



Photo: © Unsplash

# **CHAPTER 7**

# **TRACKING PROGRESS TOWARD**

# **SDG 7 ACROSS TARGETS:**

# **INDICATORS AND DATA**



everaging national data efforts worldwide, this annual report is a joint effort of the five custodian agencies responsible for monitoring progress toward the targets of Sustainable Development Goal (SDG) 7—universal access to affordable, reliable, sustainable, and modern energy by 2030 (table 7.1). The World Bank and World Health Organization (WHO) are responsible for tracking progress toward SDG target 7.1 (universal access to modern energy services). The International Energy Agency (IEA), International Renewable Energy Agency (IRENA), and United Nations Statistics Division (UNSD) are responsible for tracking SDG target 7.2 (the share of renewable energy in the energy mix). IEA and UNSD are responsible for tracking SDG target 7.3 (improvements in energy efficiency). IRENA is also responsible for tracking target 7.a (international cooperation—with the Organisation for Economic Co-operation and Development, OECD) and target 7.b (promotion of energy infrastructure). The World Bank’s Energy Sector Management Assistance Program produces and publishes the report.

This chapter provides a descriptive summary of each indicator’s data and methodological challenges. Further details can be found in the United Nations’ metadata repository for SDG indicators (<https://unstats.un.org/sdgs/metadata/>). Detailed datasets with country data for all SDG 7 indicators can be accessed at no charge at <https://trackingsdg7.esmap.org/downloads>.

**TABLE 7.1 • SDG 7 TARGETS, INDICATORS, AND CUSTODIAN AGENCIES**

TARGET	INDICATOR	CUSTODIAN AGENCY OR AGENCIES	RELEVANT CHAPTER IN THIS REPORT
7.1—By 2030, ensure universal access to affordable, reliable and modern energy services	7.1.1—Proportion of population with access to electricity	World Bank	Chapter 1
	7.1.2—Proportion of population with primary reliance on clean fuels and technology for cooking	World Health Organization	Chapter 2
7.2—By 2030, increase substantially the share of renewable energy in the global energy mix	7.2.1—Renewable energy share in total final energy consumption	International Energy Agency, International Renewable Energy Agency, UN Statistics Division	Chapter 3
7.b—By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing states, and landlocked developing countries, in accordance with their respective programs of support	7.b.1—Installed renewable energy-generating capacity in developing and developed countries (in watts per capita)	International Renewable Energy Agency	
7.3—By 2030, double the global rate of improvement in energy efficiency	7.3.1—Energy intensity measured in terms of primary energy and GDP	International Energy Agency, UN Statistics Division	Chapter 4
7.a—By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency, and advanced and cleaner fossil fuel technology, and promote investment in energy infrastructure and clean energy technology	7.a.1—International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems	International Renewable Energy Agency, Organisation for Economic Co-operation and Development	Chapter 5

Note: GDP = gross domestic product.

# Access to electricity

---

Measuring access to electricity (SDG indicator 7.1.1) is not as straightforward as simply counting the number of people with electricity. It is a complex process involving data collection and validation efforts carried out by national and international players, including governments, energy utilities, private companies, and multilateral development organizations. Understanding the intricacies of electricity access in low-income countries and countries marked by fragility, conflict, or violence requires a comprehensive look at the multiple attributes of access in different settings.

While most microdata from household, enterprise, and agricultural surveys provide useful information to energy practitioners and ministries, they fail to capture the more nuanced aspects of electricity access in households—for example, the economic activities of a household's individual members. Further complexities arise when trying to account for the scale-up of decentralized energy solutions that are not typically distinguished in routine national surveys and energy statistics.

Because the concept of electricity access does not lend itself to easy definition, efforts are underway, through the World Bank's Multi-Tier Framework, to better capture the spectrum of energy services sought and used by households: capacity, availability, reliability, affordability, quality, formality, healthiness, and safety.<sup>46</sup> Such efforts can provide more precise, more detailed information about the number of people benefiting from interventions and the nature and magnitude of improvements in electrification. Such information is critical to inform policy and decision-making. Where data are not available for multi-tier metrics, country-level surveys or censuses complement data collection.

To improve the tracking of access, capacity-building activities, including bilateral and regional training of energy statisticians, must be further developed. Data sets should also be made easier to use and compare, to help governments and energy practitioners apply new technologies and data analytics. For example, the Atlas of Sustainable Development Goals, published online by the World Bank, presents interactive storytelling and data visualizations on trends in electricity access, among other key SDG indicators.<sup>47</sup> Finally, leveraging large-scale open databases, for example, satellite-based data that could provide real-time information, will help clarify where and how electricity is being used, as well as socioeconomic trends in its use.

---

46 Information on the Multi-Tier Framework can be found at <https://mtfenergyaccess.esmap.org/>.

47 A new edition of the Atlas of Sustainable Development Goals has been published in 2023 (Pirlea et al. 2023). The 2020 edition can be found at <https://datatopics.worldbank.org/sdcatlas/>.

# Access to clean cooking fuels and technologies for cooking

---

SDG indicator 7.1.2 measures the number of people using clean fuels and technologies as their primary energy source for cooking in the household. Households considered to have access to clean cooking are those that primarily rely on electricity, biogas, solar, alcohol fuels, natural gas, and liquefied petroleum gas for household cooking purposes. Here, “clean” refers to the combinations of fuels and technologies that meet the emissions targets set out in the WHO (2014) guidelines for indoor air quality and household fuel combustion. Improving the collection of data on the parallel use of multiple cooking solutions (also known as “stove stacking”) in low- and middle-income countries would allow a more complete representation of the population exposed to pollution and resultant diseases. Presently, however, such data are too limited in geographic coverage to be used in global tracking efforts.

Household surveys and censuses are the primary data sources for global estimates. Using their data as the main inputs, the Global Household Energy Model is applied to estimate the use of clean cooking fuels and technologies. Knowing the extent to which household surveys capture modes and duration of use is therefore vital for designing, implementing, and monitoring the effectiveness and outcomes of clean cooking policies and programs.

By refining household surveys and censuses, countries can gain a more complete picture of household energy use; access to clean cooking fuels and technologies; and the effects of cooking practices on air pollution, gender, climate, and other impacts. The WHO and World Bank developed the guidebook *Measuring Energy Access* and a harmonized set of “Core Questions on Household Energy Use” (World Bank and WHO 2021; WHO n.d.). The questions improve upon previous surveys by not only establishing whether a household has electricity access and what its primary cooking fuel is, but also assessing the type of electricity access; the quality of access; impediments to access; the types of fuels and devices used for cooking, heating, and lighting; and important safety and livelihood impacts of household energy use.<sup>48</sup>

Beyond the SDG 7 indicators, including additional and more comprehensive questions in surveys will also help monitor trends in and broader outcomes of access to clean cooking. At the moment, most energy-related data collected by national household surveys do not capture everything needed to understand the role of household energy services in mitigating poverty and other impacts; hence, they do not permit extensive energy policy analysis. Including questions on cooking time, fuel collection, and health implications would increase the granularity of clean cooking estimates and help in the formulation of better national and global policies (World Bank and WHO 2021).

---

48 More information on CHEST can be found at: <https://www.who.int/tools/clean-household-energy-solutions-toolkit>.

# Renewable energy

---

Progress toward SDG target 7.2—substantially increasing the share of renewable energy in the global energy mix—is tracked using renewable energy’s share of total final energy consumption as the key indicator. Here, too, accurate tracking requires comprehensive data across all energy sources (renewable and nonrenewable) and across supply, transformation, and final consumption. The methodology used to derive total final energy consumption, total energy supply, and energy balances is detailed in United Nations (2018).

To increase the accuracy of tracking renewables, two methodological challenges must be met: (1) monitoring the rapid development of geographically distributed energy sources, such as off-grid and micro-grid solar photovoltaic and wind, and (2) enhancing countries’ capacity to measure traditional uses of biomass (solid biofuels) by households. Biomass is the largest source of renewable (if not clean) energy in low- and middle-income countries.

National-level household and industry surveys could do more to boost the reliability of renewable energy statistics. For example, a broader range of questions on how biomass is used in households and organizations could help determine the extent to which biomass can be considered a sustainable energy source. Traditional fuelwood harvesting is associated with deforestation, yet fuelwood is still assumed to be a renewable energy source for lack of an agreed definition of sustainable harvesting, or accurate measures of fuelwood harvests. Survey-based data could help better quantify the “renewable” fraction of biomass use, and perhaps prompt significant revisions of earlier estimates.

# Energy efficiency

---

Energy intensity, defined as the ratio of total energy supply to economic output, is used to track progress toward SDG target 7.3—doubling the global rate of improvement in energy efficiency (UN 2018). Measuring the total energy supply requires credible information on, among others, primary energy production across all sources, as well as trade in all energy products. Information on supply is collected from administrative sources or via surveys of higher-level players, such as energy suppliers.<sup>49</sup> This information includes commercially traded energy sources and is of fairly good quality in most countries.

To improve the tracking of energy intensity it will be important to analyze the drivers of demand across sectors, such as industry, transport, and buildings (both residential and commercial/industrial). Collecting demand-side data is much more complex, time consuming, and expensive than collecting supply-side data, due to the diversity of end users. Consumer surveys can complement data collection efforts when energy suppliers have limited or no information on how much energy is consumed by different types of users.

Analyzing energy efficiency within sectors requires countries to monitor intensities at the end-use level. Efficiency indicators might include energy expended per passenger-kilometer by vehicle type for passenger transport (tonne-kilometer for freight transport); energy for space heating and cooling, by unit of area, for buildings; or, for industry, energy used in the physical production of each unit of a particular good. More details on a methodological framework for energy efficiency indicators, as well as country experiences, can be found in IEA (2014).

Besides finer disaggregation of data, better energy efficiency indicators will depend on greater cross-organizational coordination in activities beyond the energy sector, including, among others, building records, vehicle registrations, and industrial reports. Many countries have already begun to collect end-use data and compile energy efficiency indicators to support their policy making and planning.<sup>50</sup>

---

49 Data collected by various agencies in response to legislation or regulation (not necessarily for statistical purposes) may be used to compile energy statistics after ensuring their quality and addressing limitations related to their purpose.

50 An example, besides the IEA energy efficiency indicators themselves (IEA 2014), is the Odyssee database for Europe (<https://www.indicators.odyssee-mure.eu/>).

# International financial flows to developing countries in support of clean and renewable energy

---

Indicator 7.a.1 measures international public financial flows to developing countries in support of clean energy research and development, and renewable energy production, including in hybrid systems. The measurement utilizes data from IRENA and the OECD.

Good measurement of international public investment flows has four components: (1) tracking financial flows, (2) standardizing commitment details, (3) centralizing data collection, and (4) presenting flows in a constant way.

To track public financial flows, it is critical to understand how aid recipients intend to spend the investments for end-use projects and programs. Recipients are defined as end-use organizations and projects run by public investors. The amount of private finance leveraged through public funds, which the OECD already monitors in its data on private finance mobilization, provides valuable supplementary information to analyses of public flows. International financial flows are typically disbursed in multiple phases and through multiple stakeholders (local governments, ventures, or funds). Some commitments may also be canceled or modified after data have been gathered. Thus, where reporting institutions revise financial investment figures, historical investment information covering multiple years should be considered to reveal changes in amounts.

Standardizing commitment details by sharing best practices among public investors and donors, refining reporting directives, and encouraging public investors and donors helps ensure that collected data comply with international standards. The standardization process also makes data more accurate and granular. For example, commitment data may specify, among other attributes, technology, type of finance (project-level finance, infrastructure, research, or technical assistance), and type of financial mechanism.

Energy-related details are often excluded while collecting investment data. The majority of data on public investments in clean energy and renewables continues to be collected in a decentralized manner, adversely affecting consistency. For comparability across public donors, data collection must be centralized, through the use of online data entry portals and questionnaires prefilled to the extent possible with data from other agencies. The OECD/Development Assistance Committee Creditor Reporting System database is exemplary in this regard and also allows self-reporting by donors.

Exchange rates and inflation must be taken into account when comparing international commitments across countries. The OECD methodology is used in this report to deflate international flows by adjusting for inflation from the year the flows occurred to a baseline year (2021) and by converting local currency values to US dollars using exchange rates from the baseline year (2021).

# Installed renewable electricity: Generating capacity in developing and developed countries

---

Indicator 7.b.1 tracks the installed capacity of power plants that generate electricity from renewable sources of energy (expressed in watts per capita). The 36 energy types disaggregated by IRENA as renewable fall into six broad categories: hydropower, marine energy (ocean, tidal, and wave energy), wind energy, solar energy (photovoltaic and thermal energy), bioenergy, and geothermal energy.

Capacity is defined as the net maximum electrical capacity installed at year end. Assessing a country's electricity production capacity is a valuable way to track progress toward target 7.b because it is an actual reflection of efforts. For many nations, the focus on increasing electricity production, especially from renewable sources, is a crucial step in their journey toward sustainable and modernized services.

Capacity data are collected in the course of IRENA's annual questionnaire cycle. Countries receive questionnaires at the beginning of each year and report renewable energy data for the previous two years. To minimize the reporting burden, the questionnaires for some countries are prefilled with data collected by other agencies (e.g., Eurostat). The questionnaires are then sent to the countries, so they can provide any additional details requested by IRENA. Validated data, by country, are published each year in late June in IRENA's Renewable Energy Statistics. IRENA (2023) is the most recent edition. Population data are extracted from the "World Population Prospects 2022" (UN Population Division 2022) and represent a country's population at mid-year (July 1).

A measure of indicator 7.b.1 in watts per capita is computed by dividing a country's renewable electricity-generating capacity at year end by its population in that year. Capacity data are drawn from this computation, and they account for the immense variations in needs between countries. Population data are used instead of gross domestic product, since population is the most basic indicator of country demand for modern and sustainable energy services.

Importantly, the indicator's focus on electricity capacity does not capture trends in the modernization of technologies in important, energy-intensive sectors such as heat production and transport. Overall, electricity accounts for only about a quarter of the energy used globally; the share is even smaller in most developing countries. With electricity access continuing to increase, however, the focus on electricity capacity will grow in relevance.



# Conclusion

---

Since the first effort back in 2013, improvements in reporting, advances in countries' statistical capacities, and enhanced models have raised the quality, reliability, and consistency of data on progress toward SDG 7 targets. This progress should be seen as a reminder of the value of pursuing a common framework using standardized data collection and estimation methodologies. The common framework will be possible only through cooperation among national statistical offices and other national agencies compiling energy information, and among those offices and relevant international bodies. International cooperation in the compilation of global databases will harmonize estimates across regions and countries and raise awareness of the need for good data.

As the custodian agencies work together on the global tracking of SDG 7, they have found ways to refine their collaboration and strengthen their support to countries. For example, the custodian agencies responsible for this report host webinars for statistical agencies and energy authorities, produce statistical guidance and reports on data collection, and regularly consult with national statistical offices and other national agencies on the estimates they provide. Continuing efforts by the World Bank, WHO, and other custodians to mainstream energy access questions into national household surveys are an important form of support to those offices. Programs to support national and regional data-collection efforts have also contributed to stronger capabilities. More such support is required to build national statistical capacities.

The IEA and UNSD have a long history of working together to build national reporting capacity. For instance, both agencies jointly organize workshops with the United Nations Framework Convention on Climate Change to help countries improve institutional coordination and, consequently, their compilation of energy balances, thereby improving the SDG 7 indicators. Recently, thanks to the IEA Sub-Saharan Africa program funded by the European Union, Nigeria established a new household survey and is planning a survey for industry.

The custodian agencies for SDG 7 emphasize a need to strengthen resources for better collection of national-level data under current and planned international programs supporting the energy transition. Building on recent improvements in data collection for the SDGs, national statistical capacities must be further strengthened. National and international institutions interested in policy success should increase resources for this purpose.

Finally, the custodian agencies would like to express their appreciation of the work and dedication of the many colleagues who collect national-level data around the world. Without their efforts, no precise estimates could be produced, and no tracking would be possible. Their work underpins the international efforts culminating in this report and ensures that the SDG 7 targets are kept in full view.

# Appendix. Regional classifications of countries/territories

This report classifies countries and territories according to the United Nations' SDG classification for regions; the most recent classification for developing countries; and the special groupings for the least-developed countries, landlocked developing countries, and small island developing states (table 7.2). The SDG regional groupings are not the same as the M49 regional grouping of the United Nations, which focuses more closely on geography. The United Nations discontinued its developing countries classification in late 2022. This report will continue to use the most recent UN classification for developing countries to ensure continuity for indicators 7.a.1 and 7.b.1 (as well as 12.a.1).

**TABLE 7.2 • GROUPINGS OF REGIONS, COUNTRIES, AND TERRITORIES AS USED IN THIS REPORT**

CATEGORY	COUNTRIES/TERRITORIES WITHIN THE CATEGORY
Northern America and Europe	Åland Islands, Albania, Andorra, Austria, Belarus, Belgium, Bermuda, Bosnia and Herzegovina, Bulgaria, Canada, Channel Islands, Croatia, Czechia, Denmark, Estonia, Faroe Islands, Finland, France, Germany, Gibraltar, Greece, Greenland, Guernsey, Holy See (the), Hungary, Iceland, Ireland, Isle of Man, Italy, Jersey, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands (Kingdom of the), North Macedonia, Norway, Poland, Portugal, Republic of Moldova, Romania, Russian Federation (the), Saint Pierre and Miquelon, San Marino, Sark, Serbia, Slovakia, Slovenia, Spain, Svalbard and Jan Mayen Islands, Sweden, Switzerland, Ukraine, United Kingdom of Great Britain and Northern Ireland (the), United States of America (the)
Sub-Saharan Africa	Angola, Benin, Botswana, British Indian Ocean Territory, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic (the), Chad, Comoros (the), Congo (the), Côte d'Ivoire, Democratic Republic of the Congo (the), Djibouti, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, French Southern and Antarctic Territories, Gabon, Gambia (the), Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mayotte, Mozambique, Namibia, Niger (the), Nigeria, Réunion, Rwanda, Saint Helena, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Eswatini, Togo, Uganda, United Republic of Tanzania (the), Zambia, Zimbabwe
Latin America and the Caribbean	Anguilla, Antigua and Barbuda, Argentina, Aruba, Bahamas (the), Barbados, Belize, Bolivia (Plurinational State of), Bonaire, Sint Eustatius and Saba, Bouvet Island, Brazil, British Virgin Islands, Cayman Islands, Chile, Colombia, Costa Rica, Cuba, Curaçao, Dominica, Dominican Republic (the), Ecuador, El Salvador, Falkland Islands (Malvinas), French Guiana, Grenada, Guadeloupe, Guatemala, Guyana, Haiti, Honduras, Jamaica, Martinique, Mexico, Montserrat, Nicaragua, Panama, Paraguay, Peru, Puerto Rico, Saint Barthélemy, Saint Kitts and Nevis, Saint Lucia, Saint Martin (French Part), Saint Vincent and the Grenadines, Sint Maarten (Dutch part), South Georgia and the South Sandwich Islands, Suriname, Trinidad and Tobago, Turks and Caicos Islands, United States Virgin Islands, Uruguay, Venezuela (Bolivarian Republic of)
Western Asia and Northern Africa	Algeria, Armenia, Azerbaijan, Bahrain, Cyprus, Egypt, Georgia, Iraq, Israel, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, State of Palestine (the), Sudan (the), Syrian Arab Republic (the), Tunisia, Türkiye, United Arab Emirates (the), Western Sahara, Yemen
Oceania	American Samoa, Australia, Christmas Island, Cocos (Keeling Islands), Cook Islands (the), Fiji, French Polynesia, Guam, Heard Island and McDonald Islands, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, New Zealand, Niue, Norfolk Island, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, United States minor outlying islands, Vanuatu, Wallis and Futuna Islands
Eastern Asia and South-eastern Asia	Brunei Darussalam, Cambodia, China, China, Hong Kong Special Administrative Region, China, Macao Special Administrative Region, Democratic People's Republic of Korea (the), Indonesia, Japan, Lao People's Democratic Republic (the), Malaysia, Mongolia, Myanmar, Philippines (the), Republic of Korea (the), Singapore, Thailand, Timor-Leste, Viet Nam
Central Asia and Southern Asia	Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Kazakhstan, Kyrgyzstan, Maldives, Nepal, Pakistan, Sri Lanka, Tajikistan, Turkmenistan, Uzbekistan

CATEGORY	COUNTRIES/TERRITORIES WITHIN THE CATEGORY
Developed countries	Åland Islands, Albania, Andorra, Australia, Austria, Belarus, Belgium, Bermuda, Bosnia and Herzegovina, Bulgaria, Canada, Channel Islands, Christmas Island, Cocos (Keeling) Islands, Croatia, Cyprus, Czechia, Denmark, Estonia, Faroe Islands, Finland, France, Germany, Gibraltar, Greece, Greenland, Guernsey, Heard Island and McDonald Islands, Holy See (the), Hungary, Iceland, Ireland, Isle of Man, Israel, Italy, Japan, Jersey, Kosovo, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Montenegro, Netherlands (Kingdom of the), New Zealand, Norfolk Island, North Macedonia, Norway, Poland, Portugal, Republic of Korea (the), Republic of Moldova (the), Romania, Russian Federation (the), Saint Pierre and Miquelon, San Marino, Sark, Serbia, Slovakia, Slovenia, Spain, Svalbard and Jan Mayen Islands, Sweden, Switzerland, Ukraine, United Kingdom of Great Britain and Northern Ireland (the), United States of America (the)
Developing countries	Afghanistan, Algeria, American Samoa, Angola, Anguilla, Antigua and Barbuda, Argentina, Armenia, Aruba, Azerbaijan, Bahamas (the), Bahrain, Bangladesh, Barbados, Belize, Benin, Bhutan, Bolivia (Plurinational State of), Bonaire, Sint Eustatius and Saba, Botswana, Bouvet Island, Brazil, British Indian Ocean Territory, British Virgin Islands, Brunei Darussalam, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Cayman Islands, Central African Republic (the), Chad, Chile, China, China, Hong Kong Special Administrative Region, China, Macao Special Administrative Region, Chinese Taipei, Colombia, Comoros (the), Congo (the), Cook Islands (the), Costa Rica, Côte d'Ivoire, Cuba, Curaçao, Democratic People's Republic of Korea (the), Democratic Republic of the Congo (the), Djibouti, Dominica, Dominican Republic (the), Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Falkland Islands (Malvinas), Fiji, French Guiana, French Polynesia, French Southern and Antarctic Territories, Gabon, Gambia (the), Georgia, Ghana, Grenada, Guadeloupe, Guam, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iran (Islamic Republic of), Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Kuwait, Kyrgyzstan, Lao People's Democratic Republic (the), Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands (the), Martinique, Mauritania, Mauritius, Mayotte, Mexico, Micronesia (Federated States of), Mongolia, Montserrat, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, New Caledonia, Nicaragua, Niger (the), Nigeria, Niue, Northern Mariana Islands, Oman, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines (the), Pitcairn, Puerto Rico, Qatar, Réunion, Rwanda, Saint Barthélemy, Saint Helena, Saint Kitts and Nevis, Saint Lucia, Saint Martin (French Part), Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Saudi Arabia, Senegal, Seychelles, Sierra Leone, Singapore, Sint Maarten (Dutch Part), Solomon Islands, Somalia, South Africa, South Georgia and the South Sandwich Islands, South Sudan, Sri Lanka, State of Palestine (the), Sudan (the), Suriname, Syrian Arab Republic (the), Tajikistan, Thailand, Timor-Leste, Togo, Tokelau, Tonga, Trinidad and Tobago, Tunisia, Türkiye, Turkmenistan, Turks and Caicos Islands, Tuvalu, Uganda, United Arab Emirates (the), United Republic of Tanzania (the), United States minor outlying islands, United States Virgin Islands, Uruguay, Uzbekistan, Vanuatu, Venezuela (Bolivarian Republic of), Viet Nam, Wallis and Futuna Islands, Western Sahara, Yemen, Zambia, Zimbabwe
Least-developed countries	Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Central African Republic (the), Chad, Comoros (the), Democratic Republic of the Congo (the), Djibouti, Eritrea, Ethiopia, Gambia (the), Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic (the), Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger (the), Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan (the), Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania (the), Yemen, Zambia
Landlocked developing countries	Afghanistan, Angola, Bangladesh, Benin, Burkina Faso, Burundi, Cambodia, Central African Republic (the), Chad, Comoros (the), Democratic Republic of the Congo (the), Djibouti, Eritrea, Ethiopia, Gambia (the), Guinea, Guinea-Bissau, Haiti, Kiribati, Lao People's Democratic Republic (the), Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger (the), Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan (the), Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania (the), Yemen, Zambia
Small island developing states	American Samoa, Anguilla, Antigua and Barbuda, Aruba, Bahamas (the), Barbados, Belize, Bonaire, Sint Eustatius and Saba, British Virgin Islands, Cabo Verde, Comoros (the), Cook Islands (the), Cuba, Curaçao, Dominica, Dominican Republic (the), Fiji, French Polynesia, Grenada, Guam, Guinea-Bissau, Guyana, Haiti, Jamaica, Kiribati, Maldives, Marshall Islands (the), Mauritius, Micronesia (Federated States of), Montserrat, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Puerto Rico, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Seychelles, Singapore, Sint Maarten (Dutch Part), Solomon Islands, Suriname, Timor-Leste, Tonga, Trinidad and Tobago, Tuvalu, United States Virgin Islands, Vanuatu

CATEGORY	COUNTRIES/TERRITORIES WITHIN THE CATEGORY
<p>"Developing countries" under indicator 7.a.1. These are a modified list of countries specific to international public finance flows</p>	<p>Afghanistan, Albania, Algeria, Angola, Antigua and Barbuda, Argentina, Armenia, Azerbaijan, Bahamas (the), Bangladesh, Barbados, Belarus, Belize, Benin, Bhutan, Bolivia (Plurinational State of), Bosnia and Herzegovina, Botswana, Brazil, Burkina Faso, Burundi, Cabo Verde, Cambodia, Cameroon, Central African Republic (the), Chad, Chile, China, China, Hong Kong Special Administrative Region, China, Macao Special Administrative Region, Chinese Taipei, Colombia, Comoros (the), Congo (the), Cook Islands (the), Costa Rica, Côte d'Ivoire, Cuba, Democratic People's Republic of Korea (the), Democratic Republic of the Congo (the), Djibouti, Dominica, Dominican Republic (the), Ecuador, Egypt, El Salvador, Equatorial Guinea, Eritrea, Eswatini, Ethiopia, Fiji, French Polynesia, Gabon, Gambia (the), Georgia, Ghana, Grenada, Guatemala, Guinea, Guinea-Bissau, Guyana, Haiti, Honduras, India, Indonesia, Iran (Islamic Republic of), Iraq, Jamaica, Jordan, Kazakhstan, Kenya, Kiribati, Kosovo, Kyrgyzstan, Lao People's Democratic Republic (the), Lebanon, Lesotho, Liberia, Libya, Madagascar, Malawi, Malaysia, Maldives, Mali, Marshall Islands (the), Mauritania, Mauritius, Mexico, Micronesia (Federated States of), Mongolia, Montenegro, Montserrat, Morocco, Mozambique, Myanmar, Namibia, Nauru, Nepal, New Caledonia, Nicaragua, Niger (the), Nigeria, Niue, North Macedonia, Pakistan, Palau, Panama, Papua New Guinea, Paraguay, Peru, Philippines (the), Republic of Moldova (the), residual/unallocated ODA: Central Asia and Southern Asia, residual/unallocated ODA: Eastern and South-eastern Asia, residual/unallocated ODA: Latin America and the Caribbean, residual/unallocated ODA: Northern America and Europe, residual/unallocated ODA: Oceania excl. Aus. and N. Zealand, residual/unallocated ODA: Sub-Saharan Africa, residual/unallocated ODA: Western Asia and Northern Africa, Rwanda, Saint Helena, Saint Lucia, Saint Vincent and the Grenadines, Samoa, Sao Tome and Principe, Senegal, Serbia, Seychelles, Sierra Leone, Solomon Islands, Somalia, South Africa, South Sudan, Sri Lanka, State of Palestine (the), Sudan (the), Suriname, Syrian Arab Republic (the), Tajikistan, Thailand, Timor-Leste, Togo, Tokelau, Tonga, Trinidad and Tobago, Tunisia, Türkiye, Turkmenistan, Tuvalu, Uganda, Ukraine, United Republic of Tanzania (the), Unspecified countries, Uruguay, Uzbekistan, Vanuatu, Venezuela (Bolivarian Republic of), Viet Nam, Wallis and Futuna Islands, Yemen, Zambia, Zimbabwe</p>

Note: ODA = official development assistance.



**ANNEX 2.**  
**REFERENCES**

## CHAPTER 7 • DATA AND INDICATORS

IEA (International Energy Agency). 2014. *Energy Efficiency Indicators: Fundamentals on Statistics*. Paris: IEA. <https://www.iea.org/reports/energy-efficiency-indicators-fundamentals-on-statistics>.

IRENA (International Renewable Energy Agency). 2023. *Renewable Energy Statistics 2023*. Abu Dhabi: IRENA. <https://www.irena.org/Publications/2023/Jul/Renewable-energy-statistics-2023>.

Pirlea, A. F., U. Serajuddin, D. Wadhwa, and M. Welch, eds. 2023. *Atlas of Sustainable Development Goals 2023*. Washington, DC: World Bank. <https://datatopics.worldbank.org/sdgateas/>.

UN (United Nations). 2018. *International Recommendations for Energy Statistics*. New York: UN. <https://unstats.un.org/unsd/energystats/methodology/ires/>.

UN Population Division. 2022. "World Population Prospects 2022." Online data. <https://population.un.org/wpp/>.

WHO (World Health Organization). 2014. *WHO Guidelines for Indoor Air Quality: Household Fuel Combustion*. Geneva: WHO. <https://www.who.int/publications/i/item/9789241548885>.

WHO. n.d. "Core Questions on Household Energy Use." <https://www.who.int/tools/core-questions-for-household-energy-use>.

World Bank and WHO. 2021. *Measuring Energy Access: A Guide to Collecting Data Using "The Core Questions on Household Energy Use"*. Washington, DC: World Bank. <https://www.who.int/publications/i/item/WHO-HEP-ECH-AQH-2021.9>.