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# Ensuring access to affordable, reliable, sustainable and modern energy for all

**Report of the Secretary-General** 

Summary

The present report, submitted pursuant to General Assembly resolution 76/210, provides an overview of progress made towards ensuring access to affordable, reliable, sustainable and modern energy for all and highlights actions taken by Member States and other stakeholders to accelerate progress towards that objective. The report also provides an update on the implementation of the United Nations Decade of Sustainable Energy for All (2014–2024), including plans for a global stocktaking, an overview of the outcomes of and follow-up to the high-level dialogue on energy and an outline of recent and planned efforts of UN-Energy in support of the achievement of Sustainable Development Goal 7 of the 2030 Agenda for Sustainable Development.

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<sup>\*</sup> Reissued for technical reasons on 8 September 2022.

## I. Introduction

1. The present report is submitted pursuant to General Assembly resolution 76/210, in which the Assembly requested the Secretary-General to submit to it, at its seventy-seventh session, a report on the implementation of the resolution, including activities carried out to mark the United Nations Decade of Sustainable Energy for All (2014–2024).

## II. Ensuring access to affordable, reliable, sustainable and modern energy for all in a time of slowdown of global economic growth

2. Energy is central to the achievement of both the 2030 Agenda for Sustainable Development and the Paris Agreement adopted under the United Nations Framework Convention on Climate Change. Access to affordable, reliable, sustainable and modern energy for all is fundamental to human development and the achievement of many of the Sustainable Development Goals. A shift towards sustainable energy solutions is also essential for the achievement of the Paris Agreement.

3. Decisive action on sustainable energy can catalyse progress towards the achievement of many other Sustainable Development Goals, including: ending poverty and hunger (Goals 1 and 2); provision of health-care facilities (Goal 3); providing access to education (Goal 4); improving gender equality (Goal 5); providing access to clean water and sanitation (Goal 6); promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (Goal 8); reducing inequalities (Goal 10); promoting sustainable production and consumption (Goal 12); building sustainable cities and communities (Goal 11); protecting and conserving life below water and on land (Goals 14 and 15); creating peace, justice and strong institutions (Goal 16); promoting biodiversity (Goal 15); and catalysing climate action (Goal 13).

4. As pointed out by the Global Crisis Response Group on Food, Energy and Finance established by the Secretary-General, the multiple and interlinked global crises the world is facing – the coronavirus disease (COVID-19) pandemic, the climate crisis and the impacts of the conflict in Ukraine and elsewhere – are putting at risk the very viability of achieving the Sustainable Development Goals by 2030. An urgent rescue effort to bring about a rapid change of course is needed, grounded in a comprehensive response to the interlinked global crises and a renewed commitment to multilateralism and international cooperation.

5. The current slowdown in global economic growth, the growing impacts of climate change and soaring energy prices are affecting those most in need the hardest – the least developed countries and marginalized populations worldwide.

6. There is an urgent need for strengthened commitments on the part of all stakeholders towards a clean energy transition and net zero emissions in order to advance action on the achievement of Goal 7 and to limit global warming to 1.5 degrees Celsius. Current levels of commitment related to sustainable energy, as reflected in nationally determined contributions under the Paris Agreement on climate change, are not yet in line with a net zero emissions trajectory by 2050. The establishment of bold policies and the advancement of actions to facilitate a faster transition to more accessible, affordable and sustainable energy systems are urgently needed.

7. It is essential to step up and double down on action to achieve Goal 7, in conjunction with the other Goals, and net zero emissions. Accelerating just and

equitable energy transitions is needed now more than ever. The outcome of the highlevel dialogue on energy convened by the Secretary-General on 24 September 2021, which included a global road map for accelerated action on Goal 7 and multi-stakeholder voluntary energy compacts, should be fully leveraged to drive action forward.

## III. Progress towards ensuring access to affordable, reliable, sustainable and modern energy for all<sup>1</sup>

#### A. Global overview

8. While progress towards the achievement of Goal 7 has been achieved in some regions of the world, efforts remain well below the scale required to meet the Goal by 2030. With the conflict in Ukraine now driving up global energy prices and increasing energy insecurity worldwide, the global momentum towards universal energy access and a decarbonized, climate-resilient energy system must be accelerated or it will not be possible to deliver on Goal 7 and many other Goals.

#### Access to electricity

9. Recent progress in improving access to electricity was mixed, as is the overall outlook for 2030. The global electricity access rate rose markedly between 2010 and 2020, from 83 per cent to 91 per cent, and the number of unserved people fell from 1.2 billion in 2010 to 733 million in 2020.

10. The pace of annual growth in access was faster than in previous years, although the annual rate of growth slowed from 0.8 percentage points during the period from 2010 to 2018 to 0.5 percentage points from 2018 to 2020 because of the complexity in reaching the remaining unserved populations and the potential impacts of COVID--19.

11. While global access to electricity has increased since 2010, regional disparities remain wide. Between 2010 and 2020, every region in the developing world showed steady progress in achieving electrification. Sub-Saharan Africa remained the least electrified region. In 2020, 77 per cent of people without access to electricity, about 568 million people, lived in sub-Saharan Africa. Electricity access in that region rose from 46 per cent in 2018 to 48 per cent in 2020, an average annual growth rate of 1 percentage point. However, it is anticipated that COVID-19 will undermine the pace of progress in the region. Other regions, such as Central and Southern Asia, witnessed declines in their access deficits, despite COVID-19.

12. Differences are also observable in terms of urban versus rural access to electricity. In 2020, around 80 per cent of the global population without access to electricity lived in rural areas. The lack of electricity limits the opportunities of such populations to access quality public services (for example, health care), rise out of poverty and improve their livelihoods. About 75 per cent of the world's rural population without access to electricity live in sub-Saharan Africa.

<sup>&</sup>lt;sup>1</sup> The present report draws on the following documents: policy briefs addressing the interlinkages between Sustainable Development Goal 7 and the other Sustainable Development Goals compiled by the technical advisory group on Goal 7 in support of the high-level political forum held in 2022; and *Tracking SDG 7: The Energy Progress Report 2022*, a joint report of the International Energy Agency, the International Renewable Energy Agency, the Statistics Division of the Department of Economic and Social Affairs, the World Bank Group and the World Health Organization.

13. The least developed countries lag behind the rest of the world in access to electricity to a significant degree, with an average access rate of 55 per cent – a gap of 36 percentage points compared with the global average of 91 per cent. In 2020, more than half of the global population without access to electricity (479 million people) lived in least developed countries.

14. Strong political commitments, better targeted policies, disruptive technology and business models and innovative financing tools have helped connect 1.3 billion people to power since 2010. However, with only eight years left to achieve target 7.1 of Goal 7, Governments and the international community face the challenge of drastically increasing the pace of progress in a context of high uncertainty and in transition towards net zero energy systems.

15. Because of the continuing socioeconomic impact of the COVID-19 pandemic, effects of climate change and related weather events and the complexities of reaching the "last mile" (that is, rural populations living far from the electrical grid), closing the access gap will become increasingly challenging.

16. Meeting the 2030 target requires increasing the number of people connected to electricity to 100 million a year. At current rates of progress, the world will reach only 92 per cent of its electrification goal by 2030.

17. Robust policies and public financial support are critical to boost growth in electrification fast enough and far enough to leave no one behind, especially the most vulnerable. Decentralized energy systems are vital to expanding access, especially in rural areas.

18. The approaches best suited to achieve universal access are also advantageous for reaching net zero emissions in a just and inclusive way and should be tailored to meet the needs of the least developed countries. Access to electricity is essential not only for more inclusive, sustainable and resilient growth, but for fully exploiting synergies between Goal 7 and the other Goals.

#### Access to clean cooking solutions

19. Increasing access to clean cooking solutions must remain a top priority in the coming years. As at 2020, an average of 69 per cent of the global population had access to clean cooking fuels and technologies. The remaining 31 per cent, an average of 2.4 billion people, were still cooking primarily with polluting fuels and technologies, such as charcoal, coal, crop waste, dung, kerosene and wood.

20. The use of inefficient fuels produces a range of health risks and damages the climate. The use of inefficient stoves and fuels also produces a range of short-lived climate pollutants, such as black carbon, which has a warming effect that is 460 to 1,500 times stronger than carbon dioxide. New estimates of disease burdens indicate that 3.2 million deaths from diseases, including ischemic heart disease, stroke, pneumonia, chronic obstructive pulmonary disease and cancers, were caused by household air pollution in 2019. Household air pollution accounted for the loss of an estimated 86 million healthy life years, with the largest burden falling on women living in low- and middle-income countries.

21. While some progress in the global access rate has been made over the last two decades, current trends indicate that, at present rates of progress, only around 75 per cent of the population will have access to clean cooking fuels and technologies by 2030.

22. From 2010 to 2020, global access to clean cooking fuels and technologies increased by an average of 1 percentage point a year. The increase was primarily driven by advances in large populous countries in Asia.

23. Large urban-rural discrepancies in access to clean cooking fuels and technologies exist worldwide. In 2020, 86 per cent of people in urban areas had access to clean fuels and technologies compared with only 48 per cent of the rural population.

24. Business as usual is no longer possible. Clean cooking fuels must be made a top political priority, including through targeted policies. The COVID-19 pandemic has exacerbated the vulnerability of people who lack access to clean fuels and technologies. The economic crisis caused by the pandemic will undoubtedly have a further impact on household fuel use; in some countries it threatens to reverse the progress made thus far. However, the crisis also provides opportunities to advance joint efforts to ensure universal access to clean cooking fuels and technologies by 2030.

25. Strengthened political commitment to provide clean cooking fuels and technologies is necessary. Major initiatives and substantial investments, both public and private, will be needed to encourage the uptake of clean cooking fuels and technologies by 2030. Innovative solutions, relying on biogas fuel and solar energy, should be considered, in addition to the more common solution of improved cooking stoves.

#### **Renewable energy**

26. Despite continued disruptions in economic activity and supply chains following responses to the COVID-19 pandemic across the world, the renewable energy sector has shown strong resilience, especially in the electricity sector. However, in 2021, rising commodity, energy and shipping prices, in addition to restrictive trade measures, have increased the cost of producing and transporting solar photovoltaic modules, wind turbines and biofuels, increasing uncertainty about renewable energy projects. Getting the deployment of renewables back on track will require stronger policies in all sectors, more effective mobilization of private capital and the strategic use of public financing, particularly in developing countries.

27. In 2019, the share of renewable energy sources in total final energy consumption amounted to 17.7 per cent, only 0.4 percentage points higher than in 2018, renewable energy consumption increased by 2.8 per cent over 2018 and total final energy consumption expanded by 0.7 per cent compared to 2018. This suboptimal result underlines the importance of reducing energy consumption through energy efficiency and conservation if rapid progress is to be made towards achievement of target 7.2. The largest increase in the share of renewable energy continues to be observed in the electricity sector; much slower progress was made in the transport and heat sectors.

28. Continuing its upward trend since 1990, renewable electricity use grew more than 5 per cent year-on-year in 2019 (up from 3 per cent in 2018), bringing the share of renewables in global electricity consumption to 26.2 per cent (up from 25.3 per cent in 2018). In meeting the growing global demand for electricity, which rose by 1.6 per cent in 2019, non-renewable electricity consumption grew as well, rising by 0.4 per cent, more slowly than the renewable sector, but from a significantly larger base, so that it accounted for 18 per cent of the global annual increase in electricity consumption.

29. In 2019, renewable energy used for heating increased by 2.4 per cent, to 17.8 exajoules, excluding traditional uses of biomass energy. Traditional uses of biomass in 2019 remained roughly stable globally, accounting for over 13 per cent (23.5 exajoules) of global heat consumption. Over the past decade, as global heat demand continued to increase (rising 0.3 per cent year-on-year), the share of modern renewables in global heat consumption reached just 10.1 per cent, an improvement of less than 2 percentage points in a period of 10 years.

30. As in 2018, renewable energy used in transport increased, rising by 7 per cent to 4.4 exajoules in 2019, the largest increase in absolute terms since 2012. Biofuels, primarily crop-based ethanol and biodiesel, supplied 91 per cent of the renewable energy used in transport. The expansion of renewable electricity and sales of electric vehicles are pushing up the use of renewable electricity in transport, which grew to 0.03 exajoules in 2019, the second-largest increase in a single year after 2018.

31. Significant regional disparities lie behind such global improvements. Sub-Saharan Africa has the largest share of renewable sources in its energy supply, although traditional uses of biomass represent more than 85 per cent of the total. Excluding traditional uses of biomass, Latin America and the Caribbean is the region with the largest share of modern renewables in total final energy consumption, thanks to significant hydropower generation, the consumption of bioenergy in industrial processes and the use biofuels for transport. In 2019, 44 per cent of the global year-on-year increase in modern renewable energy consumption took place in Eastern Asia, essentially in China, where the use of hydropower, solar photovoltaic and wind-driven power dominated growth.

32. In developing countries as a whole, renewable capacity per capita rose by 9.5 per cent a year over the last five years. Growth was much slower in landlocked developing countries (2.4 per cent), the least developed countries (5.2 per cent), and small island developing States (8.3 per cent).

33. Measures to scale up renewable heating can and must be aligned with broad socioeconomic policies and objectives, such as improving conditions for vulnerable segments of the population, developing key economic sectors, setting long-term energy plans and pursuing international climate and sustainability goals. A coherent, consistent, long-term policy approach to renewable energy and decarbonization of the energy system will inspire confidence in investors and project developers. Importantly, international cooperation can be a key accelerator in energy transition and can help to address climate change, economic inequality and social injustice.

#### **Energy efficiency**

34. Achieving target 7.3, doubling the global rate of improvement in energy efficiency by 2030, would also support progress towards the other targets of Goal 7. Energy intensity is the ratio of total energy supply to the annual gross domestic product (GDP) created, in essence, the amount of energy used per unit of wealth created. Energy intensity falls as energy efficiency improves.

35. Globally, the energy efficiency rate rose by 1.5 per cent in 2019, to 4.69 megajoules/per United States dollar (\$) (2017 purchasing power parity). This rate of improvement was the second lowest since the global financial crisis, but it was still higher than the rate in 2018. Over the period from 2010 to 2019, annual energy intensity improvements averaged 1.9%.

36. Since global progress has been slower than the targeted rate of 2.6 per cent in all years except 2015, the annual average improvement rate now required to achieve the target 7.3 by 2030 is 3.2 per cent.

37. Stark differences are observable across regions. During the period from 2010 to 2019, the Eastern and South-Eastern Asia region was the only region that overachieved in terms of target 7.3, with energy efficiency improving by an annual average rate of 2.7 per cent, driven by strong economic growth. Average annual improvement rates in Oceania (2.2 per cent), North America and Europe (2.0 per cent) and Central and Southern Asia (2.0 per cent) were also above the global average and historical trends. The lowest rates of improvement were in Latin America and the Caribbean (0.6 per cent), followed by Western Asia and North Africa (1.2 per cent)

and sub-Saharan Africa (1.3 per cent). Energy intensity in sub-Saharan Africa is almost double the level in the Latin America and the Caribbean region, mirroring differences in economic structure, energy supply and access rather than energy efficiency.

38. The rate of improvement accelerated across all sectors between 2010 and 2019, except for residential buildings. The freight transport sector experienced the highest rate of improvement, followed by the industry sector. Mitigating the effects of the growing demand for cooling, heating and appliances in residential buildings requires better enforcement of building energy codes, especially in emerging economies, where a large share of new housing is being built.

39. Improving energy efficiency at scale will be a key factor in achieving affordable, sustainable energy access for all. Stronger government policies on energy efficiency are needed to bring that target within reach.

#### Means of implementation

40. Achieving Goal 7, including net zero emissions, requires an urgent and steep rise in clean energy investment and finance. Worldwide investment in clean energy and energy efficiency will need to triple over the next 10 years to put the world on track for zero net emissions by 2050, with a priority focus on the needs of the world's least developed countries and on universal access to electricity and clean cooking solutions by 2030. This is a massive opportunity and one that will require concerted policy interventions, public finance and private investments for realization at the required scale.

41. International financial flows to developing countries in support of clean energy amounted to \$10.9 billion in 2019, a decrease for a second year in a row. In terms of the five-year moving average, average annual commitments declined by 5.5 per cent from \$17.5 billion during the period from 2014 to 2018 to \$16.6 billion during the period from 2015 to 2019 for the first time since 2008. In particular, the level of financial support was lower for the least developed countries, landlocked developing countries and small island developing States.

42. This trend reveals a contraction even before the COVID-19 crisis. Regarding geographical regions, most regions observed a drop in international public flows in 2019, except Oceania, which showed an increase of 72 per cent. The decrease was mainly noted in the following regions: Eastern and South-Eastern Asia, by 66.2 per cent; Latin America and the Caribbean, by 29.8 per cent; and Central and Southern Asia by 24.5 per cent.

43. Public finance institutions and international donors play a critical role beyond providing direct investments in renewable assets, particularly in developing countries, where risks have led to a high cost of financing or limited project implementation. The policies and funds of public finance providers should be aligned to create an enabling environment for private investment, establish necessary infrastructure and mitigate perceived risks to private capital flows. In addition, funding should be used to implement policies that enable just and inclusive energy transitions, such as capacity-building, retraining and the implementation of industrial policies. International collaboration should be strengthened to better channel funds towards support for the energy transition.

### **B.** Regional overview

#### Africa region

44. Countries in Africa are still dealing with the impacts of the COVID-19 pandemic and plans to expand energy infrastructure have stalled due to supply chain interruptions and budget cuts. Infrastructure development has been identified as a vital pillar in the reconstruction of African economies. The pandemic has also increased the urgency of efforts to address the long-standing energy access problem in African countries. Evidence suggests that the pandemic has reversed progress in terms of energy access, with numerous nations experiencing reductions and stagnation in the biennium 2020–2021.

45. Reduced access to electricity translates into low consumption. In comparison to other regions and countries, the average per capita electricity consumption in countries in Africa is extremely low, at around 600 kilowatt hours per year. In terms of energy generation, the yearly output of the continent was 854 terawatt hours in 2018.

46. The convergence of the health and energy components of the COVID-19 pandemic in countries in Africa has revealed the significance of accelerating clean cooking solutions, mainly in rural areas. Data show that clean cooking is a significant challenge, requiring more imaginative rules and practices than those already in place. Over 800 million people on the African continent still lack access to clean cooking fuels and technologies, relying on traditional biomass for their energy needs, resulting in 500,000 early deaths per year due to indoor pollution. Installed capacity of 233,000 megawatts in Africa is centred mainly in countries in North Africa and in South Africa, with the rest of the continent's installed capacity being roughly equal to that of South Africa.

47. Despite the enormous potential for renewables, African countries still have only a small share of mixed power sources. However, advancements in Egypt, Ethiopia, Kenya, Morocco, Senegal and South Africa have accelerated the deployment of renewable energy on the continent over the previous five years. African countries can build on this momentum with pragmatism, transformational leadership and ambitious policies and initiatives. This momentum could also help stimulate significant global measures to combat climate change and promote inclusive growth that leaves no one behind.

#### Arab region

48. Countries in the Arab region are lagging behind in efforts to achieve Goal 7. Supply chain disruptions, the economic downturn, conflicts and instability in several Arab countries have had a negative impact on progress. Increased electricity prices as the result of higher global fuel prices not only affect vulnerable households but also reduce the reliability of the power supply. The geopolitical situation and rising energy prices provide a strong incentive for Governments to shift to renewable energy sources and to invest in energy efficiency as soon as possible.

49. Access to electricity in the Arab region was around 90 per cent in 2020, with about 42 million people living without access. Although the number decreased by about 3 million between 2019 and 2020, there was a noticeable slowdown in the rate of increased access to electricity. Electricity access in urban areas was 98 per cent and only 82 per cent in rural areas. In Arab countries, 53 million people had no access to clean cooking solutions. Although overall access to clean cooking fuels and technologies was about 87 per cent, there were large subregional disparities. Only 35 per cent of the people in least developed countries in the Arab region had access to

clean cooking fuels and technologies, while other countries in the region had full or almost full access.

50. Renewable energy rates continue to lag behind other regions. In terms of consumption, only 4.6 per cent of the region's total final energy consumption is sourced from renewables, mainly from traditional biomass. Modern renewables, however, continue to grow as their falling costs have made them increasingly cost-competitive with conventional sources, particularly in the States members of the Gulf Cooperation Council.

51. Primary energy intensity in the Arab region was 4.9 megajoules per United States dollar (\$) at 2017 purchasing power parity (4.9 megajoules/\$); this was higher than the average global primary energy intensity (4.7 megajoules/\$ in 2017 purchasing power parity) in 2019. While there have been improvements over the past decade, there was a slowdown in the improvement of energy efficiency, and the compound annual growth rate decreased from negative 2.3 per cent (2017–2018) to negative 1.4 per cent (2018–2019), indicating a shortfall from target 7.3 of improving energy efficiency by 2.6 per cent per year until 2030.

#### Asia and the Pacific region

52. Progress in the Asia and the Pacific region towards achieving Goal 7 is mixed. At the national level, there are good examples of policies and measures in energy access, renewable energy and energy efficiency. However, improvement is patchy among the countries of the region. The region as a whole will not achieve the 2030 targets unless new policy efforts are rapidly developed and adopted soon.

53. Regional progress towards achieving universal access to electricity is well on track. There are several national examples of rapid electrification, and only a few nations are struggling to make good progress. The Asia and the Pacific region accounted for most of the global access gains between 2010 and 2020. Central and Southern Asia, in particular, exhibited a substantial reduction in the number of people without access, from 440 million in 2010 to 78 million in 2020, an average annual decrease of 36 million. Among the countries in the region, India showed the largest annual drop in its access deficit (28 million).

54. Countries in the Asia and the Pacific region are making little progress in expanding access to clean cooking fuels and technologies. In recent years, there has been a decline in the total number of people making the transition to clean cooking, reversing a previously improving trend. Some examples of effective national policies and programmes have emerged, offering concrete evidence of how prioritizing the clean cooking issue can lead to rapid progress in this area.

55. Modern renewable energies, particularly wind and solar energy, are helping renewables to make small gains in their share of final energy consumption. The bulk of regional capacity additions are in a handful of countries, with poorer economies seeing fewer additions. In 2019, 44 per cent of the global year-on-year increase in modern renewable energy consumption took place in Eastern Asia, especially in China, where hydropower, solar photovoltaic power and wind power dominated growth.

56. While Eastern and South-Eastern Asia were the only regions that overachieved in terms of target 7.3 between 2010 and 2019, with energy efficiency improving by an annual average rate of 2.7 per cent, the pace of improvement of regional energy efficiency in the Asia and the Pacific region is slowing, falling seriously short of the global target. While a few Member States have successfully implemented energy efficiency measures across sectors, many have faced difficulties in achieving scale. A

rising share of final consumption is being covered by minimum energy performance standards, although such standards often fail to reflect the best available technologies.

#### Latin America and the Caribbean region

57. Countries in the Latin America and the Caribbean region continue to make progress in achieving Goal 7. Access to electricity has improved, and energy intensity in the region has maintained a downward trend, particularly in the Caribbean. However, the negative impacts on the region's economy caused by the COVID-19 pandemic have limited progress.

58. Access to electricity has been steadily increasing in the region. Overall, coverage is about 97.4 per cent, but rural areas remained disadvantaged, with coverage of only around 95 per cent. As at 2020, around 16.7 million people still had no access to electricity.

59. In many countries, including Belize, Bolivia (Plurinational State of), Dominica, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Paraguay and Peru, more than 10 per cent of the population did not have access to clean technologies for cooking in 2019. Due to this slow progress, the region is unlikely to reach the 2030 target, which requires replacement of traditional biomass for cooking and heating by modern sources and a long-term focus on electrification for cooking needs.

60. From 2019 to 2020, the share of renewables in the primary energy supply in the region increased from 30 per cent to 33 per cent, exceeding the global average, which is only 13 per cent. During the same time period, generation of electricity by renewable sources increased from 58 per cent to 61 per cent, totalling 952 terawatthours during 2020 (75 per cent hydroelectric power and 25 per cent solar, wind, biomass and geothermal power).

61. The region has historically had the lowest level of energy intensity in the world. There has, however, been no reduction in the region's energy intensity level since 2014, and further efforts will be required to reach the target set for 2030.

#### Member States of the Economic Commission for Europe

62. The member States of the Economic Commission for Europe region continue to make progress towards achievement of the key targets and indicators of Goal 7. The region has achieved 100 per cent access to modern energy services and clean cooking fuels, although there are still remote communities whose access are not registered in reported statistics and that require attention. Distributed renewable generation, small-scale energy storage and microgrids provide ways of ensuring energy services and clean cooking solutions for such communities.

63. With respect to energy efficiency indicators, while the results achieved in the region are better than the global indicators, there are still significant opportunities for improvement. As at 2019, the region accounted for 43 per cent of world's GDP and 38 per cent of its total energy supply. Both percentages have grown significantly at the global and regional levels. Importantly, the pace of improvement of energy efficiency in the countries of the Economic Commission for Europe region has accelerated, outpacing global indicators.

64. Regarding renewable energy, there has been a great deal of investment in renewable energy technologies in countries in the western part of the Economic Commission for Europe region, whereas activity has been more limited in countries in the eastern part of the region. The main issues impeding progress relate to end-use tariffs, market design and investment policy. Looking at longer term development, in 1990, 80 per cent of the energy mix in the region was based on fossil fuels. More

recently, following major efforts on renewables and on energy efficiency, 82 per cent of the energy mix in the region was reported to be based on fossil fuels.

## Least developed countries, landlocked developing countries and small island developing States

65. In the least developed countries, access to energy is occurring only slowly, falling short of the requirement to achieve structural transformation in as a driver of progress – a central pillar of the Doha Programme for Action for the Least Developed Countries for the Decade 2022–2031 and critical to the achievement of Goal 7 and the other Goals. At current annual growth rates, it would take the least developed countries and landlocked developing countries almost 40 years and small island developing States almost 15 years to reach a level of deployment similar to the average level achieved by developing countries in 2020.

66. Between 2010 and 2020, access to electricity in the least developed countries improved steadily from 33 per cent to 55 per cent. Nevertheless, as at 2020, 478 million people in those countries still had no access to electricity, and over 860 million people were reliant on harmful fuels for cooking. Progress is uneven across regions and between rural and urban areas. The global deficit in access to electricity is increasingly concentrated in the least developed countries in the African region, while least developed countries in the Asia and the Pacific region have made huge strides in electrification, resulting in the reduction of the number of people without electricity by over 100 million from 2010 to 2020.

67. To provide universal access, the least developed countries need to nearly triple the pace of electrification, from 23 million newly connected users each year during the period from 2000 to 2018 to 63 million from 2019 to 2030.

68. Excluding traditional uses of biomass, the share of renewables in total final energy consumption reached 10.3 per cent in 2019, down slightly from 10.7 per cent in 2010. Data reveal hydroelectric power to be the dominant renewable technology in the least developed countries. However, non-renewable capacity continues to expand faster than renewables to meet growing energy demands in the least developed countries.

69. Energy intensity needs, that is, the ratio of total energy supply per unit of GDP, fell in the least developed countries from 5.59 megajoules/\$ to 4.84 megajoules/\$ during the period from 2010 to 2019, using 2017 purchasing power parity. The global average ratio of total energy supply per unit of GDP is 4.69 megajoules/\$.

70. In 2019, the least developed countries received 25 per cent of international financial flows to support developing countries in adopting clean energy technologies. While this shows an increase of 21 per cent over 2018, it hides an overall decrease of 9 per cent from \$3 billion to \$2.7 billion in such flows.

## IV. Follow up to the high-level dialogue on energy: implementing the global road map for accelerated action on Goal 7

71. Pursuant to General Assembly resolution 74/225, a high-level dialogue on energy was convened by the Secretary-General on 24 September 2021 at United Nations Headquarters. The summit brought together over 130 Heads of State and Government, high-level representatives and multi-stakeholder leaders. The dialogue promoted implementation of the energy-related goals and targets of the 2030 Agenda in support of the implementation of the United Nations Decade of Sustainable Energy for All (2014–2024), including the global plan of action for the Decade.

72. The high-level dialogue on energy was coordinated under the leadership of the Under-Secretary-General for Economic and Social Affairs and Secretary-General of the dialogue, Liu Zhenmin, together with Co-Chairs, the Administrator of the United Nations Development Programme (UNDP), Achim Steiner, and the Special Representative of the Secretary-General for Sustainable Energy for All, Damiola Ogunbiyi, who are both also Co-Chairs of UN-Energy. The Department of Economic and Social Affairs served as the secretariat for the dialogue. UN-Energy provided technical support throughout the process.

73. As the first global gathering on energy under the auspices of the General Assembly in 40 years, the high-level dialogue served as a unique vehicle for galvanizing the political commitment and accelerated implementation required in the coming years. The dialogue focused on five key themes: energy access; energy transition; enabling the achievement of the Sustainable Development Goals through inclusive, just energy transitions; innovation, technology and data; and finance and investment. Preparations for the dialogue were supported by 30 Member State global theme champions, which spearheaded global advocacy, as well as by a series of inclusive engagements and consultations with Member States and other stakeholders.<sup>2</sup>

74. As a result of the dialogue, the Secretary-General compiled and disseminated a non-negotiated summary of the dialogue: the global road map for accelerated action on Goal 7. The aim of the global road map, to provide a way forward for collective action, calls for the following actions:

(a) Closing the energy access gap: decisive action is required to achieve access to clean energy for over the 700 million people who currently live without electricity and for the over 2 billion people still relying on harmful fuels for cooking; ensuring access to clean, decarbonized energy for all by 2030 must be an urgent political priority at all levels; and investing in closing the energy access gap, halving it by 2025, should be prioritized, especially in the least developed countries;

(b) Rapidly transitioning to decarbonized energy systems: without significant energy decarbonization, the goal of limiting global warming to 1.5 degrees Celsius above pre-industrial levels set out in the Paris Agreement on climate change will quickly fall out of reach; limiting temperature rise to 1.5 degrees Celsius requires the reduction of greenhouse gas emissions by 45 per cent below 2010 levels by 2030 and reaching net zero emissions by 2050; the deployment of renewable energy is lagging, especially in transport, industry, heating and cooling; global energy efficiency improvements must increase significantly; and the phasing out of coal power generation needs to be accelerated globally;

(c) Mobilizing adequate and predictable finance: global investment in renewable energy and energy efficiency should be tripled to achieve the Sustainable Development Goals by 2030; shifting fossil fuel subsidies to renewables, as well as putting a price on carbon, will also be crucial in accelerating the energy transition; international cooperation must be dramatically scaled up to catalyse the public and private finance and investment needed to accelerate energy transitions, especially for developing countries and small island developing States; and access to finance and the provision of technology transfer must be prioritized;

(d) Leaving no one behind on the path to a net zero future: the global energy transition must be just, inclusive and equitable; no two national energy transition pathways will be identical; Goal 7 should be integrated as a guiding framework for energy transition through policy and planning, to enhance synergies and reduce trade-offs with other Goals and to ensure no one is left behind, especially the most vulnerable, including older persons, children, youth, indigenous peoples and

<sup>&</sup>lt;sup>2</sup> A/76/206, paras. 95–107.

displaced populations, as well as women, who also face risks of being left behind; while the energy transition is expected to produce an overall net gain in jobs, it is critical to invest in the reskilling of affected workers and economic diversification of communities, ensuring a just transition;

(e) Harnessing innovation, technology and data: Governments need to establish a clear direction and enabling environments for energy innovation and technology development and deployment to harness their transformational potential; more investment is required in order to improve the collection, management and application of data and to address the digital divide; international cooperation should be enhanced to promote technology transfer to developing countries.

75. To help ensure that collective efforts are designed and implemented consistent with the targets of Goal 7 and in support of the other Goals and net zero emissions, in line with the Paris Agreement on climate change, the global road map includes, as a practical guide, two sets of milestones for 2025 and 2030:

#### 2025 milestones

- 500 million more people have gained access to electricity
- 1 billion more people have gained access to clean cooking solutions
- Annual investment in access to electricity increased to \$35 billion and investment in access to clean cooking solutions increased to \$25 billion
- 100 per cent increase in modern renewables capacity globally achieved
- Annual investment in renewable energy and energy efficiency doubled globally
- No new coal power plans introduced in the pipeline since 2021
- Fossil fuel consumption subsidies redirected towards renewable energy and energy efficiency
- 30 million jobs created in the areas of renewable energy and energy efficiency.

#### 2030 milestones

- Universal access to electricity and clean cooking solutions achieved
- · Global renewable power capacity tripled
- Global rate of improvement in energy efficiency doubled
- Global annual investment in renewable energy and energy efficiency tripled
- Coal power plants within the Organization for Economic Cooperation and Development phased out by 2030 and globally by 2040
- 60 million jobs created in in the areas of renewable energy and energy efficiency
- Universal access to electricity in all health-care facilities and all schools worldwide.

76. In achieving the above milestones, the most vulnerable countries, in particular, countries in the Africa region, the least developed countries, landlocked developing countries and small island developing States, deserve special attention, as investments in renewable energy in those countries will have a significant positive impact across different Goals and exemplify the true spirit of leaving no one behind.

77. Gender equality and women's empowerment must be prioritized, including empowering women in the design, production and distribution of modern energy

services, including for productive uses, as well as equal representation of women in decision-making process in the energy field.

78. The global road map calls on all stakeholders, including Member States, international organizations, multilateral development banks, businesses, civil society, scientific communities, cities and regional governments, to step up and strengthen their efforts to drive the global energy transition forward by forming transformational partnerships.

79. The global road map further notes that entities of the United Nations system, supported by UN-Energy, should significantly scale up efforts towards attaining Goal 7 and net zero emissions. UN-Energy should be strengthened to support United Nations entities and other partners, including by facilitating coordination and monitoring progress of energy compacts, towards implementation of the global road map.

80. In its resolution 76/210, the General Assembly welcomed the high-level dialogue on energy and urged the Secretary-General to continue engagement with the Member States on the achievement of Goal 7 as a follow-up to the high-level dialogue on energy and the United Nations Decade of Sustainable Energy for All. Representatives of Member States, in the ministerial declaration of the high-level segment adopted at the high-level political forum in 2022, took note of the global road map proposed by the Secretary-General for accelerated action on Goal 7 and reaffirmed the need to continuously engage on the achievement of Goal 7.

81. As the secretariat of the high-level dialogue on energy, the Department of Economic and Social Affairs will continue to provide support for such engagement as part of the follow up to the high-level dialogue on energy, working closely with UN-Energy and other partners.

## V. Scaling up action and implementing energy compacts

82. In order to achieve Goal 7 and net zero emissions, global commitments must be increased and worldwide ambitions raised. Realization of the global road map will put these objectives back on track. All stakeholders must scale up their efforts and implement transformative actions.

83. The Secretary-General called for five critical actions to jump start the renewable energy transition. First, renewable energy technologies, such as battery storage, must be treated as essential and freely available global public goods. Second, the supply of critical components and raw materials for renewable energy technologies must be secure, scaled up and diversified. Third, Governments must build frameworks and reform bureaucracies to level the playing field for renewables. Fourth, Governments must shift subsidies away from fossil fuels to protect the poor and most vulnerable people and communities. Fifth, private and public investments in renewable energy must be tripled to at least \$4 trillion a year.

84. To drive multi-stakeholder action, including by Member States, business, civil society, youth, cities and subnational authorities, in support of implementing the global road map, the high-level dialogue on energy mobilized the registration of about 200 energy compacts in support of the achievement of Goal 7. By mobilizing voluntary commitments from all stakeholders and providing an effective tool for driving holistic and inclusive action, the energy compacts are a key vehicle by which to turn the global road map into concrete actions and partnerships. The above-mentioned energy compacts, with over \$600 billion in commitments, have been registered, attesting to the unprecedented momentum created by this process. In

addition, several catalytic partnerships have committed additional investments of over \$1 trillion for the achievement of Goal 7.

85. In May 2022, the energy compact action network was launched to provide an inclusive engagement platform. Supported by UN-Energy, the network is a multi-stakeholder mechanism bringing together Governments, businesses and other actors that have committed to the energy compact, in order to mobilize investment, resources and know-how to enable the delivery of commitments made under Goal 7. The network aims to mobilize additional energy compacts to match the ambition of the global road map; develop and apply dynamic monitoring frameworks, providing transparency in tracking progress on the energy compacts; share lessons learned, results and impacts and new opportunities regarding the energy compacts on a real-time basis; establish a global marketplace to connect offers of support with requests for action on the achievement of Goal 7, in support of implementing the global road map; and improve collaboration, coordination and effectiveness of relevant activities of the network participants. UN-Energy has already set up an online platform to keep track of energy compact commitments and will continue to support the mobilization of energy compacts, in collaboration with relevant partners

### **VI.** Strengthening coherence and coordination through UN-Energy

86. The General Assembly, in its resolution 74/225, encouraged UN-Energy, which was established by the United Nations System Chief Executives Board for Coordination, to support coherence and coordination across the energy-related activities of the entities of the United Nations development system, within their respective mandates. Under the leadership of the UN-Energy Co-Chairs, the Administrator of UNDP and the Special Representative of the Secretary-General for Sustainable Energy for All, UN-Energy is working to bring the United Nations system together for more integrated and coherent delivery of policy and normative support. The Department of Economic and Social Affairs is home to the secretariat of UN-Energy.

87. In May 2022, UN-Energy launched its plan of action towards 2025. In full alignment with the global road map for accelerated action on Goal 7, the plan will guide the activities of UN-Energy in the upcoming years, providing clarity, focus and expected deliverables that will enable it to make a crucial difference by accelerating action worldwide in support of the 2030 Agenda and the Paris Agreement on climate change. The seven main deliverables identified are: forging joint programmes; supporting the energy compact action network; contributing to a carbon-neutral United Nations; conducting a global campaign for action on Goal 7; organizing a global Goal 7 action forum; providing policy analysis; and establishing a Goal 7 action data hub and tracking system. Notably, UN-Energy will mobilize further energy compacts and drive multi-stakeholder action through the energy compact action network. A UN-Energy multi-partner trust fund has been established to mobilize resources for relevant activities.

88. The UN-Energy secretariat at the Department for Economic and Social Affairs will continue to be strengthened to provide policy coordination support and to deliver on the growing demand for its services in the follow-up to the high-level dialogue on energy and other major global engagements, in close collaboration with members of UN-Energy and partners, as well as the United Nations Development Coordination Office, as needed.

## VII. Implementing the Decade of Sustainable Energy for All (2014–2024): towards a global stocktaking

89. The General Assembly has called, most recently in its resolution 72/224, for the rapid implementation of the strategic objectives of the global plan of action for the Decade of Sustainable Energy for All (2014–2024). The midpoint review, which was held in 2019, as mandated by the Assembly in its resolution 73/236, proved to be particularly useful in convening key stakeholders to discuss the implementation of Goal 7.

90. As mandated by the General Assembly in its resolution 74/225, the high-level dialogue on energy was convened successfully in support of the implementation of the United Nations Decade of Sustainable Energy for All (2014–2024).

91. Additional efforts will be required to spur further progress in the ongoing implementation of the Decade towards its completion in 2024. Action must be scaled up towards universal access to electricity and clean cooking solutions, accelerated deployment of renewable energy, and just, inclusive and equitable energy transitions, while leveraging energy action to also advance other Goals. Furthermore, multi-stakeholder partnerships and voluntary commitments by all stakeholders must be catalysed. Special attention should be given to the means of implementation of Goal 7, including financing, investment, innovation, new technologies, capacity-building and the collection of quality data.

92. The further implementation of the Decade will provide a basis for the global stocktaking to be held in 2024, supported by extrabudgetary resources, marking the completion of the ongoing efforts to implement the plan of action of the Decade. The Department of Economic and Social Affairs will continue to support the Secretary-General in coordinating such activities to spur the ongoing implementation of the plan of action.

93. In its resolution 76/210, the General Assembly requested the Secretary-General to present the plans for a potential global stocktaking to further accelerate the implementation of the energy-related Goals and targets of the 2030 Agenda. The stocktaking should be informed by a series of engagements at various levels, including at the regional level, together with all Member States and other stakeholders, including stakeholders from the private sector, civil society and academia. Arrangements for a global stocktaking could be informed by the following interconnected plans designed to facilitate inclusive and broad-based processes among Member States and other stakeholders:

(a) Sharing of lessons and experiences to encourage learning and inspire further action;

(b) Assessing the progress achieved to date and the challenges ahead in filling the implementation gaps towards the achievement of Goal 7; bottom-up engagements, including at local, national and regional level, will be critical to inform this process;

(c) Mobilizing further action and partnerships by all stakeholders towards the achievement of Goal 7 and net zero emissions, building on the energy compacts to scale up means of implementation.

94. Plans for the global stocktaking should aim at further accelerating implementation of the global road map towards the achievement of Goal 7 and the objectives of the Paris Agreement on climate change, in particular ensuring that the goal of limiting global warming to 1.5 degrees Celsius above pre-industrial levels is kept within reach, building on the United Nations Decade of Sustainable Energy for All and on the Secretary-General's five critical actions to jump start the renewable

energy transition cited in paragraph 83 above, with particular attention to three key areas:

(a) Energy access: as a prerequisite and catalyst for improving the living and working conditions of all the world's people, especially the poorest and most vulnerable populations who lack any modern energy services, universal energy access to electricity and clean cooking solutions is integral to the transition to an inclusive, just, sustainable, secure, and net zero emissions energy supply, in line with the Paris Agreement on climate change;

(b) Just, inclusive and equitable energy transitions: to further propel an energy transition based on renewable energy and energy efficiency, ensuring that no one is left behind, human well-being, health and capabilities must be enhanced, resilience must be increased and innovation must aim towards a sustainable society at all levels, while also driving huge investments; such transition pathways will vary based on the individual needs of countries and regions, including a variety of transitional measures;

(c) Means of implementation: to enable decisive action, means of implementation must be significantly strengthened, focusing in particular on additional finance and investment in line with target 7.a; without a strong push on innovation, new technologies, capacity-building and quality data, global efforts to achieve Goal 7 are bound to fail.

95. The global stocktaking should leverage existing processes and products to create synergies and maximize efficiency. This includes the second summit on the Sustainable Development Goals, to be held in September 2023, and the review of progress on the achievement of Goal 7 at the high-level political forum in 2023, which will be informed by the annual overview report on progress towards the achievement of Goal 7, *Tracking SDG 7: The Energy Progress Report*, which is prepared jointly by the International Energy Agency, the International Renewable Energy Agency, the Statistics Division of the Department of Economic and Social Affairs, the World Bank Group and the World Health Organization (WHO), and the compilation of policy briefs in support of the high-level political forum 2022 on addressing energy's interlinkages with other Sustainable Development Goals.<sup>3</sup>

96. Other activities that can be leveraged include efforts to address specific interlinkages of Goal 7, such as the Health and Energy Platform of Action operated jointly by WHO, the Department of Economic and Social Affairs, UNDP and the World Bank; the global Sustainable Water and Energy Solutions Network created by the Department of Economic and Social Affairs and Itaipu Binacional; and the outcome of the conference on climate and the Sustainable Development Goals synergies, organized by the Department of Economic and Social Affairs and Social Affairs and the secretariat of the United Nations Framework Convention on Climate Change, which was held in Tokyo in July 2022.

97. All stakeholders will need to get involved and strengthen their efforts to implement the United Nations Decade of Sustainable Energy for All (2014–2024), including UN-Energy and multi-stakeholder groups, such as the technical advisory group on Goal 7. The Department of Economic and Social Affairs will continue to support the Secretary-General in coordinating the relevant activities towards the global stocktaking, in close collaboration with UN-Energy and other relevant stakeholders.

<sup>&</sup>lt;sup>3</sup> See https://sdgs.un.org/sites/default/files/2022-06/SDG7%20Policy%20Briefs%202022% 20presentation%20-%201%20June%202022.pdf.

## VIII. Conclusion

98. We must step up and double down on action to achieve Goal 7 and net zero emissions. Accelerating just and equitable energy transitions is needed now more than ever, since, on the current trajectory, achievement of those aims is bound to fail. All stakeholders must urgently increase their efforts in support of Goal 7.

99. The high-level dialogue on energy significantly increased global ambitions, created global momentum, charted a clear way forward through the global road map on accelerated action on Goal 7 and mobilized action by all stakeholders. Member States and United Nations entities need to build on the dialogue to spur further action, including through the energy compacts. UN-Energy will continue to strengthen coherence within the United Nations system on energy and will step up support to Member States and other partners in line with its plan of action.

100. It is important to take full advantage of the momentum created by, and to ensure follow-up on, the high-level dialogue on energy, including the implementation of the global road map for accelerated action on Goal 7.

101. The Decade of Sustainable Energy for All (2014–2024) provides a unique global platform to strengthen ambition and action in response to the outcomes of the high-level dialogue on energy. Further efforts are required to advance progress in the ongoing implementation of the Decade towards its completion in 2024. A global stocktaking after the completion of the Decade will provide a unique opportunity to further galvanize political commitment and strengthen concerted action in support of the achievement of Goal 7 and the objectives of the Paris Agreement on climate change, including significantly increased efforts on means of implementation.

102. Only through resolute action can the world build sustainable and resilient societies, ensuring that no one is left behind, while bringing the objectives of both the 2030 Agenda for Sustainable Development and the Paris Agreement on climate change within reach.