
Australia	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Austria	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Azerbaijan	73	93	>95	89	>95	>95	94	>95	>95	73	95	>95
Bahamas	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Bahrain	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Bangladesh	7	13	19	13	19	28	31	50	70	<5	6	15
Barbados	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Belarus	92	>95	>95	68	>95	>95	76	>95	>95	63	>95	>95
Belgium	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Belize	78	84	86	78	87	93	92	>95	>95	57	78	92
Benin	<5	<5	6	<5	6	13	<5	9	18	<5	<5	<5
Bermuda												
Bhutan	27	61	76	55	79	94	77	>95	>95	46	75	92
Bolivia (Plurinational State of)	63	76	81	74	83	90	94	>95	>95	32	52	71

Country	Total (%)					Urban (%)			Rural (%)			
	2000	2010	2016	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)
Bosnia and Herzegovina	39	53	62	43	63	80	45	70	92	23	58	89
Botswana	42	53	58	31	59	74	42	73	93	21	41	63
Brazil	87	94	>95	88	>95	>95	94	>95	>95	56	79	92
British Virgin Islands												
Brunei Darussalam	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Bulgaria	66	84	90	61	91	>95	30	94	>95	13	85	>94
Burkina Faso	<5	6	9	<5	10	17	17	30	44	<5	<5	<5
Burundi	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Cambodia	<5	11	18	11	20	30	53	66	77	<5	7	16
Cameroon	10	18	24	9	25	36	33	46	60	<5	<5	7
Canada	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Cabo Verde	58	69	75	37	75	83	71	92	>95	27	40	49
Cayman Islands												
Central African Republic	<5	<5	<5	<5	<5	<5	<5	<5	6	<5	<5	<5
Chad	<5	<5	<5	<5	<5	6	5	14	25	<5	<5	<5
Channel Islands												
Chile	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
China	49	54	58	30	58	83	66	82	91	12	32	60
Colombia	79	90	94	84	94	>95	94	>95	>95	37	61	80
Comoros	<5	<5	8	<5	10	23	<5	20	43	<5	<5	17
Democratic Republic of the Congo	<5	<5	<5	<5	<5	11	<5	9	20	<5	<5	5
Congo	9	17	24	11	25	43	20	37	55	<5	<5	13
Cook Islands	84	85	84	54	84	>95	57	95	>95	<5	62	>95
Costa Rica	88	92	94	85	95	>95	93	>95	>95	58	83	>95
Côte d'Ivoire	16	18	20	8	21	40	32	47	62	<5	<5	8
Croatia	84	90	92	79	93	>95	80	>95	>95	50	89	>95
Cuba	77	86	89	10	90	>95	31	94	>95	<5	77	>95

Country	Total (%)				Urban (%)			Rural (%)		
	2000	2010	2016	2017 (U)	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)
Curaçao										
Cyprus	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Czechia	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Denmark	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Djibouti	5	8	10	37	17	18	19	<5	<5	14
Dominica	78	87	91	79	91	>95	>95	46	81	>95
Dominican Republic	80	87	90	83	91	>95	>95	46	74	93
Ecuador	88	95	>95	91	>95	>95	>95	66	91	>95
Egypt	85	>95	>95	>95	>95	>95	>95	86	>95	>95
El Salvador	57	79	88	79	89	95	>95	52	79	95
Equatorial Guinea	14	29	37	70	11	42	76	<5	9	34
Eritrea	<5	12	17	45	15	31	51	<5	<5	9
Estonia	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Ethiopia	<5	<5	<5	10	7	16	29	<5	<5	<5
Faroe Islands										
Fiji	32	43	48	82	18	67	93	<5	17	50
Finland	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
France	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
French Polynesia										
Gabon	60	76	81	94	75	92	>95	24	43	60
Gambia	<5	<5	<5	9	<5	<5	16	<5	<5	<5
Georgia	41	66	78	93	89	>95	>95	6	33	73
Germany	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Ghana	6	16	23	36	30	41	51	<5	8	18
Gibraltar										
Greece	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Greenland										

Country	Total (%)				Urban (%)			Rural (%)					
	2000	2010	2016	2017 (U)	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)			
Grenada	94	>95	>95	91	>95	>95	>95	63	>95	>95	73	>95	>95
Guam													
Guatemala	37	41	43	33	43	43	53	7	50	94	2	32	81
Guinea	<5	<5	<5	<5	<5	<5	<5	<5	<5	24	<5	<5	5
Guinea-Bissau	<5	<5	<5	<5	<5	<5	<5	<5	<5	28	<5	<5	<5
Guyana	36	62	75	59	77	77	90	57	84	>95	50	71	87
Haiti	<5	<5	<5	<5	<5	<5	11	<5	12	46	<5	<5	18
Honduras	30	45	52	37	54	54	70	40	82	>95	6	25	53
China, Hong Kong Special Administrative Region													
Hungary	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Iceland	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
India	22	36	44	26	45	45	65	63	78	88	12	22	35
Indonesia	7	42	63	42	65	65	82	70	85	93	38	51	64
Iran (Islamic Republic of)	87	>95	>95	95	>95	>95	>95	>95	>95	>95	87	>95	>95
Iraq	72	>95	>95	94	>95	>95	>95	>95	>95	>95	84	>95	>95
Ireland	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Isle of Man													
Israel	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Italy	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Jamaica	72	86	91	84	92	92	>95	86	>95	>95	62	85	>95
Japan	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Jordan	>95	>95	>95	>95	>95	>95	>95	94	>95	>95	91	>95	>95
Kazakhstan	85	94	>95	88	>95	>95	>95	88	>95	>95	71	95	>95
Kenya	<5	7	13	6	14	14	26	12	28	48	<5	<5	6
Kiribati	<5	<5	6	<5	6	6	29	<5	14	48	<5	<5	16
Democratic People's Republic of Korea	<5	6	10	<5	11	11	33	5	15	33	<5	<5	14

Country	Total (%)				Urban (%)			Rural (%)				
	2000	2010	2016	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)
Republic of Korea	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Kosovo												
Kuwait	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Kyrgyzstan	53	73	81	58	83	>95	67	95	>95	48	74	94
Lao People's Democratic Republic	<5	<5	5	<5	5	21	5	14	27	<5	<5	7
Latvia	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Lebanon												
Lesotho	16	27	32	17	33	51	67	82	92	9	17	28
Liberia	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Libya												
Liechtenstein												
Lithuania	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Luxembourg	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
China, Macao Special Administrative Region												
The former Yugoslav Republic of Macedonia	41	59	65	47	66	83	70	87	95	15	45	76
Madagascar	<5	<5	<5	<5	<5	<5	<5	<5	5	<5	<5	<5
Malawi	<5	<5	<5	<5	<5	5	6	10	16	<5	<5	<5
Malaysia	95	>95	>95	37	>95	>95	84	>95	>95	14	95	>95
Maldives	32	87	>95	72	>95	>95	82	>95	>95	85	>95	>95
Mali	<5	<5	<5	<5	<5	<5	<5	<5	6	<5	<5	<5
Malta	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Marshall Islands	7	57	65	36	66	87	61	91	>95	<5	7	29
Mauritania	30	39	44	30	46	58	39	71	85	8	21	29
Mauritius	94	>95	>95	89	>95	>95	84	>95	>95	88	>95	>95
Mexico	81	84	86	79	86	91	88	93	>95	40	55	72
Micronesia (Federated States of)	11	12	12	5	12	27	6	75	>95	<5	9	49

Country	Total (%)						Urban (%)			Rural (%)		
	2000	2010	2016	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)
Republic of Moldova	68	89	94	81	94	>95	92	>95	>95	62	92	>95
Monaco	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Mongolia	15	29	38	6	41	60	25	57	78	<5	11	29
Montenegro	55	62	65	44	66	87	51	77	>95	18	50	83
Morocco	91	>95	>95	93	>95	>95	>95	>95	>95	74	94	>95
Mozambique	<5	<5	<5	<5	<5	7	<5	9	21	<5	<5	<5
Myanmar	<5	10	19	7	20	38	28	54	74	<5	6	22
Namibia	32	40	44	<5	44	58	49	75	89	5	12	21
Nauru	72	89	92	35	92	>95	69	91	>95	<5	27	>95
Nepal	14	22	29	18	29	43	41	65	84	7	15	25
Netherlands	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
New Caledonia												
New Zealand	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Nicaragua	34	45	52	44	54	63	69	79	87	<5	13	32
Niger	<5	<5	<5	<5	<5	8	<5	8	22	<5	<5	<5
Nigeria	<5	<5	6	<5	7	12	6	14	26	<5	<5	5
Niue	75	89	93	81	93	>95	67	>95	>95	73	94	>95
Northern Mariana Islands												
Norway	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Oman	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Pakistan	23	35	43	29	44	62	77	92	>95	<5	14	35
Palau	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Panama	79	86	89	82	90	>95	95	>95	>95	53	75	92
Papua New Guinea	6	9	11	<5	12	30	19	47	74	<5	<5	22
Paraguay	46	58	65	56	66	75	73	83	90	25	38	53
Peru	35	66	74	66	76	84	80	90	>95	17	29	43
Philippines	36	42	44	29	44	61	42	64	83	11	21	33

Country	Total (%)				Urban (%)		Rural (%)	
	2000	2010	2016	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)
Poland	>95	>95	>95	>95	>95	>95	>95	>95
Portugal	>95	>95	>95	>95	>95	>95	>95	>95
Puerto Rico								
Qatar	>95	>95	>95	>95	>95	>95	>95	>95
Romania	67	83	88	89	>95	74	>95	95
Russian Federation	93	>95	>95	>95	>95	93	>95	>95
Rwanda	<5	<5	<5	<5	<5	<5	<5	<5
Samoa	16	26	31	31	45	42	65	81
San Marino	>95	>95	>95	>95	>95	>95	>95	>95
Sao Tome and Principe	<5	<5	<5	<5	12	<5	<5	15
Saudi Arabia	>95	>95	>95	>95	>95	>95	>95	>95
Senegal	34	33	31	31	46	34	55	74
Serbia	52	67	74	74	93	63	86	>95
Seychelles	>95	>95	>95	>95	>95	>95	>95	>95
Sierra Leone	<5	<5	<5	<5	<5	<5	<5	9
Singapore	>95	>95	>95	>95	>95	>95	>95	>95
Sint Maarten (Dutch part)								
Slovakia	>95	>95	>95	>95	>95	>95	>95	>95
Slovenia	>95	>95	>95	>95	>95	>95	>95	>95
Solomon Islands	6	8	8	8	20	21	39	59
Somalia	<5	<5	<5	<5	6	<5	5	14
South Africa	55	76	84	86	93	85	95	>95
South Sudan	<5	<5	<5	<5	<5	<5	<5	<5
Spain	>95	>95	>95	>95	>95	>95	>95	>95
Sri Lanka	14	22	27	28	43	48	66	80
Saint Kitts and Nevis	>95	>95	>95	>95	>95	>95	>95	>95
Saint Lucia	87	95	>95	>95	>95	84	>95	>95

Country	Total (%)				Urban (%)				Rural (%)				
	2000	2010	2016	2017 (U)	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)
Sint Maarten (Dutch part)													
Saint Vincent and the Grenadines	>95	>95	>95	>95	91	>95	>95	84	>95	>95	80	>95	>95
Sudan	13	29	41	57	30	44	83	56	70	83	7	30	58
Suriname	80	87	90	>95	79	91	>95	86	95	>95	60	81	95
Swaziland	27	42	50	64	39	51	94	74	87	94	20	33	46
Sweden	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Switzerland	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Syrian Arab Republic	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	84	>95	>95
Tajikistan	38	68	81	95	61	83	>95	90	>95	>95	37	74	95
United Republic of Tanzania	<5	<5	<5	7	<5	<5	22	5	11	22	<5	<5	<5
Thailand	65	73	78	90	61	78	>95	76	88	>95	60	73	84
Timor-Leste	<5	5	10	21	<5	11	36	15	25	36	<5	5	13
Togo	<5	<5	7	14	<5	8	28	8	18	28	<5	<5	<5
Tonga	49	54	55	74	34	55	>95	68	85	>95	23	49	74
Trinidad and Tobago	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Tunisia	93	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Turkey	90	94	>95	>95	91	>95	>95	>95	>95	>95	71	88	>95
Turkmenistan	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	59	>95	>95
Turks and Caicos Islands													
Tuvalu	20	44	52	77	12	52	>95	18	75	>95	<5	32	95
Uganda	<5	<5	<5	<5	<5	<5	6	<5	<5	6	<5	<5	<5
Ukraine	89	95	>95	>95	82	>95	>95	94	>95	>95	74	93	>95
United Arab Emirates	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
United Kingdom of Great Britain and Northern Ireland	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
United States of America	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Uruguay	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95

Country	Total (%)					Urban (%)			Rural (%)			
	2000	2010	2016	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)
Uzbekistan	80	89	92	77	92	>95	90	>95	>95	60	91	>95
Vanuatu	12	12	11	<5	11	22	16	35	57	<5	<5	11
Venezuela (Bolivarian Republic of)	>95	>95	>95	92	>95	>95	92	>95	>95	64	88	>95
Viet Nam	14	46	67	55	70	81	80	92	>95	35	60	76
United States Virgin Islands												
State of Palestine												
Yemen	55	60	63	52	63	75	90	>95	>95	26	48	71
Zambia	14	15	16	10	16	24	24	38	55	<5	<5	7
Zimbabwe	32	30	29	19	29	37	61	78	90	<5	5	11
World	50	57	60	54	61	67	29	34	40	79	83	85
Northern America (M49) and Europe (M49)	>95	>95	>95	>95	>95	>95	92	>95	>95	>95	>95	>95
Latin America and the Caribbean (MDG=M49)	78	85	88	85	88	90	55	62	68	92	94	>95
Central Asia (M49) and Southern Asia (MDG=M49)	26	38	45	33	46	60	16	23	32	70	79	87
Eastern Asia (M49) and South-eastern Asia (MDG=M49)	46	55	60	44	61	77	25	38	55	73	82	89
Sub-Saharan Africa (M49)	9	11	13	12	14	15	3	4	5	27	30	33
Oceania (MDG) / Oceania (M49) excluding Australia and New Zealand (M49)	11	14	16	8	17	30	2	7	21	34	52	70
Western Asia (M49) and Northern Africa (M49)	78	87	90	83	90	93	76	81	86	>95	>95	>95
Australia and New Zealand (M49)	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95

Source: World Health Organization

Note:

L = 95% confidence interval lower bound

M = point estimate

U = 95% confidence interval upper bound

RENEWABLE ENERGY

UN Country Name	Share in total final energy consumption (%)												Final consumption of renewable energy (PJ) (4)				Total final energy consumption (PJ)										
	Renewable energy				Solid biofuels		Liquid biofuels		Biogases		Hydro		Wind		Solar		Geothermal		Tide		Municipal waste (renew)		Electricity consumption (2)	Heat raising (3)	Transport (4)	2016	2016
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016					
Afghanistan	15.9%	14.8%	18.4%	20.8%	10.3%	0.0%	0.0%	0.0%	0.0%	10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.5	13.3	0.0	0.0	129.3	a	
Åland Islands
Albania	25.5%	37.1%	38.6%	40.0%	10.2%	4.3%	0.0%	0.0%	0.0%	24.9%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.8	8.6	3.4	3.4	79.6	b	
Algeria	0.2%	0.3%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9	0.3	0.0	0.0	1415.6	b	
American Samoa	0.0%	0.0%	0.9%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	0.5	a	
Andorra	14.1%	18.7%	19.3%	19.3%	0.3%	0.0%	0.0%	0.0%	0.0%	17.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	1.6	0.0	0.0	0.0	8.6	a	
Angola	72.3%	56.5%	53.2%	54.7%	51.1%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.1	258.5	0.0	0.0	506.1	b	
Anguilla	0.3%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	1.6	a	
Antigua and Barbuda	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	4.8	a	
Argentina	8.9%	9.0%	10.1%	10.0%	2.7%	2.2%	0.0%	0.0%	0.0%	5.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	127.6	59.1	53.2	53.2	2390.7	b	
Armenia	2.1%	9.4%	15.8%	14.0%	7.0%	0.0%	0.0%	0.0%	0.0%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1	6.1	0.1	0.1	87.7	b	
Aruba	0.3%	5.5%	6.7%	6.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	6.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4	0.0	0.0	0.0	6.5	a	
Australia	8.0%	8.1%	9.2%	9.3%	5.3%	0.2%	0.2%	0.2%	1.4%	1.4%	1.1%	1.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	107.4	181.9	10.0	10.0	3210.7	b	
Austria	25.1%	30.4%	34.5%	34.7%	16.4%	2.2%	2.2%	0.5%	12.5%	17.7%	1.7%	1.1%	0.1%	1.1%	0.1%	0.0%	0.3%	0.0%	0.0%	0.0%	164.4	180.5	31.1	31.1	1084.5	b	
Azerbaijan	0.7%	4.5%	2.3%	1.9%	0.4%	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	5.2	1.3	0.1	0.1	344.5	b	
Bahamas	0.0%	1.7%	1.4%	1.4%	1.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.3	0.0	0.0	20.0	a	
Bahrain	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	192.7	b	
Bangladesh	71.7%	41.1%	34.6%	34.0%	33.8%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2	387.8	0.0	0.0	1148.4	b	
Barbados	19.6%	9.0%	2.8%	2.8%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.3	0.0	0.0	11.5	a	
Belarus	0.9%	7.3%	6.8%	6.7%	6.4%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2	43.3	0.2	0.2	666.7	b	
Belgium	1.3%	5.8%	9.3%	9.1%	4.8%	1.3%	0.5%	0.1%	0.1%	1.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	48.5	61.4	19.5	19.5	1414.8	b	
Belize	38.0%	33.7%	30.2%	30.3%	21.8%	0.0%	0.0%	0.0%	8.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0	1.5	0.0	0.0	11.3	a	
Benin	93.7%	48.1%	50.9%	50.0%	49.8%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2	78.4	0.0	0.0	157.4	b	

UN Country Name	Share in total final energy consumption (%)												Final consumption of renewable energy (PJ) (4)				Total final energy consumption (PJ)											
	Renewable energy				Solid biofuels		Liquid biofuels		Biogases		Hydro		Wind		Solar		Geothermal		Tide		Municipal waste (renew)		Electricity consumption (2)	Heat raising (3)	Transport (4)	2016	2016	
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016						2016
Bermuda	0.0%	2.4%	2.4%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.0	0.0	0.0	0.0	5.9	a
Bhutan	95.9%	90.6%	86.4%	84.8%	73.5%	0.0%	0.0%	0.0%	11.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.3	47.1	0.0	0.0	0.0	64.1	a	
Bolivia (Plurinational State of)	37.4%	19.7%	17.5%	15.7%	13.7%	0.0%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5	38.5	0.0	0.0	0.0	286.9	b	
Bonaire, Sint Eustatius and Saba	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	0.0	3.9	a	
Bosnia and Herzegovina	7.3%	19.6%	27.1%	24.8%	16.4%	0.0%	0.0%	0.0%	8.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.6	24.9	0.1	0.1	0.1	151.6	b	
Botswana	47.6%	29.9%	28.4%	28.4%	28.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	23.1	0.0	0.0	0.0	81.5	b	
Brazil	49.9%	47.0%	43.8%	45.5%	22.8%	7.9%	0.0%	13.3%	0.0%	1.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1413.1	1882.5	699.4	0.0	0.0	8776.5	b	
British Indian Ocean Territory
British Virgin Islands	1.5%	0.7%	0.8%	0.9%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	0.0	1.9	a	
Brunei Darussalam	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	0.0	36.9	b	
Bulgaria	1.9%	14.4%	17.7%	17.7%	10.7%	1.7%	0.4%	2.3%	0.0%	0.8%	1.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.4	46.7	6.9	6.9	6.9	396.2	b	
Burkina Faso	93.3%	81.5%	72.7%	72.3%	71.8%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7	109.5	0.0	0.0	0.0	152.6	a	
Burundi	95.2%	95.3%	91.2%	89.2%	88.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7	48.7	0.0	0.0	0.0	55.3	a	
Cabo Verde	36.6%	21.7%	27.0%	25.2%	22.1%	0.0%	0.0%	0.0%	0.0%	2.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2	1.5	0.0	0.0	0.0	6.7	a	
Cambodia	..	68.5%	64.9%	62.7%	58.8%	0.0%	0.0%	0.0%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.4	155.8	0.0	0.0	0.0	265.1	b	
Cameroon	81.6%	78.6%	78.0%	78.1%	73.9%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.8	224.4	0.0	0.0	0.0	303.5	b	
Canada	22.0%	22.5%	21.4%	21.6%	5.0%	1.0%	0.1%	14.1%	0.0%	1.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1094.2	330.3	87.9	87.9	87.9	7018.2	b	
Cayman Islands	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	0.0	4.7	a	
Central African Republic	94.1%	81.3%	78.0%	77.7%	73.0%	0.0%	0.0%	0.0%	3.3%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8	12.9	0.0	0.0	0.0	17.6	a	
Chad	89.7%	81.6%	85.4%	85.3%	85.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	60.0	0.0	0.0	0.0	70.3	a	
Channel Islands
Chile	34.0%	27.0%	25.0%	24.5%	16.1%	0.0%	0.0%	0.0%	6.8%	0.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	107.8	156.9	1.5	1.5	1.5	1085.6	b	
China	33.9%	12.4%	12.2%	12.6%	4.5%	0.1%	0.4%	4.6%	0.0%	0.9%	1.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4536.7	4802.8	200.6	200.6	200.6	75657.9	b	

UN Country Name	Share in total final energy consumption (%)														Final consumption of renewable energy (PJ) (4)				Total final energy consumption (PJ)									
	Renewable energy				Solid biofuels		Liquid biofuels		Biogases		Hydro		Wind		Solar		Geothermal		Tide		Municipal waste (renew)		Electricity consumption (2)		Heat raising (3)		Transport (4)	
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016
China, Hong Kong Special Administrative Region	1.1%	0.8%	0.8%	0.6%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4	2.4	0.0	0.2	0.2	378.3	b
China, Macao Special Administrative Region	0.7%	5.8%	4.6%	4.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	1.6	0.0	0.0	0.0	0.0	0.0	35.0	a
Christmas Island
Cocos (Keeling) Islands
Colombia	38.3%	27.9%	28.6%	28.5%	17.2%	0.1%	0.0%	11.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	142.5	206.3	1.6	1.6	1229.8	b	
Comoros	49.8%	46.4%	45.4%	41.9%	41.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	1.6	0.0	0.0	3.9	a	
Congo	65.4%	54.8%	62.2%	63.3%	61.5%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6	52.6	0.0	0.0	85.5	b	
Cook Islands	0.0%	0.0%	1.3%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	0.7	a	
Costa Rica	45.4%	42.3%	38.9%	37.2%	15.7%	0.0%	0.0%	16.4%	2.3%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.6	24.5	0.0	0.0	158.9	b	
Côte d'Ivoire	73.6%	75.4%	64.5%	62.7%	61.5%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0	183.9	0.0	0.0	299.8	b	
Croatia	21.9%	29.8%	33.1%	31.9%	18.3%	0.0%	0.5%	11.0%	1.6%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.9	50.2	0.6	0.6	272.3	b	
Cuba	42.9%	14.6%	20.1%	17.5%	13.7%	3.6%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3	43.4	0.0	0.0	261.3	b	
Curaçao	0.0%	0.5%	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6	0.0	0.0	0.0	24.8	b	
Cyprus	0.5%	6.4%	9.9%	9.8%	1.2%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4	4.3	0.4	0.4	61.7	b	
Czechia	3.6%	10.9%	14.8%	14.7%	10.6%	1.3%	1.4%	0.5%	0.1%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	22.4	110.1	13.3	13.3	989.2	b	
Democratic People's Republic of Korea	7.2%	13.5%	23.1%	23.1%	12.0%	0.0%	0.0%	11.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.4	37.0	0.0	0.0	309.2	b	
Democratic Republic of the Congo	92.1%	96.8%	95.8%	97.0%	94.3%	0.0%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.2	865.8	0.0	0.0	918.2	b	
Denmark	7.0%	21.4%	33.5%	33.1%	17.9%	1.8%	1.4%	0.0%	8.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	66.9	109.2	10.8	10.8	565.3	b		
Djibouti	26.6%	32.5%	14.2%	28.5%	28.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	1.8	0.0	0.0	6.2	a	
Dominica	14.6%	10.1%	8.6%	10.7%	3.6%	0.0%	0.0%	7.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.1	0.1	0.0	0.0	1.7	a	
Dominican Republic	28.0%	17.7%	16.4%	17.5%	13.5%	0.0%	0.0%	2.4%	1.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.2	32.4	0.0	0.0	237.9	b	
Ecuador	24.2%	12.1%	14.1%	15.2%	4.5%	0.2%	0.0%	10.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.9	20.0	0.8	0.8	471.9	b	

UN Country Name	Share in total final energy consumption (%)												Final consumption of renewable energy (PJ)(4)						Total final energy consumption (PJ)
	Renewable energy						Municipal waste (renew)						Electricity consumption (2)	Heat raising (3)	Transport (4)	2016			
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016			
Egypt	8.5%	5.7%	5.8%	5.7%	3.5%	0.0%	0.0%	1.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	47.0	76.6	0.2	2173.9	b
El Salvador	67.1%	31.3%	23.5%	21.4%	11.9%	0.0%	0.1%	4.1%	0.0%	0.0%	5.2%	0.0%	0.0%	0.0%	12.0	10.4	0.0	104.7	b
Equatorial Guinea	84.6%	5.9%	10.2%	12.7%	11.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6	3.8	0.0	34.8	a	
Eritrea	..	81.3%	80.1%	80.1%	80.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	19.8	0.0	24.7	b	
Estonia	3.5%	25.1%	27.5%	26.6%	25.0%	0.1%	0.3%	0.1%	1.1%	0.0%	0.0%	0.0%	0.0%	3.2	27.8	0.1	117.3	b	
Eswatini	57.9%	63.7%	66.3%	60.9%	56.8%	0.0%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5	17.0	0.0	35.2	a	
Ethiopia	96.6%	94.5%	92.2%	91.9%	90.0%	0.0%	0.0%	1.7%	0.1%	0.0%	0.0%	0.0%	0.0%	31.7	1585.4	0.3	1760.8	b	
Falkland Islands (Malvinas)	1.1%	0.7%	0.9%	0.9%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.7	a	
Faroe Islands	2.5%	2.8%	5.3%	4.2%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4	0.0	0.0	8.3	a	
Fiji	58.1%	27.8%	29.8%	24.4%	17.1%	0.0%	0.0%	7.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6	3.8	0.0	22.2	a	
Finland	24.5%	33.6%	43.1%	42.0%	32.0%	0.8%	0.3%	6.6%	1.3%	0.0%	0.0%	0.0%	0.0%	127.6	290.0	8.5	1013.7	b	
France	10.5%	12.1%	13.6%	14.7%	7.1%	2.2%	0.3%	3.0%	1.1%	0.5%	0.1%	0.0%	0.0%	274.0	445.7	136.9	5811.8	b	
French Guiana	5.7%	29.6%	33.2%	30.2%	13.1%	0.0%	0.0%	15.0%	0.0%	2.1%	0.0%	0.0%	0.0%	1.7	1.2	0.0	9.6	a	
French Polynesia	4.7%	12.6%	10.2%	11.1%	0.4%	0.0%	0.0%	10.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.8	0.0	0.0	7.5	a	
French Southern and Antarctic Territories
Gabon	78.3%	85.9%	82.0%	82.1%	80.6%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0	163.7	0.0	203.2	b	
Gambia	61.4%	54.7%	51.3%	51.3%	51.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	5.3	0.0	10.2	a	
Georgia	12.8%	39.2%	28.7%	28.1%	9.6%	0.0%	0.0%	18.0%	0.0%	0.1%	0.4%	0.0%	0.0%	29.6	16.9	0.9	168.7	b	
Germany	2.1%	10.3%	14.2%	14.2%	5.1%	1.4%	2.0%	0.7%	2.7%	1.6%	0.1%	0.0%	0.0%	532.7	548.0	120.0	8475.1	b	
Ghana	80.6%	49.8%	41.4%	42.0%	36.3%	0.0%	0.0%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	15.6	101.3	0.0	278.7	b	
Gibraltar	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	7.1	b	
Greece	7.8%	11.1%	17.2%	16.1%	5.7%	1.1%	0.2%	3.0%	2.7%	3.4%	0.1%	0.0%	0.0%	52.4	47.6	6.6	662.4	b	
Greenland	0.5%	10.1%	15.8%	15.7%	0.0%	0.0%	0.0%	15.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2	0.0	0.0	8.0	a	
Grenada	8.3%	10.5%	10.9%	11.2%	11.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.3	0.0	2.8	a	

UN Country Name	Share in total final energy consumption (%)												Final consumption of renewable energy (PJ) (4)				Total final energy consumption (PJ)	
	Renewable energy						Municipal waste (renew)						Electricity consumption (2)	Heat raising (3)	Transport (4)	2016		
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016			
Guadeloupe	6.8%	3.8%	7.3%	7.6%	3.3%	0.0%	0.0%	0.6%	0.9%	1.5%	1.4%	0.0%	0.0%	1.4	0.1	0.0	19.3	a
Guam	0.0%	0.0%	1.3%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.2	0.0	0.0	5.7	a
Guatemala	75.0%	67.4%	63.1%	63.1%	60.2%	0.0%	0.0%	2.5%	0.1%	0.1%	0.2%	0.0%	0.0%	20.7	265.7	0.0	453.8	b
Guernsey	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	1.3	a
Guinea	89.3%	75.7%	76.3%	75.1%	72.7%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4	102.6	0.0	141.2	a
Guinea-Bissau	88.6%	87.8%	86.9%	86.5%	86.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	23.9	0.0	27.7	a
Guyana	42.2%	33.8%	25.3%	21.6%	21.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	6.2	0.0	29.1	a	
Haiti	81.1%	79.0%	76.1%	76.1%	76.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1	105.4	0.0	138.6	b	
Heard Island and McDonald Islands	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Holy See	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Honduras	70.1%	50.4%	53.5%	55.2%	49.8%	0.0%	0.0%	3.3%	0.8%	1.2%	0.0%	0.0%	0.0%	12.9	100.4	0.0	205.4	b
Hungary	3.9%	13.5%	15.5%	15.1%	12.2%	1.1%	0.3%	0.2%	0.4%	0.2%	0.6%	0.0%	0.2%	13.1	89.4	8.3	732.1	b
Iceland	54.7%	75.4%	77.0%	78.1%	0.0%	0.5%	0.1%	36.4%	0.0%	0.0%	41.1%	0.0%	0.0%	62.1	34.2	0.9	124.4	b
India	58.7%	40.7%	34.7%	34.0%	31.4%	0.1%	0.0%	1.7%	0.6%	0.3%	0.0%	0.0%	0.0%	637.2	6823.7	350	22023.2	b
Indonesia	58.5%	39.1%	35.8%	37.2%	34.4%	1.4%	0.0%	0.9%	0.0%	0.0%	0.5%	0.0%	0.0%	99.6	2264.7	88.1	6589.0	b
Iran (Islamic Republic of)	1.2%	0.9%	0.9%	1.0%	0.3%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0	21.2	0.1	6842.4	b
Iraq	1.6%	1.7%	0.8%	0.9%	0.2%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9	1.2	0.0	761.8	b
Ireland	2.3%	5.3%	9.1%	8.7%	2.1%	1.1%	0.2%	0.5%	4.2%	0.1%	0.0%	0.0%	0.4%	22.9	10.6	5.0	445.4	b
Isle of Man	0.0%	5.4%	4.8%	4.3%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	3.7%	0.1	0.0	0.0	2.3	a
Israel	5.8%	8.6%	3.7%	3.9%	0.2%	0.0%	0.1%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	5.0	17.0	0.0	561.7	b
Italy	3.8%	12.8%	16.6%	16.1%	6.6%	1.3%	0.8%	3.3%	1.4%	1.9%	0.6%	0.0%	0.3%	371.2	321.9	58.7	4672.1	b
Jamaica	4.6%	9.7%	13.4%	12.7%	9.8%	1.7%	0.0%	0.4%	0.6%	0.0%	0.0%	0.0%	0.0%	1.4	7.3	1.4	80.4	b
Japan	4.5%	4.8%	6.3%	6.6%	1.9%	0.2%	0.0%	2.4%	0.2%	1.7%	0.2%	0.0%	0.1%	504.4	174.3	25.6	10754.5	b
Jersey	0.0%	11.0%	15.9%	14.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.1%	0.9	0.0	0.0	6.2	a

UN Country Name	Share in total final energy consumption (%)														Final consumption of renewable energy (PJ) (4)				Total final energy consumption (PJ)															
	Renewable energy						Solid biofuels						Liquid biofuels		Biogases		Hydro		Wind		Solar		Geothermal		Tide		Municipal waste (renew)		Electricity consumption (2)		Heat raising (3)		Transport (4)	
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	
Jordan	2.8%	3.0%	3.2%	4.6%	0.7%	0.0%	0.0%	0.0%	0.1%	0.5%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8	8.7	0.0	0.0	251.8	b	
Kazakhstan	1.4%	1.4%	1.6%	2.0%	0.3%	0.0%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.3	3.8	1.3	1555.0	b		
Kenya	77.3%	76.5%	72.9%	71.9%	68.5%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.6	468.9	0.0	0.0	685.4	b		
Kiribati	65.3%	48.3%	47.6%	45.4%	44.2%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.5	0.0	0.0	1.2	a		
Kuwait	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	662.4	b		
Kyrgyzstan	7.9%	25.6%	23.3%	21.9%	0.0%	0.0%	0.0%	0.0%	21.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	31.6	0.0	0.1	144.7	b			
Laos People's Democratic Republic	88.4%	64.9%	53.9%	51.9%	42.2%	0.0%	0.0%	0.0%	0.0%	9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.0	52.0	0.0	0.0	123.2	a		
Latvia	17.6%	33.1%	38.1%	38.5%	30.3%	0.3%	1.7%	5.9%	1.7%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.4	46.5	0.7	155.0	b			
Lebanon	11.3%	5.2%	3.6%	3.4%	2.3%	0.0%	0.0%	0.6%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2	5.8	0.0	0.0	206.6	b			
Lesotho	52.0%	53.5%	53.4%	51.0%	46.2%	0.0%	0.0%	4.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8	26.6	0.0	0.0	57.5	a			
Liberia	88.8%	89.4%	84.0%	82.9%	82.8%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	71.1	0.0	0.0	85.9	a			
Libya	3.1%	1.6%	2.0%	1.6%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	6.4	0.0	0.0	393.4	b			
Liechtenstein	0.0%	56.6%	62.5%	62.9%	7.8%	0.0%	0.8%	41.7%	0.8%	0.0%	12.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4	0.2	0.0	0.0	2.6	a			
Lithuania	3.1%	21.5%	29.0%	31.4%	21.6%	1.1%	0.8%	2.1%	0.8%	5.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.8	43.4	2.5	209.1	b				
Luxembourg	1.7%	3.7%	9.1%	13.5%	2.2%	2.5%	1.6%	2.3%	1.6%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.0	2.9	4.1	148.1	b				
Madagascar	85.7%	81.9%	68.9%	68.1%	66.6%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1	92.0	0.0	0.0	138.2	a			
Malawi	84.0%	81.2%	80.9%	78.5%	70.5%	0.0%	0.0%	8.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2	45.3	0.0	0.0	64.4	a			
Malaysia	12.0%	3.8%	5.2%	6.2%	1.9%	0.8%	0.0%	3.4%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	69.7	35.5	16.4	1977.0	b				
Maldives	4.5%	1.3%	1.3%	1.1%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.1	0.0	0.0	15.1	a			
Mali	88.6%	67.3%	58.9%	59.4%	55.8%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0	45.7	0.0	0.0	82.0	a			
Malta	0.0%	1.4%	5.4%	8.9%	0.2%	1.3%	0.5%	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2	0.3	0.3	19.2	b				
Marshall Islands	0.0%	13.3%	11.3%	11.8%	11.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.2	0.0	0.0	1.7	a			
Martinique	1.9%	2.9%	6.0%	6.2%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4	0.4	0.0	0.0	17.1	a			
Mauritania	47.0%	34.0%	32.8%	34.6%	33.5%	0.0%	0.0%	0.0%	0.0%	0.9%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4	13.6	0.0	0.0	40.7	a			

UN Country Name	Share in total final energy consumption (%)												Final consumption of renewable energy (PJ) (4)				Total final energy consumption (PJ)		
	Renewable energy						Municipal waste (renew)						Electricity consumption (2)	Heat raising (3)	Transport (4)	2016	2016		
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016						2016	2016
Mauritius	47.1%	13.7%	11.5%	10.3%	8.7%	0.0%	0.2%	1.0%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	2.2	1.3	0.0	34.3	b
Mayotte	33.4%	10.0%	10.2%	9.9%	8.1%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%	0.0%	0.0%	0.0%	0.1	0.3	0.0	3.4	a
Mexico	14.4%	9.4%	9.2%	9.2%	6.0%	0.0%	0.0%	1.9%	0.7%	0.2%	0.4%	0.0%	0.0%	148.1	300.0	0.6	4872.4	b	
Micronesia (Federated States of)	0.0%	1.7%	1.5%	1.6%	1.3%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0	0.0	0.0	1.3	a	
Monaco
Mongolia	1.9%	4.5%	3.6%	3.3%	2.8%	0.0%	0.0%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.8	3.9	0.0	139.1	b	
Montenegro	..	49.1%	43.0%	43.9%	24.3%	0.0%	0.0%	19.6%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6	7.0	0.0	28.8	b	
Montserrat	0.0%	0.0%	22.6%	51.2%	0.0%	0.0%	0.0%	0.0%	51.2%	0.0%	0.0%	0.0%	0.0%	0.1	0.0	0.0	0.3	a	
Morocco	19.5%	13.9%	11.2%	11.0%	8.4%	0.0%	0.0%	0.7%	1.7%	0.2%	0.0%	0.0%	0.0%	16.2	52.2	0.2	622.6	b	
Mozambique	93.1%	91.3%	86.5%	79.9%	72.3%	0.0%	0.0%	7.6%	0.0%	0.0%	0.0%	0.0%	0.0%	34.1	323.3	0.0	447.2	b	
Myanmar	90.9%	84.4%	69.4%	68.0%	63.5%	0.0%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	30.1	423.5	0.0	667.3	b	
Namibia	..	29.0%	28.3%	27.2%	9.4%	0.0%	0.0%	17.7%	0.0%	0.2%	0.0%	0.0%	0.0%	13.5	7.3	0.0	76.1	b	
Nauru	9.9%	37.8%	33.5%	31.4%	0.0%	0.0%	0.0%	0.0%	31.3%	0.2%	0.0%	0.0%	0.0%	0.1	0.0	0.0	0.5	a	
Nepal	95.1%	87.3%	85.0%	79.2%	73.7%	0.0%	2.2%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	17.7	402.2	0.0	530.3	b	
Netherlands	1.2%	3.9%	5.9%	5.8%	1.9%	0.6%	0.4%	0.0%	1.5%	0.3%	0.2%	0.0%	0.0%	47.8	49.2	11.0	1866.4	b	
New Caledonia	12.3%	5.2%	5.3%	4.0%	0.3%	0.0%	0.0%	2.4%	0.8%	0.5%	0.0%	0.0%	0.0%	1.1	0.1	0.0	33.8	a	
New Zealand	30.0%	31.3%	30.6%	32.8%	10.1%	0.0%	0.2%	15.2%	1.4%	0.1%	5.8%	0.0%	0.0%	116.0	61.9	0.3	544.0	b	
Nicaragua	68.8%	52.5%	48.1%	46.8%	42.2%	0.0%	0.0%	1.1%	1.8%	0.0%	1.7%	0.0%	0.0%	6.3	43.4	0.0	106.2	b	
Niger	..	80.7%	78.9%	79.7%	79.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	92.8	0.0	116.5	b	
Nigeria	87.8%	87.0%	82.4%	82.4%	82.1%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	16.5	4402.5	0.0	5362.6	b	
Niue	0.6%	26.7%	22.4%	22.1%	0.5%	0.0%	0.0%	0.0%	0.0%	21.6%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.1	a	
Norfolk Island
Northern Mariana Islands	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	1.1	a	
Norway	59.2%	56.5%	58.3%	59.5%	4.4%	1.9%	0.2%	51.5%	0.8%	0.0%	0.0%	0.0%	0.0%	396.7	40.6	17.9	764.8	b	

UN Country Name	Share in total final energy consumption (%)												Final consumption of renewable energy (PJ)(4)						Total final energy consumption (PJ)
	Renewable energy						Municipal waste (renew)						Electricity consumption (2)	Heat raising (3)	Transport (4)	2016			
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016		2016		
Oman	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	749.6	b	
Pakistan	57.5%	46.8%	45.3%	45.6%	0.0%	0.0%	0.0%	3.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	113.5	1373.9	0.0	3264.8	b
Palau	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	2.2	a
Panama	43.6%	19.9%	21.2%	21.2%	7.2%	0.0%	0.0%	12.7%	1.2%	0.1%	0.0%	0.0%	0.0%	20.6	10.5	0.0	146.4	b	
Papua New Guinea	71.7%	55.3%	50.9%	50.3%	46.5%	0.0%	0.0%	2.7%	0.0%	0.0%	1.1%	0.0%	0.0%	4.6	56.1	0.0	120.7	a	
Paraguay	78.5%	64.3%	61.7%	59.4%	38.4%	2.8%	0.0%	18.2%	0.0%	0.0%	0.0%	0.0%	0.0%	39.6	83.7	6.1	218.0	b	
Peru	39.4%	30.8%	25.5%	25.3%	12.4%	2.0%	0.1%	10.1%	0.4%	0.3%	0.0%	0.0%	0.0%	82.0	95.5	13.8	755.8	b	
Philippines	51.0%	28.8%	25.9%	24.0%	17.5%	1.5%	0.0%	1.9%	0.2%	0.3%	2.6%	0.0%	0.0%	64.5	223.6	18.1	1277.4	b	
Pitcairn
Poland	2.5%	9.5%	11.9%	11.4%	8.6%	0.7%	0.3%	0.2%	1.3%	0.1%	0.0%	0.0%	0.1%	64.0	224.1	20.8	2718.5	b	
Portugal	27.0%	27.8%	27.2%	29.1%	13.2%	1.9%	0.2%	7.1%	5.6%	0.9%	0.1%	0.0%	0.1%	90.3	79.7	11.8	624.2	b	
Puerto Rico	1.8%	0.6%	1.8%	1.9%	0.0%	0.0%	0.0%	0.3%	0.9%	0.6%	0.0%	0.0%	0.0%	1.2	0.0	0.0	62.3	a	
Qatar	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	556.2	b	
Republic of Korea	1.6%	1.3%	2.7%	2.6%	1.0%	0.5%	0.1%	0.2%	0.1%	0.3%	0.1%	0.0%	0.3%	52.7	63.8	21.0	5390.7	b	
Republic of Moldova	1.1%	19.6%	25.0%	25.5%	24.9%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6	28.7	0.0	115.3	b	
Réunion	37.5%	16.9%	18.2%	18.0%	9.3%	0.0%	0.4%	3.8%	0.2%	4.3%	0.0%	0.0%	0.0%	3.6	3.6	0.0	40.6	a	
Romania	3.4%	24.1%	23.7%	24.4%	16.0%	1.2%	0.1%	4.8%	1.8%	0.5%	0.1%	0.0%	0.0%	63.4	145.9	12.3	907.5	b	
Russian Federation	3.8%	3.3%	3.3%	3.5%	0.7%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	406.5	111.3	50.7	16232.5	b	
Rwanda	80.1%	90.7%	86.7%	86.0%	84.8%	0.0%	0.0%	1.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.9	68.1	0.0	80.2	a	
Saint Barthélemy
Saint Helena	11.7%	9.2%	12.6%	14.2%	4.8%	0.0%	0.0%	0.0%	7.1%	2.3%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.1	a	
Saint Kitts and Nevis	40.0%	1.0%	1.6%	1.8%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%	0.0%	0.0%	0.0%	0.0	0.0	0.0	1.9	a	
Saint Lucia	5.5%	2.2%	2.1%	2.1%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.1	0.0	3.9	a	
Saint Martin (French Part)

UN Country Name	Share in total final energy consumption (%)														Final consumption of renewable energy (PJ) (4)				Total final energy consumption (PJ)										
	Renewable energy		Solid biofuels		Liquid biofuels		Biogases		Hydro		Wind		Solar		Geothermal		Tide		Municipal waste (renew)		Electricity consumption (2)		Heat raising (3)		Transport (4)				
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016		
Saint Pierre and Miquelon	0.0%	0.8%	0.7%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7	a
Saint Vincent and the Grenadines	15.4%	5.5%	5.8%	6.3%	2.3%	0.0%	0.0%	0.0%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.1	0.1	0.1	0.0	0.0	0.0	2.5	a	
Samoa	45.9%	36.0%	26.9%	27.3%	23.3%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2	0.2	0.9	0.9	0.0	0.0	0.0	3.9	a	
Sao Tome and Principe	50.9%	43.8%	40.2%	39.2%	38.3%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.8	0.8	0.0	0.0	0.0	2.1	a	
San Marino
Saudi Arabia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.3	0.3	0.0	0.0	0.0	4641.4	b	
Senegal	55.6%	50.3%	39.9%	37.6%	36.7%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3	1.3	46.1	46.1	0.0	0.0	0.0	126.2	b	
Serbia	15.5%	20.6%	21.2%	20.8%	12.7%	0.0%	0.1%	8.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	27.3	27.3	43.8	43.8	0.4	0.4	0.0	343.7	b	
Seychelles	4.3%	0.6%	0.8%	1.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	a	
Sierra Leone	91.0%	84.2%	78.1%	77.6%	77.2%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3	0.3	42.4	42.4	0.0	0.0	0.0	54.9	a	
Singapore	0.2%	0.5%	0.7%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	3.1	3.1	0.0	0.0	0.2	0.2	0.0	467.1	b	
Sint Maarten (Dutch part)	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.2	a	
Slovakia	2.2%	10.3%	13.4%	13.1%	6.2%	1.6%	0.9%	3.8%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	21.7	21.7	22.6	22.6	6.4	6.4	0.0	388.6	b		
Slovenia	12.4%	19.5%	20.8%	20.8%	12.1%	0.4%	0.4%	6.4%	0.0%	0.0%	0.0%	0.6%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	14.4	14.4	26.8	26.8	1.0	1.0	0.0	203.2	b		
Solomon Islands	61.0%	63.5%	63.3%	65.7%	65.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	3.2	3.2	0.0	0.0	0.0	4.9	a		
Somalia	87.2%	93.6%	94.4%	94.7%	94.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	105.0	105.0	0.0	0.0	0.0	110.9	a		
South Africa	16.6%	14.6%	14.1%	14.4%	13.5%	0.0%	0.0%	0.1%	0.1%	0.4%	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.2	21.2	377.3	377.3	0.4	0.4	0.0	2762.6	b		
South Georgia and the South Sandwich Islands
South Sudan	..	..	26.2%	28.5%	28.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	6.5	6.5	0.0	0.0	0.0	22.9	b
Spain	10.6%	14.4%	16.3%	17.1%	5.6%	1.5%	0.2%	3.5%	4.7%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	315.4	315.4	184.2	184.2	53.3	53.3	0.0	3238.2	b		
Sri Lanka	78.1%	61.9%	52.9%	50.9%	47.3%	0.0%	0.0%	3.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.9	14.9	192.5	192.5	0.0	0.0	0.0	407.3	b		
State of Palestine	22.1%	14.1%	10.5%	10.1%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	6.8	6.8	0.0	0.0	0.0	67.6	a		
Sudan	73.3%	61.6%	64.5%	61.6%	56.7%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.1	25.1	287.6	287.6	0.0	0.0	0.0	507.3	b		

UN Country Name	Share in total final energy consumption (%)												Final consumption of renewable energy (PJ) (4)				Total final energy consumption (PJ)		
	Renewable energy						Municipal waste (renew)						Electricity consumption (2)	Heat raising (3)	Transport (4)	2016			
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016					2016	2016	
Suriname	..	22.4%	22.7%	21.8%	5.2%	0.0%	0.0%	16.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6	1.1	0.0	21.8	b
Svalbard and Jan Mayen Islands	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sweden	34.1%	46.0%	53.1%	51.4%	27.1%	4.1%	0.5%	14.0%	3.5%	0.1%	0.0%	0.0%	0.0%	0.0%	256.9	352.5	60.7	1305.0	b
Switzerland	17.1%	21.5%	25.3%	25.5%	5.2%	0.4%	0.4%	15.1%	0.1%	0.9%	2.0%	0.0%	0.0%	0.0%	122.6	67.7	10.2	786.5	b
Syrian Arab Republic	2.4%	1.4%	0.5%	1.1%	0.1%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4	0.2	0.0	243.0	b
Tajikistan	29.6%	61.8%	48.1%	43.9%	0.0%	0.0%	0.0%	43.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	45.3	0.0	0.1	103.3	b
Thailand	33.6%	22.7%	22.6%	21.8%	17.5%	2.2%	0.9%	0.8%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	106.2	508.8	67.5	3124.2	b
The former Yugoslav Republic of Macedonia	2.4%	22.3%	24.0%	21.7%	10.7%	0.0%	0.2%	9.8%	0.6%	0.1%	0.3%	0.0%	0.0%	0.0%	8.2	8.4	0.0	76.8	b
Timor-Leste	0.0%	34.7%	18.2%	19.2%	19.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.8	0.0	0.0	4.4	a
Togo	78.7%	65.8%	71.3%	71.6%	67.5%	0.0%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0	64.4	0.0	95.5	b	
Tokelau	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tonga	1.5%	1.0%	1.9%	2.0%	0.9%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	1.4	a
Trinidad and Tobago	1.2%	0.3%	0.3%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.5	0.0	0.0	168.7	b
Tunisia	14.5%	12.7%	12.6%	12.5%	11.3%	0.0%	0.0%	0.0%	0.4%	0.7%	0.0%	0.0%	0.0%	1.6	38.5	0.0	322.4	b	
Turkey	24.4%	14.2%	13.3%	13.2%	2.9%	0.1%	0.2%	5.4%	1.2%	1.0%	2.5%	0.0%	0.0%	269.0	223.6	5.8	3765.5	b	
Turkmenistan	0.3%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.4	0.0	751.8	b	
Turks and Caicos Islands	1.8%	0.5%	0.6%	0.6%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	1.2	a	
Tuvalu	0.0%	0.0%	8.2%	11.8%	0.0%	0.0%	0.0%	0.0%	0.0%	11.8%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.1	a	
Uganda	96.0%	91.6%	89.1%	88.6%	87.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	9.4	473.4	0.0	545.0	a	
Ukraine	0.7%	2.9%	4.2%	5.5%	4.2%	0.1%	0.0%	1.0%	0.1%	0.1%	0.0%	0.0%	0.0%	22.6	86.2	2.9	2040.6	b	
United Arab Emirates	0.0%	0.1%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	1.1	1.9	0.0	2053.9	b	
United Kingdom of Great Britain and Northern Ireland	0.7%	3.7%	8.6%	8.8%	3.6%	0.8%	0.7%	0.4%	2.4%	0.7%	0.0%	0.0%	0.0%	266.5	132.5	43.8	5046.0	b	

UN Country Name	Share in total final energy consumption (%)												Final consumption of renewable energy (PJ) (4)				Total final energy consumption (PJ)			
	Renewable energy						Municipal waste (renew)						Electricity consumption (2)	Heat raising (3)	Transport (4)	2016				
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016					
United Republic of Tanzania	94.8%	90.4%	85.7%	86.1%	85.4%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.9	829.1	0.0	970.6	b
United States minor outlying Islands
United States of America	4.2%	7.4%	9.1%	9.5%	3.2%	2.9%	0.1%	1.5%	1.3%	0.4%	0.1%	0.0%	0.0%	0.1%	2025.4	1852.7	1624.0	57718.7	b	
United States Virgin Islands	0.0%	0.0%	3.9%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.1	0.0	0.0	0.0	2.3	a
Uruguay	44.8%	52.8%	58.9%	59.7%	40.7%	1.8%	0.0%	12.3%	4.7%	0.2%	0.0%	0.0%	0.0%	0.0%	38.7	73.5	3.2	193.1	b	
Uzbekistan	1.3%	2.6%	3.2%	3.2%	0.0%	0.0%	0.0%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.2	0.2	1.1	1076.0	b	
Vanuatu	28.4%	38.4%	36.1%	33.7%	31.5%	0.3%	0.0%	0.9%	0.7%	0.3%	0.0%	0.0%	0.0%	0.1	0.8	0.0	0.0	2.6	a	
Venezuela (Bolivarian Republic of)	11.7%	11.5%	12.8%	13.3%	2.3%	0.0%	0.0%	11.0%	0.0%	0.0%	0.0%	0.0%	0.0%	146.3	30.6	0.5	1338.4	b		
Viet Nam	76.1%	34.8%	34.7%	32.7%	24.0%	0.0%	0.0%	8.7%	0.0%	0.0%	0.0%	0.0%	0.0%	223.1	617.2	0.0	2569.1	b		
Wallis and Futuna Islands	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	0.2	a	
Western Sahara
Yemen	2.2%	1.0%	3.1%	4.5%	2.5%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	2.1	2.5	0.0	101.6	b		
Zambia	83.0%	92.4%	88.6%	88.5%	78.4%	0.0%	0.0%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	36.8	288.0	0.1	367.3	b		
Zimbabwe	64.0%	82.6%	81.8%	82.9%	79.9%	0.3%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	11.5	321.7	1.2	403.4	b		
World	16.5%	16.6%	17.2%	17.5%	11.2%	1.0%	0.2%	3.4%	0.8%	0.6%	0.2%	0.0%	0.1%	17522.0	41792.9	3739.6	360756.1	c		
Northern America (M49) and Europe (M49)	5.8%	10.0%	12.1%	12.3%	4.7%	1.8%	0.3%	3.3%	1.3%	0.5%	0.1%	0.0%	0.0%	7227.8	6312.2	2455.5	129582.8	c		
Latin America and the Caribbean (MDG=M49)	32.4%	28.6%	28.2%	28.8%	15.7%	3.3%	0.0%	8.8%	0.7%	0.3%	0.1%	0.0%	0.0%	2519.0	3601.8	782.7	23941.6	c		
Central Asia (M49) and Southern Asia (MDG=M49)	39.2%	30.7%	27.3%	27.1%	24.5%	0.1%	0.0%	1.9%	0.3%	0.2%	0.0%	0.0%	0.0%	987.8	9266.3	38.7	38055.8	c		
Eastern Asia (M49) and South-eastern Asia (MDG=M49)	27.5%	13.8%	14.0%	14.3%	7.3%	0.3%	0.3%	4.0%	0.7%	1.3%	0.4%	0.0%	0.0%	5855.0	9365.9	433.6	109640.1	c		

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	Renewable energy				Solid biofuels		Liquid biofuels		Biogases		Hydro		Wind		Solar		Geothermal		Tide		Municipal waste (renew)		Electricity consumption (2)	Heat raising (3)	Transport (4)	2016
	1990	2010	2015	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016	2016				
Sub-Saharan Africa (M49)	71.0%	71.6%	69.3%	69.5%	67.7%	0.0%	0.0%	0.0%	1.5%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	308.1	12162.3	4.6	17959.8	c	
Oceania (M49)	13.4%	12.7%	13.4%	13.8%	7.4%	0.2%	0.2%	3.3%	1.1%	1.1%	0.9%	0.8%	0.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	224.0	309.6	12.4	3964.1	c	
Western Asia (M49) and Northern Africa (M49)	9.2%	6.2%	5.6%	5.6%	2.9%	0.0%	0.0%	1.5%	0.3%	0.3%	0.4%	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	409.3	759.3	6.2	20927.4	c	

Note:

a. Source: Energy Balances, UN Statistics Division (2018)

b. Source: IEA (2018), World Energy Balances

c. Sources: IEA (2018), World Energy Balances; Energy Balances, UN Statistics Division (2018)

1: To establish the total consumption of each renewable energy source, direct final consumption is summed with back-calculated electricity and commercial heat based on generation shares (GTF 2013). For instance, if final consumption is 150 TJ for biogases, 400 TJ for electricity and 100 TJ for heat; and if the share of biogases is 10 percent in electricity generation and 5 percent in heat generation, the total biogases consumption will be 195 TJ, derived as $150 \text{ TJ} + 400 \text{ TJ} * 10\% + 100 \text{ TJ} * 5\%$.

2: Covers final consumption of renewable electricity in all sectors excluding transport.

3: Covers final consumption of renewable energy for heat raising purposes (excluding electricity) in all sectors excluding transport: manufacturing industries, construction and non fuel mining industries, residential, commercial and public services, agriculture, forestry, fishing and not elsewhere specified.

4: Covers final consumption of renewable energy (including electricity) in the transport sector.

ENERGY EFFICIENCY

UN country name	Energy intensity (MJ/USD 2011 PPP) (1)					Compound annual growth rate of Energy intensity (%)				
	1990	2000	2010	2015	2016	1990-2000	2000-2010	2010-2015	2015-2016	
UN country name	1990	2000	2010	2015	2016	1990-2000	2000-2010	2010-2015	2015-2016	
	Energy intensity (MJ/USD 2011 PPP)(1)									
	2000	2010	2015	2016	2016	1990-2000	2000-2010	2010-2015	2015-2016	
Afghanistan	1.9	1.7	2.9	2.4	2.3	-1.1%	5.7%	-4.1%	-4.5%	a
Åland Islands	..	..	..	..	..	..	..	..	..	..
Albania	7.2	4.3	3.1	2.9	2.9	-5.1%	-3.3%	-1.2%	-0.4%	b
Algeria	3.5	3.6	3.6	4.2	4.0	0.1%	0.2%	2.8%	-4.2%	b
American Samoa	..	..	..	..	..	..	..	..	..	..
Andorra	..	..	..	..	..	..	..	..	..	..
Angola	5.9	6.4	3.9	4.1	4.0	0.8%	-4.8%	1.1%	-3.7%	b
Anguilla	..	..	..	..	..	..	..	..	..	..
Antigua and Barbuda	3.8	3.2	4.1	3.9	3.8	-1.8%	2.6%	-1.2%	-3.4%	a
Argentina	5.4	4.7	4.3	4.3	4.4	-1.5%	-0.9%	0.2%	2.7%	b
Armenia	24.4	9.4	5.4	5.4	5.3	-9.1%	-5.4%	-0.1%	-1.6%	b
Aruba	2.9	6.7	7.8	3.4	3.3	8.6%	1.6%	-15.5%	-1.4%	a
Australia	7.4	6.7	5.8	5.0	5.0	-1.0%	-1.3%	-3.0%	0.8%	b
Austria	4.3	3.8	3.9	3.6	3.6	-1.2%	0.1%	-1.5%	-0.3%	b
Azerbaijan	15.6	13.2	3.4	3.7	3.8	-1.7%	-12.8%	2.1%	2.2%	b
Bahamas	3.2	2.8	3.3	2.6	2.4	-1.5%	1.8%	-4.2%	-9.9%	a
Bahrain	12.6	11.2	10.6	9.9	9.6	-1.2%	-0.6%	-1.2%	-3.6%	b
Bangladesh	3.9	3.6	3.4	3.1	3.1	-0.8%	-0.6%	-1.5%	-2.3%	b
Barbados	4.3	3.8	4.4	3.5	3.5	-1.2%	1.5%	-4.2%	-0.4%	a
Belarus	22.4	13.7	7.5	6.5	6.6	-4.8%	-5.9%	-2.9%	1.8%	b
Belgium	6.6	6.4	5.6	4.7	5.0	-0.3%	-1.3%	-3.3%	4.5%	b
Belize	8.5	6.4	5.1	4.7	4.7	-2.9%	-2.3%	-1.3%	-0.2%	a
Benin	9.6	7.3	9.3	8.5	8.5	-2.7%	2.5%	-1.7%	0.4%	b

UN country name	Energy intensity (MJ/USD 2011 PPP) (1)					Compound annual growth rate of Energy intensity (%)				
	1990	2000	2010	2015	2016	1990-2000	2000-2010	2010-2015	2015-2016	
Bermuda	2.9	2.3	2.4	2.5	2.7	-2.5%	0.5%	0.7%	9.7%	a
Bhutan	30.0	21.8	12.2	10.5	10.0	-3.2%	-5.7%	-2.9%	-4.7%	a
Bolivia (Plurinational State of)	4.3	5.6	4.9	5.0	5.1	2.7%	-1.3%	0.2%	1.7%	b
Bonaire, Sint Eustatius and Saba	..	..	..	..	..	..	..	..	..	..
Bosnia and Herzegovina	46.6	7.6	7.5	6.7	7.1	-16.5%	-0.2%	-2.3%	6.0%	b
Botswana	4.6	4.2	3.3	3.3	3.1	-0.9%	-2.2%	0.0%	-7.7%	b
Brazil	3.8	3.9	3.9	4.1	4.1	0.4%	-0.1%	1.0%	-0.2%	b
British Indian Ocean Territory	..	..	..	..	..	..	..	..	..	..
British Virgin Islands	..	..	..	..	..	..	..	..	..	..
Brunei Darussalam	3.3	3.7	4.3	3.7	4.1	1.0%	1.7%	-3.4%	11.6%	b
Bulgaria	14.6	10.8	6.6	6.4	6.0	-3.0%	-4.8%	-0.7%	-6.0%	b
Burkina Faso	12.6	6.6	6.5	6.0	5.7	-6.2%	-0.1%	-1.8%	-3.7%	a
Burundi	9.8	11.3	13.5	8.1	8.3	1.5%	1.8%	-9.8%	2.7%	a
Cabo Verde	4.0	2.7	3.2	2.8	2.8	-4.0%	1.7%	-2.6%	2.8%	a
Cambodia	..	8.5	6.2	5.8	5.8	..	-3.1%	-1.4%	0.7%	b
Cameroon	5.9	6.6	5.0	5.1	4.9	1.2%	-2.8%	0.4%	-2.7%	b
Canada	10.2	9.2	8.0	7.6	7.5	-1.0%	-1.5%	-0.9%	-1.6%	b
Cayman Islands	2.6	2.6	2.9	2.6	2.5	0.1%	1.0%	-1.9%	-3.3%	a
Central African Republic	11.4	7.3	5.8	8.2	7.8	-4.3%	-2.4%	7.3%	-4.1%	a
Chad	7.3	7.4	3.5	2.9	3.1	0.2%	-7.3%	-3.7%	8.2%	a
Channel Islands	..	..	..	..	..	..	..	..	..	..
Chile	4.9	4.8	3.9	3.7	3.9	-0.2%	-2.1%	-1.0%	5.1%	b
China	21.1	10.1	8.3	6.7	6.2	-7.1%	-1.9%	-4.2%	-7.3%	b
China, Hong Kong Special Administrative Region	2.3	2.5	1.7	1.5	1.5	0.7%	-3.9%	-2.6%	2.3%	b
China, Macao Special Administrative Region	1.0	1.3	0.6	0.7	0.7	2.2%	-7.7%	3.1%	2.4%	a
Christmas Island	..	..	..	..	..	..	..	..	..	..

UN country name	Energy intensity (MJ/USD 2011 PPP) (1)					Compound annual growth rate of Energy intensity (%)				
	1990	2000	2010	2015	2016	1990-2000	2000-2010	2010-2015	2015-2016	
Cocos (Keeling) Islands	..	..	..	..	..	..	..	..	..	..
Colombia	3.9	3.2	2.6	2.6	2.6	-2.0%	-2.1%	-0.3%	2.2%	b
Comoros	3.2	4.0	4.8	4.7	5.0	2.3%	1.7%	-0.3%	7.1%	a
Congo	2.6	2.1	3.1	4.1	4.2	-2.4%	4.1%	5.6%	3.4%	b
Cook Islands	..	..	..	..	..	..	..	..	..	..
Costa Rica	2.9	3.1	3.3	2.9	2.9	0.6%	0.6%	-2.4%	-0.8%	b
Côte d'Ivoire	4.6	5.8	7.8	7.3	6.5	2.2%	3.0%	-1.3%	-11.1%	b
Croatia	4.9	5.0	4.4	4.0	3.9	0.3%	-1.3%	-2.0%	-2.2%	b
Cuba	5.0	4.2	2.3	1.9	1.6	-1.7%	-6.1%	-3.2%	-16.4%	b
Curaçao	..	..	..	..	..	..	..	..	..	..
Cyprus	4.2	4.3	3.6	3.3	3.4	0.1%	-1.6%	-2.2%	3.3%	b
Czechia	10.1	7.9	6.4	5.5	5.3	-2.4%	-2.2%	-3.0%	-3.7%	b
Democratic People's Republic of Korea	8.1	6.9	5.7	3.0	3.4	-1.6%	-1.8%	-12.0%	11.4%	b
Democratic Republic of the Congo	10.3	21.6	19.5	19.5	19.6	7.7%	-1.0%	0.0%	0.1%	b
Denmark	4.2	3.5	3.3	2.6	2.6	-1.9%	-0.3%	-4.7%	0.3%	b
Djibouti	5.2	5.4	4.7	2.3	2.6	0.3%	-1.3%	-13.5%	11.3%	a
Dominica	2.0	2.9	3.5	3.6	3.6	3.6%	1.9%	0.8%	-0.1%	a
Dominican Republic	4.3	4.4	2.9	2.5	2.4	0.3%	-4.1%	-3.0%	-1.6%	b
Ecuador	3.5	4.0	3.5	3.6	3.5	1.3%	-1.1%	0.6%	-3.6%	b
Egypt	4.0	3.3	3.7	3.5	3.7	-2.0%	1.3%	-1.0%	4.1%	b
El Salvador	4.3	5.0	4.7	4.1	4.0	1.5%	-0.6%	-2.9%	-0.5%	b
Equatorial Guinea	11.7	1.4	2.5	1.7	1.5	-19.0%	5.8%	-7.0%	-15.2%	a
Eritrea	..	5.2	5.0	4.5	4.4	..	-0.4%	-2.1%	-1.5%	b
Estonia	17.2	9.0	7.8	6.3	6.2	-6.3%	-1.4%	-4.1%	-1.1%	b
Eswatini	..	..	..	..	..	-0.5%	-2.6%	-1.1%	-14.4%	a
Ethiopia	30.6	32.3	19.0	13.7	13.1	0.5%	-5.2%	-6.3%	-4.3%	b
Falkland Islands (Malvinas)	..	..	..	..	..	..	..	..	..	..

UN country name	Energy intensity (MJ/USD 2011 PPP) (1)					Compound annual growth rate of Energy intensity (%)				
	1990	2000	2010	2015	2016	1990-2000	2000-2010	2010-2015	2015-2016	
Faroe Islands	..	..	..	..	..	..	..	..	..	..
Fiji	5.3	4.0	3.4	4.8	4.4	-2.9%	-1.6%	7.3%	-9.7%	a
Finland	8.2	7.5	7.2	6.4	6.5	-0.9%	-0.5%	-2.2%	2.1%	b
France	5.4	5.0	4.6	4.1	4.0	-0.9%	-0.8%	-2.1%	-2.9%	b
French Guiana	..	..	..	..	..	..	..	..	..	..
French Polynesia	..	..	..	..	..	..	..	..	..	..
French Southern and Antarctic Territories	..	..	..	..	..	..	..	..	..	..
Gabon	2.7	2.8	8.4	6.7	6.7	0.5%	11.6%	-4.5%	0.0%	b
Gambia	5.0	4.9	4.4	4.6	4.5	-0.2%	-1.0%	0.5%	-1.4%	a
Georgia	13.5	8.3	4.9	5.8	5.8	-4.7%	-5.1%	3.2%	0.6%	b
Germany	5.9	4.7	4.1	3.6	3.5	-2.4%	-1.2%	-2.8%	-1.3%	b
Ghana	7.9	6.2	4.2	3.6	3.5	-2.4%	-3.7%	-3.0%	-4.1%	b
Gibraltar	..	..	..	..	..	..	..	..	..	..
Greece	4.3	4.2	3.6	3.7	3.6	-0.1%	-1.5%	0.5%	-2.0%	b
Greenland	..	..	..	..	..	..	..	..	..	..
Grenada	2.3	3.0	3.4	3.0	2.9	2.5%	1.4%	-2.9%	-1.9%	a
Guadeloupe	..	..	..	..	..	..	..	..	..	..
Guam	..	..	..	..	..	..	..	..	..	..
Guatemala	3.9	4.2	4.7	4.5	4.8	0.6%	1.2%	-1.0%	8.3%	b
Guernsey	..	..	..	..	..	..	..	..	..	..
Guinea	12.3	10.2	8.7	7.1	6.7	-1.9%	-1.6%	-3.8%	-6.8%	a
Guinea-Bissau	12.6	13.7	12.8	11.8	11.3	0.8%	-0.6%	-1.6%	-4.2%	a
Guyana	11.6	9.3	7.3	6.4	6.6	-2.2%	-2.3%	-2.8%	4.0%	a
Haiti	4.4	5.7	10.6	10.1	10.1	2.6%	6.5%	-0.9%	0.0%	b
Heard Island and McDonald Islands	..	..	..	..	..	..	..	..	..	..
Holy See	..	..	..	..	..	..	..	..	..	..

UN country name	Energy intensity (MJ/USD 2011 PPP) (1)						Compound annual growth rate of Energy intensity (%)				
	1990	2000	2010	2015	2016	2016	1990-2000	2000-2010	2010-2015	2015-2016	
Honduras	6.3	5.8	5.9	6.3	6.1	6.1	-0.9%	0.2%	1.3%	-3.5%	b
Hungary	6.8	5.7	5.0	4.3	4.3	4.3	-1.7%	-1.4%	-2.9%	-0.5%	b
Iceland	12.9	13.6	18.3	16.4	14.5	14.5	0.6%	3.0%	-2.1%	-11.9%	b
India	8.4	7.0	5.4	4.6	4.5	4.5	-1.8%	-2.6%	-3.0%	-3.8%	b
Indonesia	4.9	5.3	4.2	3.5	3.4	3.4	0.8%	-2.2%	-3.6%	-2.7%	b
Iran (Islamic Republic of)	4.5	5.9	6.4	7.5	7.0	7.0	2.7%	0.8%	3.3%	-7.1%	b
Iraq	4.2	3.8	4.0	3.7	3.9	3.9	-1.0%	0.6%	-1.7%	4.7%	b
Ireland	5.5	3.9	3.0	1.9	1.9	1.9	-3.4%	-2.6%	-8.3%	-0.3%	b
Isle of Man	..	..	..	..	..	..	..	..	..	..	..
Israel	5.0	4.5	4.3	3.5	3.4	3.4	-1.0%	-0.5%	-3.7%	-2.9%	b
Italy	3.5	3.5	3.4	3.1	3.0	3.0	-0.1%	-0.2%	-2.0%	-1.9%	b
Jamaica	6.2	6.9	4.6	4.9	5.2	5.2	1.1%	-4.0%	1.1%	6.1%	b
Japan	4.9	5.0	4.6	3.7	3.7	3.7	0.4%	-1.0%	-3.9%	-2.1%	b
Jersey	..	..	..	..	..	..	..	..	..	..	..
Jordan	6.1	5.5	4.4	4.6	4.7	4.7	-1.0%	-2.3%	1.2%	2.0%	b
Kazakhstan	14.4	10.1	8.8	7.9	8.2	8.2	-3.5%	-1.3%	-2.1%	3.4%	b
Kenya	8.0	8.7	8.1	7.9	7.7	7.7	0.9%	-0.8%	-0.4%	-3.0%	b
Kiribati	5.4	5.5	7.5	6.2	6.5	6.5	0.1%	3.3%	-3.8%	4.2%	a
Kuwait	1.9	5.5	6.0	5.2	5.4	5.4	10.9%	0.9%	-2.6%	2.8%	b
Kyrgyzstan	20.5	9.6	7.6	8.6	8.0	8.0	-7.4%	-2.3%	2.6%	-7.1%	b
Lao People's Democratic Republic	8.2	4.4	3.8	4.4	5.9	5.9	-6.1%	-1.3%	2.9%	35.0%	a
Latvia	8.0	6.1	4.9	3.9	3.8	3.8	-2.7%	-2.1%	-4.5%	-2.5%	b
Lebanon	3.9	5.1	3.7	4.1	4.1	4.1	2.8%	-3.0%	1.9%	-0.4%	b
Lesotho	16.4	14.4	10.9	9.8	10.1	10.1	-1.3%	-2.8%	-2.0%	2.4%	a
Liberia	20.7	20.2	27.1	26.0	27.9	27.9	-0.2%	3.0%	-0.8%	7.0%	a
Libya	4.7	5.6	4.7	6.6	7.0	7.0	1.9%	-1.8%	7.0%	6.5%	b
Liechtenstein	..	..	..	..	..	..	..	..	..	..	..

UN country name	Energy intensity (MJ/USD 2011 PPP) (1)					Compound annual growth rate of Energy intensity (%)				
	1990	2000	2010	2015	2016	1990-2000	2000-2010	2010-2015	2015-2016	
Lithuania	11.5	7.0	4.5	3.8	3.8	-4.8%	-4.3%	-3.6%	0.3%	b
Luxembourg	6.4	3.9	3.8	2.9	2.8	-4.8%	-0.3%	-5.2%	-4.0%	b
Madagascar	4.4	5.2	5.1	5.4	5.3	1.6%	-0.1%	0.9%	-0.9%	a
Malawi	9.1	6.6	4.8	4.2	4.2	-3.2%	-3.1%	-2.8%	0.0%	a
Malaysia	4.8	5.4	5.2	4.7	4.7	1.2%	-0.4%	-2.0%	-0.6%	b
Maldives	1.7	2.4	3.1	3.3	3.4	3.1%	2.6%	1.3%	4.4%	a
Mali	4.0	3.5	2.8	2.8	2.7	-1.3%	-2.4%	0.3%	-4.9%	a
Malta	5.1	2.9	3.0	1.8	1.6	-5.3%	0.1%	-9.9%	-11.0%	b
Marshall Islands	..	10.5	11.7	11.4	11.2	..	1.1%	-0.5%	-1.5%	a
Martinique	..	..	..	..	..	..	..	..	..	..
Mauritania	4.0	3.9	3.7	3.6	3.4	-0.4%	-0.3%	-0.6%	-5.6%	a
Mauritius	3.6	3.2	2.8	2.6	2.6	-1.2%	-1.3%	-1.1%	-0.1%	b
Mayotte	..	..	..	..	..	..	..	..	..	..
Mexico	4.6	4.0	4.1	3.6	3.5	-1.6%	0.2%	-2.2%	-2.7%	b
Micronesia (Federated States of)	..	5.6	4.5	6.2	6.3	..	-2.1%	6.6%	1.7%	a
Monaco	..	..	..	..	..	..	..	..	..	..
Mongolia	12.8	9.0	7.9	5.7	6.0	-3.4%	-1.3%	-6.2%	5.5%	b
Montenegro	..	..	5.4	4.4	4.1	..	..	-3.9%	-6.8%	b
Montserrat	..	..	..	..	..	..	..	..	..	..
Morocco	3.2	3.5	3.4	3.2	3.1	0.8%	-0.4%	-1.2%	-1.4%	b
Mozambique	49.5	29.6	18.8	17.4	17.0	-5.0%	-4.4%	-1.5%	-2.6%	b
Myanmar	14.8	8.9	3.0	2.8	2.9	-4.9%	-10.2%	-1.5%	2.6%	b
Namibia	..	3.8	3.6	3.3	3.5	..	-0.6%	-1.6%	4.4%	b
Nauru	7.6	17.1	8.8	4.4	4.1	8.4%	-6.4%	-13.2%	-5.6%	a
Nepal	10.8	9.3	8.0	7.4	8.1	-1.5%	-1.5%	-1.5%	9.0%	b
Netherlands	5.9	4.8	4.7	3.9	3.9	-2.1%	-0.2%	-3.5%	-0.9%	b
New Caledonia	..	..	..	..	..	..	..	..	..	..

UN country name	Energy intensity (MJ/USD 2011 PPP) (1)					Compound annual growth rate of Energy intensity (%)				
	1990	2000	2010	2015	2016	1990-2000	2000-2010	2010-2015	2015-2016	
New Zealand	6.8	6.7	5.5	5.3	5.2	-0.1%	-2.0%	-0.7%	-1.5%	b
Nicaragua	6.8	6.1	5.4	5.4	5.2	-1.1%	-1.2%	0.0%	-3.0%	b
Niger	..	7.2	7.0	6.9	6.4	-0.3%	-0.3%	-0.3%	-6.2%	b
Nigeria	9.6	10.5	6.5	5.9	6.2	0.9%	-4.6%	-2.0%	5.1%	b
Niue	..	..	..	..	..	..	..	..	..	..
Norfolk Island	..	..	..	..	..	..	..	..	..	..
Northern Mariana Islands	..	..	..	..	..	..	..	..	..	..
Norway	4.9	4.2	4.0	3.6	3.4	-1.4%	-0.4%	-2.4%	-5.2%	b
Oman	2.8	3.2	5.7	6.3	5.7	1.3%	6.0%	2.0%	-9.0%	b
Pakistan	5.5	5.5	4.8	4.4	4.3	0.1%	-1.3%	-1.9%	-3.1%	b
Palau	..	12.2	11.9	10.3	10.4	-0.3%	-0.3%	-2.9%	1.0%	a
Panama	3.2	3.3	2.7	2.2	2.2	0.4%	-2.3%	-4.0%	0.1%	b
Papua New Guinea	8.6	6.5	6.2	6.1	6.0	-2.9%	-0.4%	-0.3%	-2.5%	a
Paraguay	5.1	5.0	4.4	4.0	4.1	-0.1%	-1.2%	-2.3%	4.9%	b
Peru	3.5	3.0	2.8	2.7	2.6	-1.5%	-0.8%	-0.8%	-1.3%	b
Philippines	4.8	5.1	3.2	3.1	3.1	0.5%	-4.4%	-0.9%	-0.5%	b
Pitcairn	..	..	..	..	..	..	..	..	..	..
Poland	11.0	6.6	5.1	4.1	4.2	-5.0%	-2.6%	-4.0%	1.7%	b
Portugal	3.5	3.8	3.4	3.3	3.3	1.0%	-1.2%	-0.4%	-1.0%	b
Puerto Rico	0.0	0.1	0.2	0.4	0.5	23.5%	7.5%	14.9%	16.7%	a
Qatar	8.1	7.1	5.2	6.2	5.8	-1.3%	-3.1%	3.5%	-5.7%	b
Republic of Korea	7.8	8.1	7.0	6.5	6.6	0.3%	-1.5%	-1.2%	0.6%	b
Republic of Moldova	17.1	14.3	11.5	9.2	9.0	-1.8%	-2.1%	-4.4%	-2.0%	b
Réunion	..	..	..	..	..	..	..	..	..	..
Romania	9.8	6.5	4.1	3.3	3.1	-4.1%	-4.4%	-4.5%	-4.9%	b
Russian Federation	12.0	12.6	8.7	8.3	8.6	0.5%	-3.6%	-1.1%	3.4%	b
Rwanda	5.6	8.4	6.0	4.8	4.6	4.2%	-3.3%	-4.2%	-4.8%	a

UN country name	Energy intensity (MJ/USD 2011 PPP) (1)					Compound annual growth rate of Energy intensity (%)				
	1990	2000	2010	2015	2016	1990-2000	2000-2010	2010-2015	2015-2016	
Saint Barthélemy	..	..	..	..	..	..	..	..	..	..
Saint Helena	..	..	..	..	..	..	..	..	..	..
Saint Kitts and Nevis	3.7	3.2	2.9	2.6	2.6	-1.4%	-1.0%	-2.4%	0.8%	a
Saint Lucia	1.8	3.0	2.8	2.7	2.7	5.1%	-0.7%	-0.7%	-0.6%	a
Saint Martin (French Part)	..	..	..	..	..	..	..	..	..	..
Saint Pierre and Miquelon	..	..	..	..	..	..	..	..	..	..
Saint Vincent and the Grenadines	2.2	2.8	3.1	2.9	2.9	2.4%	1.1%	-1.1%	-1.8%	a
Samoa	4.3	4.2	3.9	4.2	4.1	-0.2%	-0.9%	1.9%	-3.2%	a
Sao Tome and Principe	6.1	5.9	5.2	4.7	4.6	-0.2%	-1.3%	-2.2%	-1.5%	a
San Marino	..	..	..	..	..	..	..	..	..	..
Saudi Arabia	3.5	4.6	6.2	5.8	5.4	2.7%	3.1%	-1.4%	-6.7%	b
Senegal	5.1	5.3	5.9	5.3	4.9	0.5%	1.0%	-2.1%	-6.7%	b
Serbia	7.0	9.6	7.1	6.6	6.6	3.2%	-3.0%	-1.5%	0.7%	b
Seychelles	2.2	5.4	3.3	2.9	3.5	9.2%	-4.6%	-2.6%	18.7%	a
Sierra Leone	9.3	13.1	7.7	7.0	6.7	3.5%	-5.2%	-2.0%	-4.7%	a
Singapore	4.6	3.8	2.9	2.5	2.5	-2.0%	-2.5%	-3.2%	-0.1%	b
Sint Maarten (Dutch part)	..	..	..	9.3	9.3	..	..	..	0.8%	a
Slovakia	11.6	8.8	5.5	4.5	4.4	-2.6%	-4.6%	-4.1%	-2.6%	b
Slovenia	6.3	5.9	5.2	4.6	4.6	-0.6%	-1.3%	-2.6%	0.4%	b
Solomon Islands	9.0	7.3	6.0	4.8	4.4	-2.0%	-2.0%	-4.3%	-9.2%	a
Somalia	..	..	..	..	..	..	..	..	..	..
South Africa	10.3	10.6	9.4	8.3	8.5	0.3%	-1.2%	-2.4%	2.7%	b
South Georgia and the South Sandwich Islands	..	..	..	..	..	..	..	..	..	..
South Sudan	..	..	..	1.6	1.7	..	..	..	6.2%	b
Spain	4.1	4.2	3.5	3.3	3.2	0.3%	-1.7%	-1.2%	-2.4%	b
Sri Lanka	3.7	3.3	2.4	2.1	2.0	-1.0%	-3.4%	-2.7%	-2.0%	b

UN country name	Energy intensity (MJ/USD 2011 PPP) (1)						Compound annual growth rate of Energy intensity (%)				
	1990	2000	2010	2015	2016	2016	1990-2000	2000-2010	2010-2015	2015-2016	
State of Palestine	4.7	3.1	3.4	3.5	3.6	3.6	-4.2%	1.0%	0.6%	2.5%	a
Sudan	9.9	7.2	4.7	4.6	4.5	4.5	-3.1%	-4.2%	-0.2%	-4.1%	b
Suriname	..	5.6	3.9	3.3	3.2	3.2	-3.4%	-3.4%	-3.4%	-3.9%	b
Svalbard and Jan Mayen Islands	..	..	..	..	..	..	..	..	..	..	..
Sweden	7.5	6.1	5.3	4.3	4.5	4.5	-2.0%	-1.4%	-4.3%	4.9%	b
Switzerland	3.2	2.9	2.5	2.2	2.1	2.1	-0.9%	-1.3%	-2.9%	-3.9%	b
Syrian Arab Republic	7.9	7.3	6.6	11.3	11.8	11.8	-0.8%	-1.0%	11.4%	4.6%	b
Tajikistan	11.5	12.3	5.7	5.1	5.0	5.0	0.6%	-7.4%	-2.0%	-2.1%	b
Thailand	4.7	5.2	5.4	5.4	5.4	5.4	1.1%	0.4%	-0.2%	-0.5%	b
The former Yugoslav Republic of Macedonia	5.4	6.4	5.1	4.2	4.1	4.1	1.7%	-2.2%	-4.0%	-2.2%	b
Timor-Leste	..	..	0.5	0.9	0.8	0.8	..	..	14.0%	-3.0%	a
Togo	10.3	13.9	16.6	14.2	13.9	13.9	3.0%	1.8%	-3.0%	-2.3%	b
Tokelau	..	..	..	..	..	..	..	..	..	..	..
Tonga	3.3	3.2	3.2	3.0	3.2	3.2	-0.1%	-0.1%	-1.2%	4.9%	a
Trinidad and Tobago	16.7	17.7	20.2	18.5	19.0	19.0	0.6%	1.3%	-1.8%	2.6%	b
Tunisia	4.5	4.2	3.9	3.7	3.8	3.8	-0.7%	-0.7%	-0.7%	0.1%	b
Turkey	3.5	3.6	3.4	2.9	3.0	3.0	0.4%	-0.7%	-2.9%	2.9%	b
Turkmenistan	23.9	25.9	18.8	13.9	13.0	13.0	0.8%	-3.2%	-5.9%	-6.0%	b
Turks and Caicos Islands	..	..	..	..	..	..	..	..	..	..	..
Tuvalu	3.5	3.4	3.9	3.8	3.8	3.8	-0.3%	1.5%	-0.5%	-0.7%	a
Uganda	20.9	12.6	10.2	9.8	9.7	9.7	-4.9%	-2.1%	-0.8%	-0.7%	a
Ukraine	19.4	23.7	15.4	12.2	12.1	12.1	2.0%	-4.2%	-4.7%	-0.7%	b
United Arab Emirates	4.2	4.1	5.4	5.3	5.0	5.0	-0.2%	2.8%	-0.4%	-6.3%	b
United Kingdom of Great Britain and Northern Ireland	5.6	4.8	3.7	3.0	2.9	2.9	-1.6%	-2.4%	-4.3%	-3.4%	b
United Republic of Tanzania	11.2	11.5	9.3	8.4	8.0	8.0	0.2%	-2.1%	-2.1%	-4.7%	b
United States minor outlying islands	..	..	..	..	..	..	..	..	..	..	..

UN country name	Energy intensity (MJ/USD 2011 PPP) (1)					Compound annual growth rate of Energy intensity (%)				
	1990	2000	2010	2015	2016	1990-2000	2000-2010	2010-2015	2015-2016	
United States of America	8.7	7.3	6.1	5.4	5.3	-1.7%	-1.9%	-2.4%	-2.4%	b
United States Virgin Islands	..	..	..	..	..	..	..	..	..	..
Uruguay	3.1	3.0	3.0	3.1	3.2	-0.2%	-0.2%	0.8%	2.4%	b
Uzbekistan	30.8	34.5	14.9	9.1	8.2	1.1%	-8.0%	-9.4%	-10.5%	b
Vanuatu	3.3	4.0	3.9	3.9	4.0	2.0%	-0.3%	0.0%	3.3%	a
Venezuela (Bolivarian Republic of)	5.8	6.1	6.3	5.2	5.8	0.5%	0.4%	-3.8%	12.1%	b
Viet Nam	7.5	5.8	6.3	6.1	6.1	-2.5%	0.8%	-0.6%	0.1%	b
Wallis and Futuna Islands	..	..	..	..	..	..	..	..	..	..
Western Sahara	..	..	..	..	..	..	..	..	..	..
Yemen	2.6	2.9	3.1	2.5	3.0	0.9%	0.8%	-4.3%	22.0%	b
Zambia	12.1	11.9	8.0	7.8	7.7	-0.2%	-3.8%	-0.7%	-0.8%	b
Zimbabwe	14.7	13.3	19.4	15.7	15.4	-1.0%	3.9%	-4.2%	-1.9%	b
World	7.7	6.6	5.9	5.3	5.1	-1.5%	-1.2%	-2.2%	-2.5%	c
Northern America (M49) and Europe (M49)	8.0	6.6	5.6	5.0	4.9	-1.8%	-1.7%	-2.3%	-1.3%	c
Latin America and the Caribbean (MDG=M49)	4.3	4.1	4.0	3.8	3.8	-0.5%	-0.4%	-0.9%	-0.2%	c
Central Asia (M49) and Southern Asia (MDG=M49)	8.1	7.0	5.7	5.1	4.9	-1.4%	-2.0%	-2.2%	-3.8%	c
Eastern Asia (M49) and South-eastern Asia (MDG=M49)	8.5	7.1	6.6	5.6	5.4	-1.9%	-0.7%	-3.1%	-4.9%	c
Sub-Saharan Africa (M49)	9.9	10.3	8.0	7.2	7.3	0.4%	-2.5%	-2.0%	0.9%	c
Oceania (M49)	7.3	6.7	5.8	5.1	5.1	-0.9%	-1.4%	-2.6%	0.4%	c
Western Asia (M49) and Northern Africa (M49)	4.3	4.3	4.6	4.4	4.3	0.0%	0.6%	-0.8%	-2.0%	c

Note:

a. Source: Energy Balances, UN Statistics Division (2018); World Bank, World Development Indicators

b. Source: IEA (2018), World Energy Balances; World Bank, World Development Indicators

c. Sources: IEA (2018), World Energy Balances; Energy Balances, UN Statistics Division (2018); World Bank, World Development Indicators

1: Energy intensity is defined as the energy supplied to the economy per unit value of economic output.

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PARTNERSHIP

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- International Energy Agency (IEA) (2019 chair)
- International Renewable Energy Agency (IRENA)
- United Nations Statistics Division (UNSD)
- World Bank (WB)
- World Health Organization (WHO)

Technical Advisory Group chaired by United Nations Department of Economics and Social Affairs (UN DESA), and composed as follows:

- African Development Bank (AfDB)
- Clean Cooking Alliance
- Denmark (Ministry of Foreign Affairs)
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- FIA Foundation
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- International Institute for Applied Systems Analysis
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- International Network on Gender and Sustainable Energy
- Islamic Development Bank
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- Latin American Energy Organization (OLADE)
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ABBREVIATIONS AND ACRONYMS

CAGR	Compound annual growth rate	LDC	Least developed country
COP21	2015 United Nations Climate Change Conference (Paris Agreement)	LMIC	Low-middle income country
DHS	Demographic and Health Survey	LSMS	Living Standards Measurement Survey
ECAPOV	Europe and Central Asia Poverty Database	LPG	Liquefied petroleum gas
EJ	Exajoules	Mb/d	Million barrels per day
ESMAP	Energy Sector Management Assistance Program	MEPS	Minimum Energy Performance Standards
EU	European Union	MICS	Multi-Indicator Cluster Survey
EVs	Electric Vehicles	MIS	Malaria Indicator Survey
FiT	Feed-in tariff	MJ	Megajoules
HEART	Household energy assessment rapid tool	MNAPOV	Middle East and North Africa Poverty Database
HIC	High income country	MTF	Multi-Tier Framework
HIES	Household Income Expenditure Survey	Mtoe	Million tonnes of oil equivalent
GDP	Gross domestic product	MW	Megawatt
GED	Global Electrification Database	NOAA	The National Oceanic and Atmospheric Administration
GHACCO	Ghana Alliance for Clean Cookstoves and Fuels	NSS	National Sample Survey
GHG	Greenhouse gas	OECD	Organisation of Economic Co-operation and Development
GNI	Gross national income	PAYGO	Pay-as-you-go
GOGLA	Global Off-Grid Lighting Association	PPA	Power purchase agreement
GPWG-DB	Global Poverty Working Group Database	PPP	Purchasing power parity
GW	Gigawatt	PV	Photovoltaic
ICT	Information and communications technology	RE	Renewable energy
IEA	International Energy Agency	REN21	Renewable Energy Policy Network for the 21st Century
IFC	International Finance Corporation	RISE	Regulatory Indicators for Sustainable Energy
IRENA	International Renewable Energy Agency	SAIDI	System Average Interruption Duration Index
IRES	International Recommendations for Energy Statistics	SAIFI	System Average Interruption Frequency Index

SDG	Sustainable Development Goal	UNSD	United Nations Statistics Division
SEDLAC	Socio-Economic Database for Latin America and the Caribbean	USAID	United States Agency for International Development
T&D	Transmission and distribution	VAT	Value added tax
TFEC	Total final energy consumption	WB	World Bank
TPES	Total primary energy supply	WDI	World Development Indicators
TJ	Terajoules	WEO	World Energy Outlook
TWh	Terawatt-hours	WHO	World Health Organization
UN	United Nations		



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