

# EXECUTIVE SUMMARY

Since its inception in 2018, *Tracking SDG 7: The Energy Progress Report* has become the global reference point for information on the realization of SDG 7. It is produced annually by five of the custodian agencies responsible for tracking global progress toward Sustainable Development Goal 7 (SDG 7), which is to “ensure access to a affordable, reliable, sustainable, and modern energy for all.” The custodians developing the report are 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).

The report offers the international community a global summary of progress on energy access, energy efficiency, renewable energy, clean cooking, and international cooperation to advance SDG 7. It presents updated statistics for each of the indicators and provides policy insights on priority areas and actions needed to spur further progress on SDG 7, as well as related SDGs. Figure ES.1 offers an updated snapshot of the primary indicators for the most recent year.

Despite some progress across the indicators, the current pace is not adequate to achieve any of the 2030 targets. As in previous years, rates of progress vary significantly across regions, with some regions making substantial gains and some slowing their progress or even moving backward. Among the major economic factors impeding the realization of SDG 7 globally are the uncertain macroeconomic outlook, high levels of inflation, currency fluctuations, debt distress in a growing number of countries, lack of financing, supply chain bottlenecks, tighter fiscal circumstances, and soaring prices for materials. The effects of the COVID-19 pandemic and the steady rise in energy prices since summer 2021 are



## A ( A 7.1.1)

Recent progress is not on track to reach universal access by 2030. Globally, access to electricity grew by an annual average of 0.7 percentage points between 2010 and 2021, **rising from 84 percent of the world's population to 91 percent**. The number of people without electricity almost halved during the period, from **1.1 billion in 2010 to 675 million in 2021**. The pace of annual growth slowed during 2019–21 to 0.6 percentage points.

To bridge the gap, especially for people living in poor and remote regions, the annual rate of growth in access must be 1 percentage point per year from 2021 onward—almost twice the current pace. If no additional efforts and measures are put in place, some 660 million people, mostly in Sub-Saharan Africa, would still be unserved in 2030 (IEA 2022a). Policies for energy access should demonstrate political commitment and maximize the socioeconomic benefits of access, keeping the most vulnerable populations at the forefront of efforts to close the access gap.

## A ( A 7.1.2)

The global population lacking access to clean cooking fell from **2.9 billion in 2010 to 2.3 billion in 2021**, but the goal of universal access by 2030 remains elusive: some **1.9 billion people would still be without access to clean cooking in 2030**. If current trends continue, almost six out of ten people without access to clean cooking in 2030 would reside in Sub-Saharan Africa.

With the ongoing impact of COVID-19 and soaring energy prices, the IEA estimates that 100 million people who recently transitioned to clean cooking may revert to using traditional biomass (IEA 2022a). Eastern Asia and Latin America and the Caribbean were the only regions to sustain progress in access to clean cooking between 2019 and 2021 (ESMAP 2022). Unless efforts are rapidly scaled up today, polluting cooking fuels and technologies will continue

## ( A 7.3.1)

SDG target 7.3 calls for doubling the global rate of improvement in energy intensity over the average rate during 1990–2010—which means improving energy intensity by 2.6 percent per year between 2010 and 2030.<sup>1</sup>





Access to electricity is expected to improve through 2030, after the difficult economic conditions created by the COVID-19 pandemic and the war in Ukraine have stabilized. However, variations across countries will persist, and many countries will not reach universal access by 2030 unless much more is done. Even then, progress may be limited for countries with weak energy access-related institutions and policies. The outlook is better for countries with strong institutional and policy support for access, most of which have already made historic progress in bringing the benefits of electricity to their population.

According to IEA's Net Zero by 2050 Scenario, annual investment of USD 30 billion will be required to achieve universal access to electricity by 2030.

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Globally, access to electricity (SDG 7.1.1) grew on average by 0.7 percentage points each year between 2010 and 2021, rising from 84 percent of the world's population to 91 percent and raising the number of people with an electricity connection by more than a billion. Over the past decade, access improved steadily, reducing the number of people without access from 1.1 billion in 2010 down to 675 million in 2021, despite a growing population. The recent slowdown in growth is leaving the poorest and hardest-to-reach people without access. In 2019–21, the number of people with access increased by 114 million per year, fewer than the 129 million who had access each year between 2010 and 2019.<sup>3</sup>

To reach universal access by 2030, the world will have to scale up annual growth in electrification to 1 percentage point per year from 2021 onward through investments and policy support, instead of the 0.6 percentage point pace recorded between 2019 and 2021. If no additional efforts and measures are put in place, some 660 million people—560 million in Sub-Saharan Africa and 70 million in Developing Asia—will remain unserved in 2030 (IEA 2022a).<sup>4</sup> Because of the continued negative impacts of COVID-19 on the global and national economies, compounded by the war in Ukraine and the related energy crisis, urgent actions must be taken to prevent setbacks in access.

Globally, the number of unserved people fell steadily between 2010 and 2021. However, the trend differs across regions (figure ES.2). Fifty-one countries in the developing world have achieved universal access, 17 of them in Latin America and the Caribbean. Another 95 countries, concentrated in Sub-Saharan Africa, were still short of the target in 2021, despite progress in about one-quarter of them—including half of the 20 countries with the largest access deficits (defined as the population lacking access to electricity). In Sub-Saharan Africa, the number of people without access was roughly the same in 2021 as in 2010.

Most of the decline in the unserved population came in Asia. The number of people without access plummeted in Central and Southern Asia, falling from 414 million in 2010 to 24 million in 2021, with much of the improvement occurring in Bangladesh, India, and other populous countries. The number without access to electricity in Eastern and South-eastern Asia declined from 90 million to 35 million during the same period. In Northern Africa and Western Asia, the unserved population decreased less markedly—falling from 37 million in 2010 to 30 million in 2021.

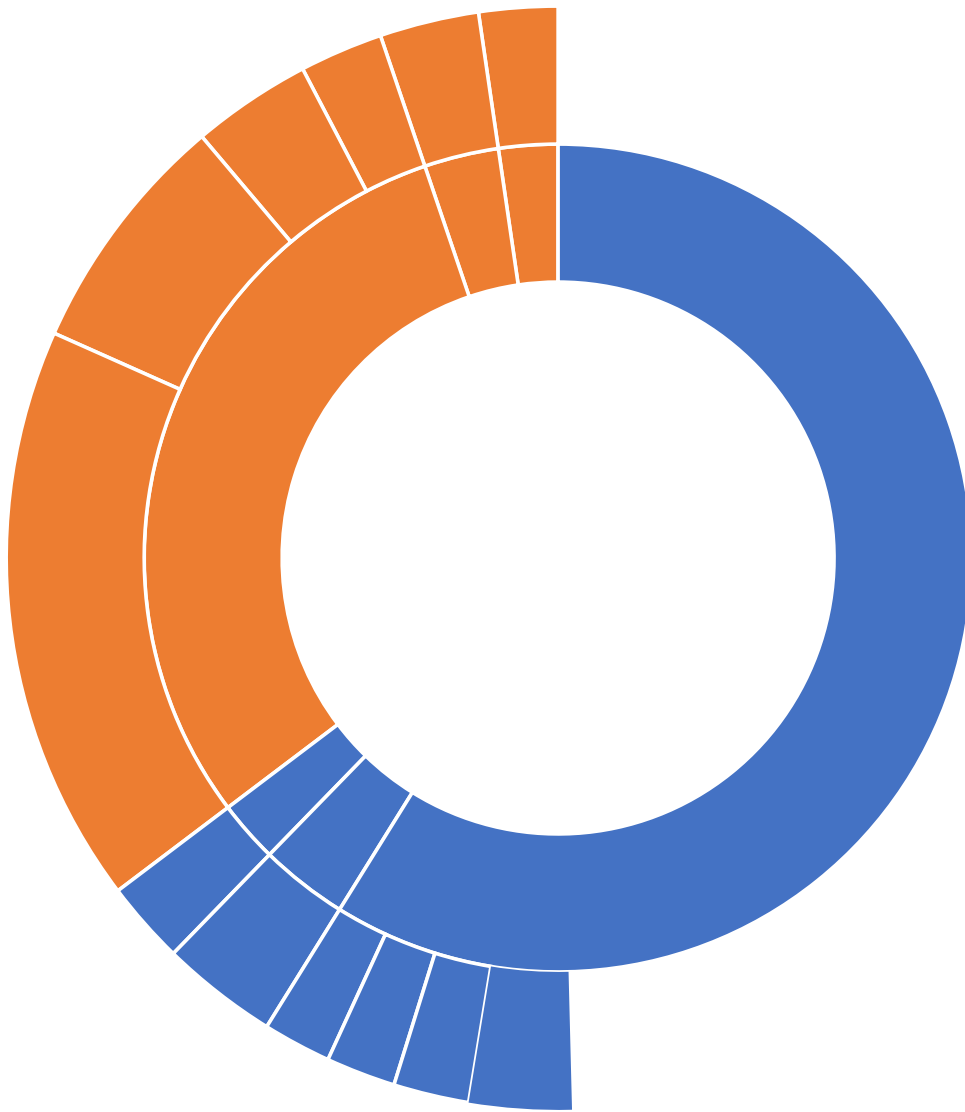
3 The annual change in access is calculated as the difference between the access rate in year 2 and the rate in year 1, divided by the number of years:  $(\text{Access Rate Year 2} - \text{Access Rate Year 1}) / (\text{Year 2} - \text{Year 1})$ .

4 The projected access rate of 92 percent in 2030 was calculated based on the UN population database and IEA World Energy Outlook (2022).

## .2 • Share of global population with access to electricity in 2021



.3 • The 20 countries with the largest access deficits in 2021 by region and income levels



Compared with the global average, the LDCs saw a relatively rapid increase in electrification, connecting about 32



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8 Clean fuels and technologies include stoves powered by electricity, liquefied petroleum gas (LPG), natural gas, biogas, solar, and alcohol. Clean fuels and technologies are as defined by the normative technical recommendations in the WHO Guidelines for Indoor Air Quality: Household Fuel Combustion (WHO 2014).

.4 • Share of population with access to clean cooking fuels and technologies, 2021 (percent)





SDG target 7.2 for 2030 is “increasing substantially the share of renewable energy in the global energy mix.” In 2020, the TFEC declined by 4.7 percent year-on-year as the COVID-19 pandemic and policy responses disrupted social and economic activities worldwide. In this context of declining energy demand, renewable energy consumption, including biomass, hydropower, geothermal, wind, solar, and modern biomass, increased by 1.1 percent in 2020, offsetting the decline in fossil fuels. Renewable energy consumption accounted for 18 percent of total final energy consumption (TFEC) in 2020, up from 17 percent in 2019.

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10 In 2020, the three categories accounted for 22 percent, 29 percent, and 49 percent of TFEC, respectively.

The share of renewables in final consumption is greatest for **electricity**, rising from 26.2 percent in 2019 to 28.3 percent in 2020. Renewable electricity accounts for a third of global renewable energy consumption, including traditional uses of biomass, and half of modern uses. It also accounts for about 90 percent of the year-on-year increase in the share of renewables in the energy mix, driven by continuous expansion of capacity in wind and solar PV.

**Heat** is the largest energy end-use worldwide, accounting for half of global final energy consumption (175 EJ). The sector remains heavily dependent on fossil fuels, which meet more than three-quarters of global heat demand. Renewable sources accounted for just 24 percent of the energy used for heat, and more than half of that is represented by traditional uses of biomass, which increased 1 percent in 2020 in response to higher prices for modern forms of renewable energy. Despite its dominant share in final energy consumption, the heat sector has received limited policy attention and support until very recently.

The **transport** sector is the end-use sector with the lowest renewable energy penetration, at only 4 percent of final energy consumption in 2020 and only 9 percent of worldwide consumption of modern forms of renewable energy. Liquid biofuels represented 90 percent of the renewable energy consumed for transport, with most of the remainder coming from renewable electricity for vehicles and trains, which expanded by 0.02 EJ year-on-year in 2020. A fraction of this growth is attributable to the growing number of electric vehicles on the road—from 7.1 million in 2019 to 11.3 million in 2020, while the electricity that powers these vehicles comes increasingly from renewable sources.

The **agri-food** sector also has substantial linkages with renewable energy. About 30 percent of the world's energy is consumed within agri-food systems, from production to food consumption.<sup>11</sup> The majority of that energy is fossil fuel-based (IRENA and FAO 2022). A joint approach to the renewable energy transition and the transformation of agri-food systems is necessary to meet their demand for electricity, heating, cooling, processing, and transport while advancing the SDGs and the Paris Agreement on Climate Change (IRENA and FAO 2022).

There are strong **regional disparities** in the share of renewables in the energy mix (figure ES.6). In 2020, almost half of





But the positive global and regional trends hide the fact that the countries most in need of support are being left

Progress on energy efficiency is measured by tracking the year-on-year percentage change in “energy intensity”– the

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12 The 2.6 percent rate was calculated based on a goal of doubling the global rate of improvement in energy intensity between 2010 and 2030 over the average rate achieved during 1990-2010.

or less). However, trends differed across these regions. In Latin America and the Caribbean, total energy supply decreased slightly, and GDP growth was among the lowest worldwide. The region also consumes the least energy in the world, at 3.3 MJ/USD (2017 PPP) (figure ES.9). On the other hand, total energy supply and GDP in Western Asia and Northern Africa, and in Sub-Saharan Africa, grew at rates higher than the global average.





Figure ES.12 reveals that commitments continued to shift from hydropower to solar energy in 2021. Solar attracted the largest share of flows (43 percent), followed by multiple/other renewables (33 percent) and hydropower (16 percent) wind and geothermal energy received less than 10 percent of total flows. Since 2018, an increasing share of commitments has fallen into the multiple/other renewables category, which includes energy funds, green bonds, and other government-led programs to support renewables, energy efficiency, and electricity access. This category is growing in importance, as interest grows in funding mechanisms that target multiple energy technologies at once.

**.12 • Share of annual public flows by technology, 2010-21**

Historically, the world's 46 LDCs have received a small share of international public flows, as illustrated in figure ES.13. Flows to LDCs decreased in the past two years, dropping to USD



Monitoring progress toward the SDG 7 goals depends on a robust framework of indicators backed by statistical data. Since this effort began back in 2013, improvements in reporting, advances in countries' statistical capacities, and enhanced models have raised the quality, reliability, and consistency of data. The custodian agencies and international community have spurred efforts to further improve data collection, analysis, and reporting. The definition of 232 initial indicators (since expanded to 248) was an important step (UNSTATS n.d.). These indicators have resulted in a common language and framework, aligning the efforts of governments, civil society, and the private sector toward shared goals.

These statistical tools and methods make it possible to track national, regional, and global progress based on collaboration between national statistical offices and international and regional organizations using optimized and standardized data-collection resources. For example, household surveys can be designed to support tracking across SDG 7 targets and even other SDG targets, such as health, air pollution, and quality of life.

Nonetheless, examination of each SDG 7 indicator reveals the need for additional information. The custodian agencies emphasize the need to strengthen resources for enhanced national data collection within current and planned international programs on energy transitions. Domestic statistical capacities, too, must be reinforced. To this end, the World Bank and the WHO have prepared a guidebook to integrate energy access questions into existing national household surveys (World Bank and WHO 2021). The custodial agencies responsible for this report also host webinars for statistical agencies, produce statistical guidance and reports on data collection, and regularly consult with national statistical offices about the estimates they provide. Continuing efforts b(7Tj /T (C) 1 (t)u5 n WHO-25 (n) d.)n e



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