

Renewables 2023 Global Status Report collection

Economic & Social Value Creation

Energy Access Factsheet

Key Headlines

- Globally, 113 countries did not have universal access to electricity as of 2022, and only 54 of these countries had targets for electricity access. Meanwhile, 128 countries lacked universal access to clean cooking, and only 39 of these countries had access targets.
- The number of people without access to electricity was set to increase in 2022 for the first time in decades, rising by some 20 million to reach 774 million.
- An estimated 1.2 gigawatts (GW) of off-grid renewable energy capacity was added in 2022, bringing the total to around 12.4 GW.
- The number of people gaining access to electricity through off-grid renewable-based systems more than doubled from 19 million in 2012 to 41 million in 2021.
- The installed capacity of distributed renewables for electricity access (DREA) achieved record levels in 2022, with sales of solar photovoltaic (PV) products growing 24% and installed off-grid capacity growing 11%.
- The costs of solar and hybrid mini-grids increased 20% on average in 2022.

Key Drivers

- Deployment of renewable energy technologies can enable countries to reduce energy imports and the negative impacts of volatile fossil fuel prices, thereby improving national and regional **energy security**.
- Renewables can provide **electricity access** to rural areas far from the main power grid, helping to alleviate poverty and support low-income communities.
- Replacing fossil fuels with renewables brings considerable **health benefits**, including from reduced air and water pollution.

Current Status, Policy and Investment

Current Status of Electricity Access

- The African countries with the lowest shares of the population having access to electricity are **South Sudan** (7%), **Chad** (11%) and **Burundi** (12%).
- Investment in off-grid solar solutions increased 63% in 2022 to reach USD 746 million.
- As of 2022, an estimated 48 million people globally were connected to around 21,500 **mini-grids**, for a total capacity of 7,224 megawatts (MW). South Asia had 9,600 systems with a total capacity of 407 MW, East Asia and the Pacific had 7,200 systems with a total capacity of 1,530 MW, and Africa had 3,100 systems with a total capacity of 1,960 MW.
- As of 2022, most mini-grid projects were in **India** (18,900), **Nigeria** (2,700), **Tanzania** (1,500) and **Senegal** (1,200). Another 29,400 mini grids were in planning stages, for a total of 2,657 MW, with a potential to connect more than 35 million people, mainly in Africa (9,000 projects) and South Asia (19,000 projects).
- Achieving universal access to electricity will require more than 217,000 new mini-grids by 2030, at a cumulative investment cost of nearly USD 127 billion.

Current Status of Clean Cooking

- Worldwide, nearly 4 million people die each year from diseases attributable to household air pollution.
- Replacing wood and charcoal stoves in **Sub-Saharan Africa** could prevent an estimated 463,000 deaths annually and save USD 66 billion in health spending.
- Women are typically the most exposed to the adverse health effects of cooking with traditional, polluting fuels. Electrification increases the likelihood of women finding jobs by 9% to 23%.

Policy

- Policies for access to electricity and clean cooking remain insufficient.
- Between 2010 and 2020, 45 countries achieved universal **access to electricity**.
- Out of 113 countries without electricity access as of 2022, 25 had set targets to achieve universal access to electricity by or before 2030, and another 29 had set targets to improve access; meanwhile, 59 countries remained without electricity access targets.
- Out of 128 of countries lacking universal access to **clean cooking**, only 19 had official targets to provide universal access to clean cooking by 2030, another 20 had less ambitious targets. 89 countries were without any targets for access to clean cooking.
- **In Rwanda**, “RBF Window 5” provides a subsidy for low-income households in off-grid areas.

Investment

- While investment in DREA shows steady progress, many mini-grid and off-grid renewable energy projects in developing countries are not yet commercially viable, and there remains a prevalent need for grants and funding schemes.
- Cumulative investment in mini-grids for energy access rose from around USD 13 billion in 2018 to USD 16 billion in 2021.
- **Solar PV** products dominate the market in off-grid renewable energy solutions, accounting for 92% of overall investments between 2010 and 2021.
- Investment in off-grid solar PV solutions increased 63% in 2022 to reach an all-time high of USD 746 million.
- **Sub-Saharan Africa** remains the primary destination for off-grid investment, attracting USD 2.2 billion between 2010 and 2021, or around 70% of the worldwide total.
- As of 2022, the World Bank had an active portfolio of USD 2.7 billion for DREA, targeting electrification for around 40 million people.
- Investment in clean cooking companies remains in the tens of millions of dollars, well below the USD 4.5 billion of annual investment needed.