POWER FOR ALL RESEARCH SUMMARY

Current electrification efforts insufficient to meet SDG 7

POWER FOR ALL

A joint report led by the World Bank[1] shows the latest progress and outlook for achieving SDG 7. Current efforts are not on track to meet any of the four Sustainable Development Goal 7 (SDG 7) target on universal electricity access (Target 7.1), universal access to clean cooking (Target 7.2), increased use of renewable energy in electricity, heating and transportation (Target 7.3), or an improvement in energy efficiency by 2.6% on average per year (Target 7.4). Here we distill the progress and hurdles.

650 million

NUMBER OF PEOPLE UNELECTRIFIED BY 2030

2.2 billion

NUMBER OF PEOPLE WITHOUT CLEAN COOKING BY 2030

$55 billion

NEEDED YEARLY TO ACHIEVE UNIVERSAL ENERGY ACCESS BY 2030

Target 7.1: The share of global population with access to electricity rose from 83% in 2010 to 89% in 2017. Despite accelerating growth, global electricity access rate will reach only 92% by 2030, leaving 650 million unserved.

» The global population without access to electricity fell from 1.2 billion in 2010 to 840 million in 2017. At least 34 million gained access through decentralized renewable energy (DRE). (15,23)

» Electrification rates accelerated between 2015–17, currently at 1.8% faster than global population growth, mainly because of progress in Central and Southern Asia. Sub-Saharan Africa now accounts for 68% of the access deficit, with over 573 million people unelectrified. (20)

» Rural electrification rates also accelerated, with DRE playing a critical role. Between 2015–17, 16 million have gainsted access while population growth was 11 million. In Ethiopia and Myanmar, DRE supplies more than 60% of rural connectivity. Urban electrification rates remained constant due to growing urban population. (21,26)

» Latest projections place the global access rate in 2030 at 92%, leaving 650 million people around the world without access to electricity. (17)

» To achieve universal access, US$55 billion is needed annually between 2018 and 2030, together with strong policy frameworks that leverage private funding, exploit the full DRE potential, and stimulate productive use. (32,33)

Target 7.2: The share of global population with access to clean cooking rose from 57% to 61% between 2010–17. By 2030 the access rate might only reach 74% at current pace.

» Clean cooking lies at the crossroads of energy, gender, health and climate change. Better access prevents premature deaths from indoor air pollution, empowers women due to less time spent on fuel collection, reduced deforestation, and lower greenhouse gas emissions. (7)

» The share of global population with access to clean fuels and technologies for cooking increased from 57% in 2010 to 61% in 2017. But because population growth is outpacing annual growth in access, the population without access to clean cooking remains just under 3 billion. (6,41)

» China and India alone accounted for 45% of the population without access in 2017. (48)

» To attain universal clean cooking targets by 2030, the annual average rate of increase in access must rise from 0.5% between 2010–17 to 3% between 2018–2030. (41)

» At current pace, it is estimated that 2.2 billion people will still lack access to clean cooking by 2030, and 40% of those will be in sub-Saharan Africa, as the access deficit in East Asia and South Asia continues to decline. (41,47)

» Greater use of liquid petroleum gas (LPG) is appropriate in urban areas, as population density justifies investment in infrastructure, while improved biomass cookstoves suit rural areas. (6,7)

» Universal clean cooking access requires finance, technological innovation, new delivery models, and improved affordability. (54)

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Target 7.3: The share of renewables in total final energy consumption (including electricity, heating and transportation) reached 17.5% in 2016. Despite remarkable progress, renewables still face persistent financial, regulatory, and technological barriers.

- The share of renewables in global energy consumption for 2016 was 24% in electricity, 10% for modern heating and 3.3% in transport. Together the average share of renewables was 17.5%. (63)
- Renewable energy sources for electricity, heating and transport continue to shift away from traditional biofuels to modern renewables. By 2016, 10.2% of renewable consumption was modern and 7.3% was traditional. Electricity consumption mainly comes from hydro while heating and transport from bioenergy. Non-hydro renewables make up 32% of global renewable energy consumption. (66,67,69,72)
- To foster an enabling environment, it is key to establish supportive governance and institutional architecture, raise consumers' awareness, induce behavioral change, and couple renewable energy policies with livelihood development. (74)
- As the share of non-dispatchable and variable renewable energy sources, such as solar and wind, increases, investment is needed in power plant flexibility, demand-side management, energy storage and grid infrastructure improvements. (76)
- Between 2018–30, US$700 billion annual investment is needed to increase the share of renewable energy in electricity, heating and transportation. (1)

Target 7.4: The average annual rate of improvement in global primary energy intensity between 2010 and 2016 was 2.3%, below the SDG target of 2.6% by 2030. Annual improvements need to average over 2.7% until 2030 to meet the SDG target.

- Global primary energy intensity, defined as the energy supply per unit of GDP, declined by 2.5% and reached 5.1 MJ/US$ from 2015–16. (81)
- Under a scenario where energy efficiency is maximized, a 3.5% rate of decline in primary energy intensity could not only meet but even exceed SDG target 7.4 by 2030. (94,101)
- Fiscal and financial incentives are policy tools that can be used by governments to complement direct regulation and encourage greater levels of efficiency. In 2016, over 32% of global energy use was regulated by mandatory energy efficiency policies. (32)
- In 2016, total energy efficiency investments amounted to US$231 billion, a majority in the buildings sector. Between 2018–30, US$600 billion annual investment is needed to improve energy efficiency. (1)

Share the Message: None of the SDG 7 targets will be achieved by 2030 under the New Policy Scenario. Total investment needed to reach SDG 7 is US$1,320 billion per year between 2018–30.

- Under the New Policies Scenario, by 2030, 650 million people will still be living without electricity, 2.2 billion people will still be dependent on inefficient and polluting cooking fuels, modern renewables (excluding traditional use of biomass) will reach just over 15% of total renewable share, and energy intensity improvements will average 2.4% per year. (101)
- Total investment needed to reach SDG 7 is approximately US$1320 billion per year between 2018–30: US$51 billion for electricity access, US$4 billion for access to clean cooking solutions, over US$660 billion for renewables and US$600 billion for energy efficiency. (101)
- Less than 5% of that investment is needed to achieve Target 7.1 and 7.2. (101)

Sources:
1. "Tracking SDG 7: The Energy Progress Report 2019," IEA, IRENA, WHO, WB. Washington DC. June 2019.