2019 TRACKING SDG 7

THE ENERGY PROGRESS REPORT

EXECUTIVE SUMMARY

A joint report of the custodian agencies

International Energy Agency

IRENA
International Renewable Energy Agency

United Nations
Statistics Division

WORLD BANK GROUP

World Health Organization

1818 H Street NW
Washington DC 20433
Telephone: 202-473-1000

Internet: www.worldbank.org

This work is a joint product of the staff of the five custodian agencies, namely The World Bank, the International Energy Agency, the International Renewable Energy Agency, the United Nations Statistics Division and the World Health Organization, with external contributions. The findings, interpretations, and conclusions expressed in this work do not necessarily reflect the views of the custodian agencies, their respective Board of Executive Directors (or equivalent), members or the governments they represent.

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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:

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- Clean Cooking Alliance
- Denmark (Ministry of Foreign Affairs)
- European Commission
- FIA Foundation
- Food and Agricultural Organization (FAO)
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- Sustainable Energy for All (SE4All)
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- United Nations Framework Convention on Climate Change (UNFCCC)
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Photo: World Bank

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

2010		2017
1.2 billion people without electricity access		**840 million** people without electricity access
2.96 billion people without clean cooking		**2.90 billion** people without clean cooking
16.6% total final energy consumption from renewables		**17.5%** total final energy consumption from renewables (2016)
5.9 MJ/USD primary energy intensity		**5.1 MJ/USD** primary energy intensity (2016)

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.

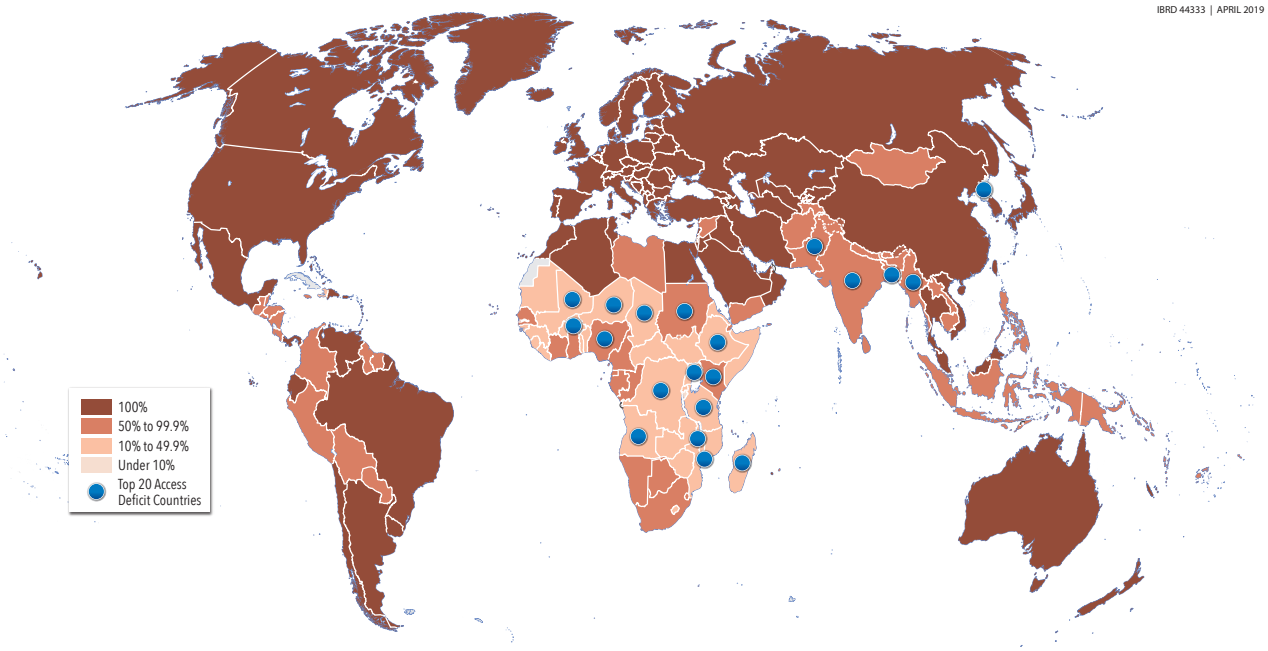
Progress in electrifying inner cities has been slow, and most informal settlements are still supplied through fragile distribution networks. The rural access rate of 79% in 2017 was lower than the urban access rate of 97%. To reach remote areas, off-grid solutions are essential; these include solar lighting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

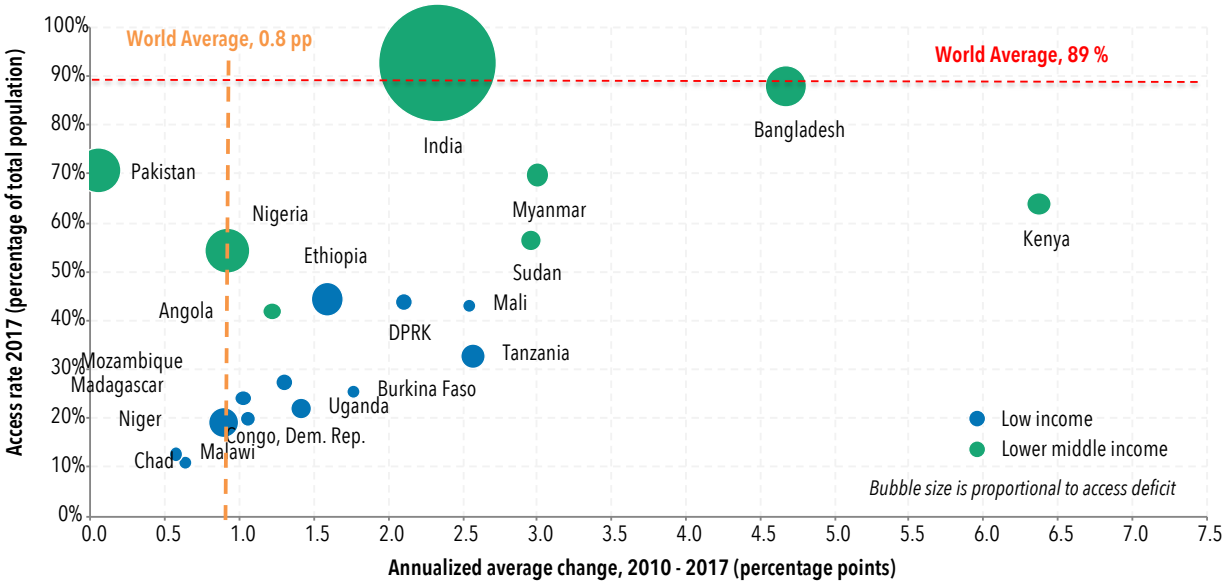
Key strategies for closing this gap will include data-based decision-making and advanced policy-planning frameworks, private sector financing, versatile solutions that include decentralized renewables, and efforts to both extend rural electrification and cope with urban densification.

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



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



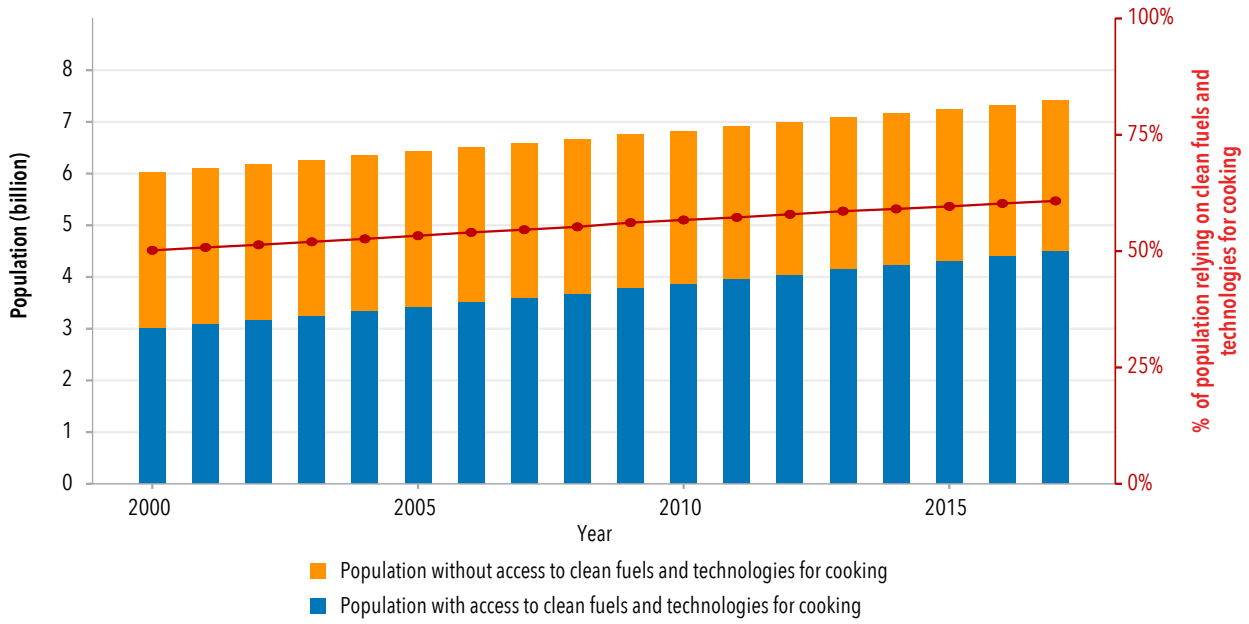
Source: World Bank.
Note: DPRK = Democratic People's Republic of Korea.

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-

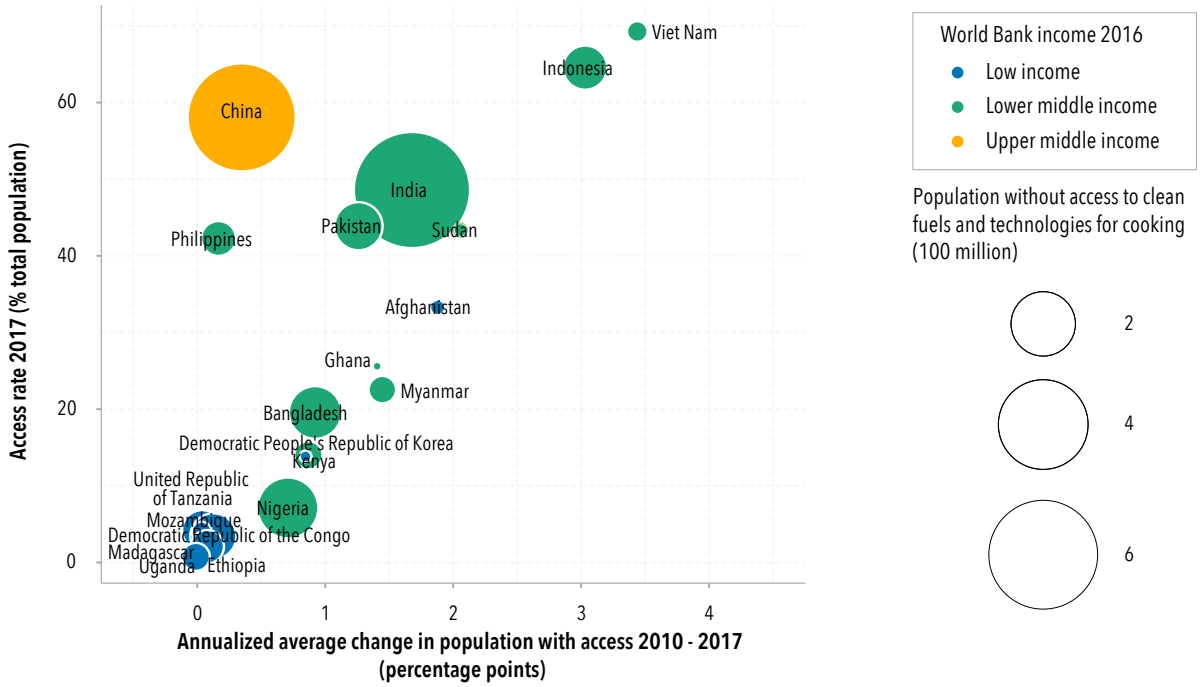
sal access by 2030, greater use of liquid petroleum gas would be appropriate in urban areas (accounting for an estimated 92% of new connections) since population density justifies the necessary investment in infrastructure. Meanwhile, improved biomass cookstoves, which represent 37% of clean cooking 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 ES5 • 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.

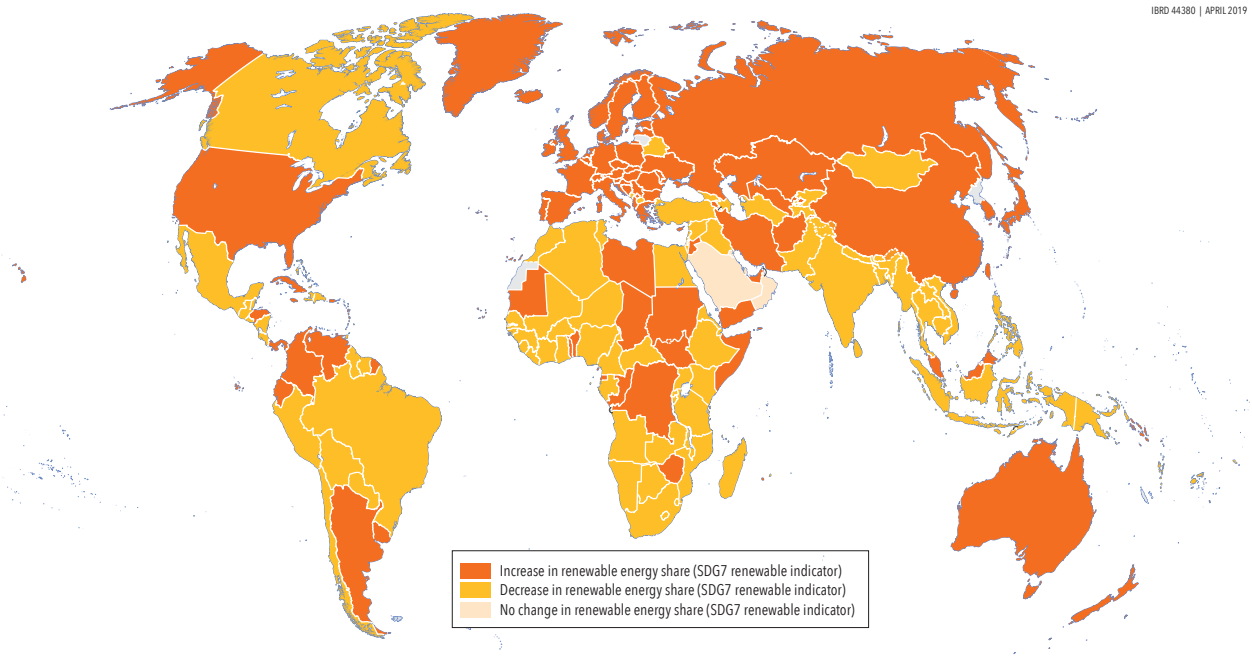
The share of renewable energy in transport remains lowest: it increased by 0.1% year on year to reach 3.3% in 2016. Biofuels constitute the majority of renewable energy used for transport in the United States, Brazil, and the European Union. Electricity generated from renewable sources also grew, linked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

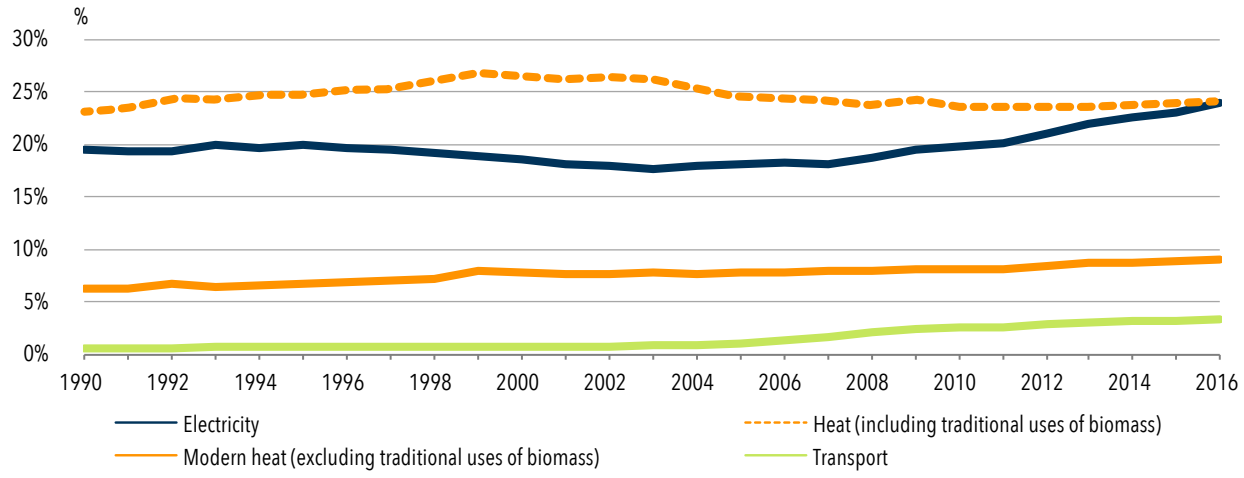
Despite remarkable progress over the past decade, renewables still face persistent financial, regulatory, and sometimes technological barriers. Policies have focused on renewable electricity so far, and fewer countries have implemented policies for renewables use for heating and transport. To foster 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



Source: IEA and UNSD.
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 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.

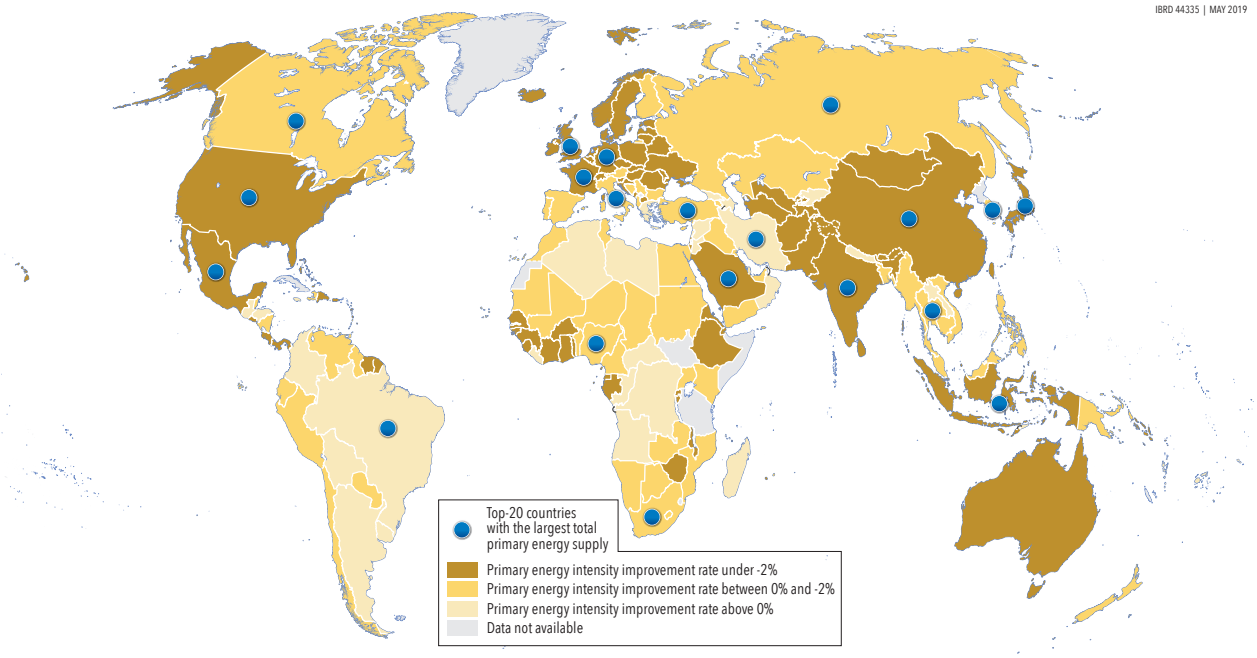
Energy intensity has decreased at varied rates across end-use sectors. Progress has been fastest in industry and passenger transport, where the average annual rate of improvement exceeded 2%. Rates of efficiency improvement in the services, agriculture, and residential sectors exceeded 1.5%. Freight 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.

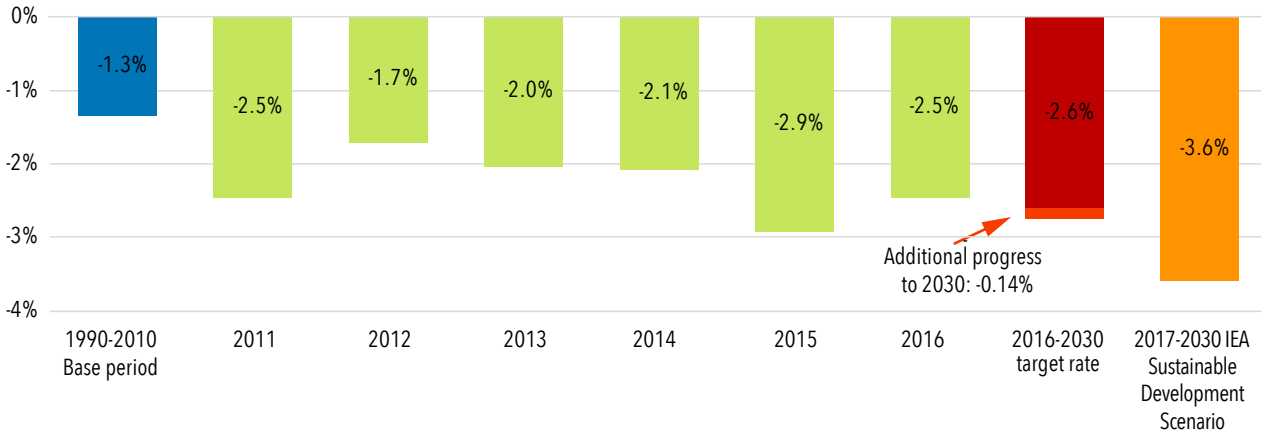
In the IEA's Sustainable Development Scenario, in which cost-effective energy efficiency potentials are maximized, the rate of intensity improvement between 2017 and 2030 reaches 3.6%. This highlights that it is still possible not only to meet but even to exceed SDG target 7.3. Key efforts that governments 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



Source: IEA, UNSD, and World Development Indicators.
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 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

Photo : World Bank

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	
Afghanistan					43	*d*	72	d	98	*g*	100	*g*	97	
Albania	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Algeria					99		100		100		100		100	
American Samoa														
Andorra	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Angola					33		42	d	42		73		0	
Anguilla			95		98		100		100		100			
Antigua and Barbuda					98		100	m	100	*m*	100	*m*	100	*m*
Argentina					99	*e*	100		100	*m*	100	*m*	100	*m*
Armenia			99	*d*	100	*d*	100	d	100		100		100	
Aruba	100	*m*	92	*e*	93	*e*	100	m	100	*m*	100	*m*	100	*m*
Australia	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Austria	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Azerbaijan			99	*c*	100		100		100		100		100	
Bahamas	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Bahrain					100	*m*	100	m	100	*m*	100	*m*	100	*m*
Bangladesh			32	*d*	55	*g*	73		88	*l*	100	*l*	81	
Barbados			100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Belarus	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Belgium	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Belize			79	*e*	90	*e*	92	c	98		98		98	
Benin			21		34	*g*	40		43		73		17	
Bermuda	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Bhutan			31	*g*	73	*c*	96		98	*e*	99	*e*	97	
Bolivia (Plurinational State of)			70	*h*	88		92	h	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	
Bosnia and Herzegovina	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Botswana			27		53		58		63		80		24	
Brazil	87	*h*	94		99		100	h	100		100		100	
British Virgin Islands							100	m	100	*m*	100	*m*	100	*m*
Brunei Darussalam	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Bulgaria	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Burkina Faso			9		13	*d*	22		25		65		10	
Burundi			3		5	*d*	8		9	*d*	62	*d*	2	
Cambodia			17	*d*	31	*d*	69		89	*l*	99	*l*	86	
Cameroon			41	*c*	53		59		61		93		21	
Canada	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Cabo Verde					81	*e*	88		93		94		90	
Cayman Islands			100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Central African Republic			6	*c*	10	*c*	24		30		52		15	
Chad			3		6	*c*	8	d	11		39		2	
Channel Islands														
Chile	92	*h*	98	*h*	99		100	h	100	*m*	100	*m*	100	*m*
China					100	*k*	100		100		100		100	
Colombia	90	*d*	95	*d*	97	*h*	98	h	100		100		98	
Comoros			40		70		75		80		95		74	
Democratic Republic of the Congo			7	*c*	13		17		19		49		0	
Congo					42		60	c	66		87		24	
Cook Islands					99		100		100		100			
Costa Rica					99	*h*	99	h	100	*h*	100	*h*	99	
Côte d'Ivoire			48		58		63		66		94		37	
Croatia	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Cuba			97	*k*	98		99		100		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*	100	*m*
Cyprus	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Czechia	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Denmark	100	*m*	100	*m*	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	*h*	98	*h*	99	h	100		100		100	
Ecuador			93		97	*h*	99	h	100		100		100	
Egypt			98	*d*	100		100		100		100		100	
El Salvador			85	*h*	92	*h*	95	h	99		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*	100	*m*	100	*m*
Ethiopia			13	*d*	33		29	d	44	*l*	97	*l*	31	
Faroe Islands	100	*m*	100	*m*	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*	100	*m*	100	*m*
France	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
French Polynesia	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Gabon			74	*d*	92		90		92		98		49	
Gambia			34	*c*	48		54		56	*d*	79	*d*	21	
Georgia					99		100		100		100		100	
Germany	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Ghana			44	*e*	64	*e*	76		79	*d*	90	*d*	65	
Gibraltar	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Greece	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Greenland	100	*m*	100	*m*	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	
Grenada			86		90		93		95		93		96	
Guam			100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Guatemala			73	*h*	84		91		93		97		89	
Guinea			17		26		32		35		83		9	
Guinea-Bissau					6	*g*	20		26		48		9	
Guyana			75		82		88		91		97		89	
Haiti			34	*d*	37		41		44		78		3	
Honduras			67		81	*h*	90	h	87	*l*	98	*l*	72	
China, Hong Kong Special Administrative Region	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Hungary	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Iceland	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
India			59		76	*g*	88	d	93		99		89	
Indonesia			86	*g*	94	*g*	98	g	98	*g*	100		96	
Iran (Islamic Republic of)			98	*d*	99		100		100		100		100	
Iraq					98		100		100		100		100	
Ireland	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Isle of Man	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Israel	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Italy	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Jamaica	70	*h*	85		93		97		100		100		99	
Japan	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Jordan	97	*d*	99		99		100		100		100		100	
Kazakhstan			99		99		100	c	100		100		100	
Kenya			15		19	*d*	42	d	64		81		58	
Kiribati					63	*e*	91	e	99		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	
Republic of Korea			100		100	*m*	100	m	100	*m*	100	*m*	100	*m*
Kosovo	100	*m*	100	*m*	99	*0*	100	m	100	*m*	100	*m*	100	*m*
Kuwait	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Kyrgyzstan			100		99	*i*	100		100		100		100	
Lao People's Democratic Republic			43		71		90	e	94	*c*	100	*c*	91	
Latvia	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Lebanon					100		100		100		100		100	
Lesotho			4	*c*	21		30		34		70		20	
Liberia					5		15		21		36		7	
Libya			100	*k*	81		73		70		70		70	
Liechtenstein	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Lithuania	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Luxembourg	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
China, Macao Special Administrative Region			100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
The former Yugoslav Republic of Macedonia	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Madagascar			14		17		20		24		69		0	
Malawi			5	*d*	9	*d*	11	d	13	*d*	58	*d*	4	
Malaysia					99		100		100		100		100	
Maldives			84	*e*	99		100		100	*d*	100	*d*	100	
Mali			10		25		38	d	43		87		12	
Malta	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Marshall Islands			69		89		93		95		96		92	
Mauritania					34		40	c	43		83		0	
Mauritius			99	*e*	100		98		98		90		100	
Mexico			98	*h*	99	*h*	99	d	100		100		100	

Country	Total electricity access rate (%)										Urban electricity access rate (%)		Rural electricity access rate (%) b	
	1990		2000		2010		2015		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	100	*m*	100	*m*	100	*m*
Monaco	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Mongolia			67	*e*	79	*c*	83		86		100		56	
Montenegro	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Morocco			70		91		100		100		100		100	
Mozambique			7		18		24	d	27		73		2	
Myanmar					49	*g*	61	g	70	*l*	93	*l*	60	
Namibia			37	*d*	44		50		53		77		29	
Nauru					99		99	g	100		100			
Nepal			27		65		87		96		99		95	
Netherlands	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
New Caledonia			100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
New Zealand	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Nicaragua			73		78		84		87		100		68	
Niger			6	*c*	13		17	g	20		67		11	
Nigeria	27	*d*	43		48	*d*	53	d	54	*c*	87	*c*	23	
Niue							100		100		100			
Northern Mariana Islands			100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Norway	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Oman					100	*m*	100	m	100	*m*	100	*m*	100	*m*
Pakistan			70		70		71		71	*e*	100		54	
Palau					98		99		100	*m*	100	*m*	100	*m*
Panama	70	*e*	81	*e*	87	*e*	95		100	*m*	100	*m*	100	*m*
Papua New Guinea			11		20	*g*	45		54		81		50	
Paraguay			89		97	*h*	99	h	99	*h*	100	*h*	99	

Country	Total electricity access rate (%)										Urban electricity access rate (%)		Rural electricity access rate (%) b	
	1990		2000		2010		2015		2017		2017		2017	
Peru			72	*h*	88	*h*	94	h	96		100		84	
Philippines			75		85		89	f	93	*d*	96	*d*	90	
Poland	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Portugal	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Puerto Rico					100	*m*	100	m	100	*m*	100	*m*	100	*m*
Qatar	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Romania	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Russian Federation	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Rwanda			6	*d*	10	*d*	23	d	34	*d*	85	*d*	24	
Samoa			87		97		100		97	*e*	100		96	
San Marino	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Sao Tome and Principe			53	*c*	60		68		73		83		45	
Saudi Arabia					100	*m*	100	m	100	*m*	100	*m*	100	*m*
Senegal			38	*c*	55		61	d	62	*d*	92	*d*	35	
Serbia	100	*m*	100	*m*	100	*c*	100	m	100	*m*	100	*m*	100	*m*
Seychelles			94		97	*e*	100	m	100	*m*	100	*m*	100	*m*
Sierra Leone					11	*c*	19		23	*c*	49	*c*	5	
Singapore	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Sint Maarten (Dutch part)					100	*m*	100	m	100	*m*	100	*m*	100	*m*
Slovakia	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Slovenia	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Solomon Islands			7		33		55	d	63		74		60	
Somalia					21		29		33		63		9	
South Africa			72		83	*g*	86	g	84	*g*	93		67	
South Sudan					2	*e*	19		25		42		21	
Spain	100	*m*	100	*m*	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	
Sri Lanka					85	g	94		98		100		97	
Saint Kitts and Nevis					100		100	m	100	m	100	m	100	m
Saint Lucia					94	e	97		99		97		99	
Sint Maarten (Dutch part)					100	m	100	m	100	m	100	m	100	m
Saint Vincent and the Grenadines			80		93		99		100		98		100	
Sudan	33	d	23	c	36		49		56		83		43	
Suriname			97		91	c	95		97		100		91	
Swaziland					46	c	66		74		93		67	
Sweden	100	m	100	m	100	m	100	m	100	m	100	m	100	m
Switzerland	100	m	100	m	100	m	100	m	100	m	100	m	100	m
Syrian Arab Republic					93	g	90		90		100		78	
Tajikistan			98	c	99		100		99	d	99	d	99	
United Republic of Tanzania			10		15	d	27		33		65		17	
Thailand			82	d	100	f	100	c	100		100		100	
Timor-Leste					38	d	67	e	80		100		72	
Togo			17	c	31	c	45		48	d	89	d	19	
Tonga			85		92		96		98		99		98	
Trinidad and Tobago			91	e	100	m	100	m	100	m	100	m	100	m
Tunisia			95	g	100	j	100		100		100		100	
Turkey					100	i	100		100		100		100	
Turkmenistan			100	d	100	i	100	c	100		100		100	
Turks and Caicos Islands	89	e	96	e	100	m	100	m	100	m	100	m	100	m
Tuvalu					97		99		100		100		100	
Uganda			8		12	g	19	d	22	g	57	g	11	
Ukraine	100	m	100	m	100	m	100	m	100	m	100	m	100	m
United Arab Emirates	100	m	100	m	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	
United Kingdom of Great Britain and Northern Ireland	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
United States of America	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
Uruguay					99		100	h	100	*m*	100	*m*	100	*m*
Uzbekistan			100		100		100		100		100		100	
Vanuatu			22		37		48		63		93		53	
Venezuela (Bolivarian Republic of)			99	*h*	99		100		100		100		100	
Viet Nam			86		98		100		100		100		100	
United States Virgin Islands	100	*m*	100	*m*	100	*m*	100	m	100	*m*	100	*m*	100	*m*
State of Palestine			100	*g*	100	*g*	100		100		100		100	
Yemen			50		66		74		79	*g*	98		69	
Zambia	14	*e*	17	*e*	22	*e*	31	g	40	*l*	75	*l*	14	
Zimbabwe			34		40		34	d	40		86		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 (L)	2017 (M)	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	>95	>95
Czechia	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Denmark	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Djibouti	5	8	10	<5	10	37	17	18	19	<5	<5	14
Dominica	78	87	91	79	91	>95	88	>95	>95	46	81	>95
Dominican Republic	80	87	90	83	91	>95	90	>95	>95	46	74	93
Ecuador	88	95	>95	91	>95	>95	>95	>95	>95	66	91	>95
Egypt	85	>95	>95	>95	>95	>95	>95	>95	>95	86	>95	>95
El Salvador	57	79	88	79	89	95	89	95	>95	52	79	95
Equatorial Guinea	14	29	37	<5	37	70	11	42	76	<5	9	34
Eritrea	<5	12	17	<5	18	45	15	31	51	<5	<5	9
Estonia	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Ethiopia	<5	<5	<5	<5	<5	10	7	16	29	<5	<5	<5
Faroe Islands												
Fiji	32	43	48	7	51	82	18	67	93	<5	17	50
Finland	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
France	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
French Polynesia												
Gabon	60	76	81	33	81	94	75	92	>95	24	43	60
Gambia	<5	<5	<5	<5	<5	9	<5	<5	16	<5	<5	<5
Georgia	41	66	78	60	79	93	89	>95	>95	6	33	73
Germany	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Ghana	6	16	23	16	25	36	30	41	51	<5	8	18
Gibraltar												
Greece	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Greenland												

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)
Grenada	94	>95	>95	91	>95	>95	63	>95	>95	73	>95	>95
Guam												
Guatemala	37	41	43	33	43	53	7	50	94	2	32	81
Guinea	<5	<5	<5	<5	<5	<5	<5	<5	24	<5	<5	5
Guinea-Bissau	<5	<5	<5	<5	<5	<5	<5	<5	28	<5	<5	<5
Guyana	36	62	75	59	77	90	57	84	>95	50	71	87
Haiti	<5	<5	<5	<5	<5	11	<5	12	46	<5	<5	18
Honduras	30	45	52	37	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
Iceland	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
India	22	36	44	26	45	65	63	78	88	12	22	35
Indonesia	7	42	63	42	65	82	70	85	93	38	51	64
Iran (Islamic Republic of)	87	>95	>95	95	>95	>95	>95	>95	>95	87	>95	>95
Iraq	72	>95	>95	94	>95	>95	>95	>95	>95	84	>95	>95
Ireland	>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
Italy	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Jamaica	72	86	91	84	92	>95	86	>95	>95	62	85	>95
Japan	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Jordan	>95	>95	>95	>95	>95	>95	94	>95	>95	91	>95	>95
Kazakhstan	85	94	>95	88	>95	>95	88	>95	>95	71	95	>95
Kenya	<5	7	13	6	14	26	12	28	48	<5	<5	6
Kiribati	<5	<5	6	<5	6	29	<5	14	48	<5	<5	16
Democratic People's Republic of Korea	<5	6	10	<5	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 (L)	2017 (M)	2017(U)	2017 (L)	2017 (M)	2017 (U)	2017 (L)	2017 (M)	2017 (U)
Poland	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Portugal	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Puerto Rico												
Qatar	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Romania	67	83	88	59	89	>95	74	>95	>95	45	80	95
Russian Federation	93	>95	>95	91	>95	>95	93	>95	>95	74	>95	>95
Rwanda	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Samoa	16	26	31	17	31	45	42	65	81	12	24	43
San Marino	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Sao Tome and Principe	<5	<5	<5	<5	<5	12	<5	<5	15	<5	<5	5
Saudi Arabia	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Senegal	34	33	31	17	31	46	34	55	74	<5	6	13
Serbia	52	67	74	43	74	93	63	86	>95	18	57	89
Seychelles	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Sierra Leone	<5	<5	<5	<5	<5	<5	<5	<5	9	<5	<5	<5
Singapore	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Sint Maarten (Dutch part)												
Slovakia	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Slovenia	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Solomon Islands	6	8	8	<5	8	20	21	39	59	<5	<5	15
Somalia	<5	<5	<5	<5	<5	6	<5	5	14	<5	<5	11
South Africa	55	76	84	72	86	93	85	95	>95	56	73	85
South Sudan	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Spain	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Sri Lanka	14	22	27	14	28	43	48	66	80	8	20	36
Saint Kitts and Nevis	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95	>95
Saint Lucia	87	95	>95	92	>95	>95	84	>95	>95	85	>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)
Sint Maarten (Dutch part)												
Saint Vincent and the Grenadines	>95	>95	>95	91	>95	>95	84	>95	>95	80	>95	>95
Sudan	13	29	41	30	44	57	56	70	83	7	30	58
Suriname	80	87	90	79	91	>95	86	95	>95	60	81	95
Swaziland	27	42	50	39	51	64	74	87	94	20	33	46
Sweden	>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
Syrian Arab Republic	>95	>95	>95	>95	>95	>95	>95	>95	>95	84	>95	>95
Tajikistan	38	68	81	61	83	95	90	>95	>95	37	74	95
United Republic of Tanzania	<5	<5	<5	<5	<5	7	5	11	22	<5	<5	<5
Thailand	65	73	78	61	78	90	76	88	>95	60	73	84
Timor-Leste	<5	5	10	<5	11	21	15	25	36	<5	5	13
Togo	<5	<5	7	<5	8	14	8	18	28	<5	<5	<5
Tonga	49	54	55	34	55	74	68	85	>95	23	49	74
Trinidad and Tobago	>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
Turkey	90	94	>95	91	>95	>95	>95	>95	>95	71	88	>95
Turkmenistan	>95	>95	>95	>95	>95	>95	>95	>95	>95	59	>95	>95
Turks and Caicos Islands												
Tuvalu	20	44	52	12	52	77	18	75	>95	<5	32	95
Uganda	<5	<5	<5	<5	<5	<5	<5	<5	6	<5	<5	<5
Ukraine	89	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
United Kingdom of Great Britain and Northern Ireland	>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
Uruguay	>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)		
	1990	2010	2015	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%	10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	13.5	13.3	0.0	129.3	a
Åland Islands	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Albania	25.5%	37.1%	38.6%	40.0%	10.2%	4.3%	0.0%	24.9%	0.0%	0.7%	0.0%	0.0%	0.0%	19.8	8.6	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%	0.9	0.3	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%	1.0%	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%	17.6%	0.0%	0.0%	0.0%	0.0%	1.5%	1.6	0.0	0.0	8.6	a
Angola	72.3%	56.5%	53.2%	54.7%	51.1%	0.0%	0.0%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	18.1	258.5	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	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	4.8	a
Argentina	8.9%	9.0%	10.1%	10.0%	2.7%	2.2%	0.0%	5.1%	0.1%	0.0%	0.0%	0.0%	0.0%	127.6	59.1	53.2	2390.7	b
Armenia	2.1%	9.4%	15.8%	14.0%	7.0%	0.0%	0.0%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1	6.1	0.1	87.7	b
Aruba	0.3%	5.5%	6.7%	6.7%	0.3%	0.0%	0.0%	0.0%	6.4%	0.0%	0.0%	0.0%	0.0%	0.4	0.0	0.0	6.5	a
Australia	8.0%	8.1%	9.2%	9.3%	5.3%	0.2%	0.2%	1.4%	1.1%	1.0%	0.0%	0.0%	0.0%	107.4	181.9	10.0	3210.7	b
Austria	25.1%	30.4%	34.5%	34.7%	16.4%	2.2%	0.5%	12.5%	1.7%	1.1%	0.1%	0.0%	0.3%	164.4	180.5	31.1	1084.5	b
Azerbaijan	0.7%	4.5%	2.3%	1.9%	0.4%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.1%	5.2	1.3	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	0.3	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	192.7	b
Bangladesh	71.7%	41.1%	34.6%	34.0%	33.8%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2	387.8	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	0.3	0.0	11.5	a
Belarus	0.9%	7.3%	6.8%	6.7%	6.4%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2	43.3	0.2	666.7	b
Belgium	1.3%	5.8%	9.3%	9.1%	4.8%	1.3%	0.5%	0.1%	1.3%	0.8%	0.0%	0.0%	0.3%	48.5	61.4	19.5	1414.8	b
Belize	38.0%	33.7%	30.2%	30.3%	21.8%	0.0%	0.0%	8.4%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0	1.5	0.0	11.3	a
Benin	93.7%	48.1%	50.9%	50.0%	49.8%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2	78.4	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)		
	1990	2010	2015	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%	2.1%	0.1	0.0	0.0	5.9	a
Bhutan	95.9%	90.6%	86.4%	84.8%	73.5%	0.0%	0.0%	11.3%	0.1%	0.0%	0.0%	0.0%	0.0%	7.3	47.1	0.0	64.1	a
Bolivia (Plurinational State of)	37.4%	19.7%	17.5%	15.7%	13.7%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	6.5	38.5	0.0	286.9	b
Bonaire, Sint Eustatius and Saba	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	3.9	a
Bosnia and Herzegovina	7.3%	19.6%	27.1%	24.8%	16.4%	0.0%	0.0%	8.4%	0.0%	0.0%	0.0%	0.0%	0.0%	12.6	24.9	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	23.1	0.0	81.5	b
Brazil	49.9%	47.0%	43.8%	45.5%	22.8%	7.9%	0.0%	13.3%	1.2%	0.4%	0.0%	0.0%	0.0%	1413.1	1882.5	699.4	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%	0.1%	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	36.9	b
Bulgaria	1.9%	14.4%	17.7%	17.7%	10.7%	1.7%	0.4%	2.3%	0.8%	1.1%	0.4%	0.0%	0.3%	16.4	46.7	6.9	396.2	b
Burkina Faso	93.3%	81.5%	72.7%	72.3%	71.8%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7	109.5	0.0	152.6	a
Burundi	95.2%	95.3%	91.2%	89.2%	88.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7	48.7	0.0	55.3	a
Cabo Verde	36.6%	21.7%	27.0%	25.2%	22.1%	0.0%	0.0%	0.0%	2.9%	0.2%	0.0%	0.0%	0.0%	0.2	1.5	0.0	6.7	a
Cambodia	..	68.5%	64.9%	62.7%	58.8%	0.0%	0.0%	3.9%	0.0%	0.0%	0.0%	0.0%	0.0%	10.4	155.8	0.0	265.1	b
Cameroon	81.6%	78.6%	78.0%	78.1%	73.9%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	12.8	224.4	0.0	303.5	b
Canada	22.0%	22.5%	21.4%	21.6%	5.0%	1.0%	0.1%	14.1%	1.1%	0.1%	0.0%	0.0%	0.0%	1094.2	330.3	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	4.7	a
Central African Republic	94.1%	81.3%	78.0%	77.7%	73.0%	0.0%	0.0%	3.3%	1.5%	0.0%	0.0%	0.0%	0.0%	0.8	12.9	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	60.0	0.0	70.3	a
Channel Islands	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Chile	34.0%	27.0%	25.0%	24.5%	16.1%	0.0%	0.0%	6.8%	0.7%	0.9%	0.0%	0.0%	0.0%	107.8	156.9	1.5	1085.6	b
China	33.9%	12.4%	12.2%	12.6%	4.5%	0.1%	0.4%	4.6%	0.9%	1.5%	0.5%	0.0%	0.0%	4536.7	4802.8	200.6	75657.9	b

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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)		
	1990	2010	2015	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%	0.8%	0.6%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4	2.4	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%	4.5%	1.6	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%	142.5	206.3	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	1.6	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%	1.6	52.6	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%	1.9%	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%	34.6	24.5	0.0	158.9	b
Côte d'Ivoire	73.6%	75.4%	64.5%	62.7%	61.5%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	4.0	183.9	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%	35.9	50.2	0.6	272.3	b
Cuba	42.9%	14.6%	20.1%	17.5%	13.7%	3.6%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3	43.4	0.0	261.3	b
Curaçao	0.0%	0.5%	2.5%	2.5%	0.0%	0.0%	0.0%	0.0%	2.2%	0.4%	0.0%	0.0%	0.0%	0.6	0.0	0.0	24.8	b
Cyprus	0.5%	6.4%	9.9%	9.8%	1.2%	0.6%	0.6%	0.0%	1.2%	5.5%	0.1%	0.0%	0.7%	1.4	4.3	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%	0.2%	22.4	110.1	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%	34.4	37.0	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%	25.2	865.8	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%	2.9%	66.9	109.2	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	1.8	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%	0.1	0.1	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%	9.2	32.4	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%	50.9	20.0	0.8	471.9	b

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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)		
	1990	2010	2015	2016	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%	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%	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%	1.0%	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%	0.5%	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%	0.7%	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%	0.5%	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

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	Renewable energy				Solid biofuels	Liquid biofuels	Biogases	Hydro	Wind	Solar	Geothermal	Tide	Municipal waste (renew)	Electricity consump-tion (2)	Heat raising (3)	Transport (4)		
	1990	2010	2015	2016	2016	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%	0.0%	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%	0.0%	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	35.0	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	
Jordan	2.8%	3.0%	3.2%	4.6%	0.7%	0.0%	0.0%	0.1%	0.5%	3.3%	0.0%	0.0%	0.0%	2.8	8.7	0.0	251.8	b
Kazakhstan	1.4%	1.4%	1.6%	2.0%	0.3%	0.0%	0.0%	1.7%	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%	1.5%	0.0%	0.0%	1.9%	0.0%	0.0%	23.6	468.9	0.0	685.4	b
Kiribati	65.3%	48.3%	47.6%	45.4%	44.2%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0	0.5	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	682.4	b
Kyrgyzstan	7.9%	25.6%	23.3%	21.9%	0.0%	0.0%	0.0%	21.9%	0.0%	0.0%	0.0%	0.0%	0.0%	31.6	0.0	0.1	144.7	b
Lao People's Democratic Republic	88.4%	64.9%	53.9%	51.9%	42.2%	0.0%	0.0%	9.8%	0.0%	0.0%	0.0%	0.0%	0.0%	12.0	52.0	0.0	123.2	a
Latvia	17.6%	33.1%	38.1%	38.5%	30.3%	0.3%	1.7%	5.9%	0.3%	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%	0.5%	0.0%	0.0%	0.0%	1.2	5.8	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%	2.8	26.6	0.0	57.5	a
Liberia	88.8%	89.4%	84.0%	82.9%	82.8%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	71.1	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	6.4	0.0	393.4	b
Liechtenstein	0.0%	56.6%	62.5%	62.9%	7.8%	0.0%	0.8%	41.7%	0.0%	12.0%	0.0%	0.0%	0.7%	1.4	0.2	0.0	2.6	a
Lithuania	3.1%	21.5%	29.0%	31.4%	21.6%	1.1%	0.8%	2.1%	5.2%	0.3%	0.0%	0.0%	0.4%	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%	2.0%	2.0%	0.0%	0.0%	0.8%	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%	2.1	92.0	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%	5.2	45.3	0.0	64.4	a
Malaysia	12.0%	3.8%	5.2%	6.2%	1.9%	0.8%	0.0%	3.4%	0.0%	0.1%	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%	0.1%	0.0%	0.0%	0.0%	0.0	0.1	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%	3.0	45.7	0.0	82.0	a
Malta	0.0%	1.4%	5.4%	8.9%	0.2%	1.3%	0.5%	0.0%	0.0%	6.7%	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%	0.4%	0.0%	0.0%	0.0%	0.0	0.2	0.0	1.7	a
Martinique	1.9%	2.9%	6.0%	6.2%	2.3%	0.0%	0.0%	0.0%	0.0%	3.1%	0.0%	0.0%	0.8%	0.4	0.4	0.0	17.1	a
Mauritania	47.0%	34.0%	32.8%	34.6%	33.5%	0.0%	0.0%	0.0%	0.9%	0.2%	0.0%	0.0%	0.0%	0.4	13.6	0.0	40.7	a

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	Renewable energy				Solid biofuels	Liquid biofuels	Biogases	Hydro	Wind	Solar	Geothermal	Tide	Municipal waste (renew)	Electricity consump-tion (2)	Heat raising (3)	Transport (4)		
	1990	2010	2015	2016	2016	2016	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%	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%	0.1	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%	0.9%	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%	0.8%	396.7	40.6	17.9	764.8	b

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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)		
	1990	2010	2015	2016	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%	42.1%	0.0%	0.0%	3.3%	0.1%	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	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)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	

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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)		
	1990	2010	2015	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	0.7	a
Saint Vincent and the Grenadines	15.4%	5.5%	5.8%	6.3%	2.3%	0.0%	0.0%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1	0.1	0.0	2.5	a
Samoa	45.9%	36.0%	26.9%	27.3%	23.3%	0.0%	0.0%	2.7%	0.0%	1.3%	0.0%	0.0%	0.0%	0.2	0.9	0.0	3.9	a
Sao Tome and Principe	50.9%	43.8%	40.2%	39.2%	38.3%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.8	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	0.3	0.0	4641.4	b
Senegal	55.6%	50.3%	39.9%	37.6%	36.7%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3	46.1	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%	0.1%	0.0%	0.0%	27.3	43.8	0.4	343.7	b
Seychelles	4.3%	0.6%	0.8%	1.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.6%	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%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3	42.4	0.0	54.9	a
Singapore	0.2%	0.5%	0.7%	0.7%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.4%	3.1	0.0	0.2	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	8.2	a
Slovakia	2.2%	10.3%	13.4%	13.1%	6.2%	1.6%	0.9%	3.8%	0.0%	0.5%	0.0%	0.0%	0.1%	21.7	22.6	6.4	388.6	b
Slovenia	12.4%	19.5%	20.8%	20.8%	12.1%	0.4%	0.4%	6.4%	0.0%	0.6%	0.9%	0.0%	0.0%	14.4	26.8	1.0	203.2	b
Solomon Islands	61.0%	63.5%	63.3%	65.7%	65.6%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0	3.2	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	105.0	0.0	110.9	a
South Africa	16.6%	14.6%	14.1%	14.4%	13.5%	0.0%	0.0%	0.1%	0.4%	0.5%	0.0%	0.0%	0.0%	21.2	377.3	0.4	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	6.5	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%	0.1%	315.4	184.2	53.3	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%	14.9	192.5	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%	4.1%	0.0%	0.0%	0.0%	0.0	6.8	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%	25.1	287.6	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				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	
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%	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%	2.1%	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%	1.5%	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%	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%	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%	0.1%	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%	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	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	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	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%	0.2%	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				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	
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%	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%	0.1%	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%	0.1	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%	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%	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	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	0.2	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%	0.2%	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

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	
Sub-Saharan Africa (M49)	71.0%	71.6%	69.3%	69.5%	67.7%	0.0%	0.0%	1.5%	0.1%	0.1%	0.1%	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%	0.9%	0.8%	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%	0.4%	0.5%	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 TJ+400TJ*10%+100TJ*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	
	Energy intensity (MJ/USD 2011 PPP) (1)					Compound annual growth rate of Energy intensity (%)				
UN country name	1990	2000	2010	2015	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	1990-2000	2000-2010	2010-2015	2015-2016	
Honduras	6.3	5.8	5.9	6.3	6.1	-0.9%	0.2%	1.3%	-3.5%	*b*
Hungary	6.8	5.7	5.0	4.3	4.3	-1.7%	-1.4%	-2.9%	-0.5%	*b*
Iceland	12.9	13.6	18.3	16.4	14.5	0.6%	3.0%	-2.1%	-11.9%	*b*
India	8.4	7.0	5.4	4.6	4.5	-1.8%	-2.6%	-3.0%	-3.8%	*b*
Indonesia	4.9	5.3	4.2	3.5	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	2.7%	0.8%	3.3%	-7.1%	*b*
Iraq	4.2	3.8	4.0	3.7	3.9	-1.0%	0.6%	-1.7%	4.7%	*b*
Ireland	5.5	3.9	3.0	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	-1.0%	-0.5%	-3.7%	-2.9%	*b*
Italy	3.5	3.5	3.4	3.1	3.0	-0.1%	-0.2%	-2.0%	-1.9%	*b*
Jamaica	6.2	6.9	4.6	4.9	5.2	1.1%	-4.0%	1.1%	6.1%	*b*
Japan	4.9	5.0	4.6	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	-1.0%	-2.3%	1.2%	2.0%	*b*
Kazakhstan	14.4	10.1	8.8	7.9	8.2	-3.5%	-1.3%	-2.1%	3.4%	*b*
Kenya	8.0	8.7	8.1	7.9	7.7	0.9%	-0.8%	-0.4%	-3.0%	*b*
Kiribati	5.4	5.5	7.5	6.2	6.5	0.1%	3.3%	-3.8%	4.2%	*a*
Kuwait	1.9	5.5	6.0	5.2	5.4	10.9%	0.9%	-2.6%	2.8%	*b*
Kyrgyzstan	20.5	9.6	7.6	8.6	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	-6.1%	-1.3%	2.9%	35.0%	*a*
Latvia	8.0	6.1	4.9	3.9	3.8	-2.7%	-2.1%	-4.5%	-2.5%	*b*
Lebanon	3.9	5.1	3.7	4.1	4.1	2.8%	-3.0%	1.9%	-0.4%	*b*
Lesotho	16.4	14.4	10.9	9.8	10.1	-1.3%	-2.8%	-2.0%	2.4%	*a*
Liberia	20.7	20.2	27.1	26.0	27.9	-0.2%	3.0%	-0.8%	7.0%	*a*
Libya	4.7	5.6	4.7	6.6	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%	-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%	-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	1990-2000	2000-2010	2010-2015	2015-2016	
State of Palestine	4.7	3.1	3.4	3.5	3.6	-4.2%	1.0%	0.6%	2.5%	*a*
Sudan	9.9	7.2	4.7	4.6	4.5	-3.1%	-4.2%	-0.2%	-4.1%	*b*
Suriname	..	5.6	3.9	3.3	3.2		-3.4%	-3.4%	-3.9%	*b*
Svalbard and Jan Mayen Islands	..	..	..	..	..					
Sweden	7.5	6.1	5.3	4.3	4.5	-2.0%	-1.4%	-4.3%	4.9%	*b*
Switzerland	3.2	2.9	2.5	2.2	2.1	-0.9%	-1.3%	-2.9%	-3.9%	*b*
Syrian Arab Republic	7.9	7.3	6.6	11.3	11.8	-0.8%	-1.0%	11.4%	4.6%	*b*
Tajikistan	11.5	12.3	5.7	5.1	5.0	0.6%	-7.4%	-2.0%	-2.1%	*b*
Thailand	4.7	5.2	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	1.7%	-2.2%	-4.0%	-2.2%	*b*
Timor-Leste	..	..	0.5	0.9	0.8			14.0%	-3.0%	*a*
Togo	10.3	13.9	16.6	14.2	13.9	3.0%	1.8%	-3.0%	-2.3%	*b*
Tokelau	..	..	..	..	..					
Tonga	3.3	3.2	3.2	3.0	3.2	-0.1%	-0.1%	-1.2%	4.9%	*a*
Trinidad and Tobago	16.7	17.7	20.2	18.5	19.0	0.6%	1.3%	-1.8%	2.6%	*b*
Tunisia	4.5	4.2	3.9	3.7	3.8	-0.7%	-0.7%	-0.7%	0.1%	*b*
Turkey	3.5	3.6	3.4	2.9	3.0	0.4%	-0.7%	-2.9%	2.9%	*b*
Turkmenistan	23.9	25.9	18.8	13.9	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	-0.3%	1.5%	-0.5%	-0.7%	*a*
Uganda	20.9	12.6	10.2	9.8	9.7	-4.9%	-2.1%	-0.8%	-0.7%	*a*
Ukraine	19.4	23.7	15.4	12.2	12.1	2.0%	-4.2%	-4.7%	-0.7%	*b*
United Arab Emirates	4.2	4.1	5.4	5.3	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	-1.6%	-2.4%	-4.3%	-3.4%	*b*
United Republic of Tanzania	11.2	11.5	9.3	8.4	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)
- European Commission
- FIA Foundation
- Food and Agricultural Organization (FAO)
- Germany (Federal Ministry for Economic Cooperation and Development)
- Hivos
- International Institute for Applied Systems Analysis
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- International Network on Gender and Sustainable Energy
- Islamic Development Bank
- Kenya (Ministry of Energy)
- Latin American Energy Organization (OLADE)
- Norway (Ministry of Foreign Affairs)
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ABBREVIATIONS AND ACRONYMS

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

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

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