Renewables 2023 Global Status Report collection
Global Overview Factsheet

Key Headlines

Global Overview

- The ongoing energy crisis, exacerbated by the Russian Federation's invasion of Ukraine, has exposed the **vulnerability of fossil fuels**, bringing more attention to **renewable energy as a stable and cheaper energy source**.
- The number of **people without access to electricity increased in 2022** for the first time in decades, due mainly to high energy prices.
- Although deployment of **renewable energy** is showing steady growth, they accounted only for **12.6% of total final energy consumption** in 2021, while fossil fuels remained at 78.9% and nuclear and traditional biomass at 8.5%.
- National governments are increasingly recognising the economic and social benefits of renewables.
- Investment in energy systems and electrification, underpinned by strong policy frameworks, are necessary to further increase renewable energy deployment.

Demand Modules

- The use of renewable energy as a reliable and affordable energy source is growing, and end-use sectors are increasing their uptake of renewables.
- **Renewable energy shares increased in all four key demand sectors in 2020**, to reach 16.8% of energy consumption in *industry*, 15.5% each in the *buildings* and *agriculture* sectors, and 4.1% in *transport*. The uptake of renewables is **underpinned by policies**, such as the European Commission's REPowerEU plan and the US Inflation Reduction Act.
- Electrification allows for higher integration of renewables, although this share varies by sector.
- Electrification and decarbonisation of the **transport** sector are necessary, as the sector has the **lowest share of electrification** (1.4%) while being the fastest growing energy-consuming sector (2% per year).

Supply Module

- Renewable energy has shown **record growth, although this has occurred mainly for a few key technologies and geographies**.
- Growth in renewables is most noticeable in the power sector, where renewable energy accounted for 30% of total generation in 2022; meanwhile, **critical energy carriers such as renewable heat and renewable-based fuels remain neglected.**
- **Policy incentives have been concentrated on the power sector** (as many as 174 national and sub-national jurisdictions had targets for renewable power shares as of 2022). More attention is needed in heat and fuel.
- **Solar photovoltaics (PV) and wind power dominate annual additions** of renewable power, together contributing 92% in 2022.

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- **The shift to renewable energy supply as uneven across regions**, China continued to lead in new renewable energy investments in 2022, followed by Europe with 11%, and the United States with 10%. While Africa and the Middle East combined represented only 1.6% of global investment in renewables

- **Energy Systems & Infrastructure Module**

- Investment in energy systems and infrastructure is necessary to increase the renewable energy share.
- Several countries have achieved high penetration of variable renewable electricity (wind and solar power), enabled by regional interconnections, digitalisation and storage developments.
- Grid infrastructure development is a key bottleneck. Across the United States and Europe, an estimated **1,000 gigawatts (GW) of solar projects were reportedly stuck in the interconnection queue as of as of the end of 2022**.

Economic & Social Value Creation Module

- Renewable energy has shown various b**enefits in terms of employment, energy access, clean cooking and local value creation.** Many governments have acknowledged these opportunities and provided support schemes.
- Deployment of renewables contributes to growth in gross domestic product and creates employment opportunities. In 2021, renewable energy employment increased to reach a record high of **12.7 million jobs**.
- Off-grid renewable-based systems are becoming a solid solution for electricity access. The **number of people gaining access to electricity through off-grid renewable-based systems doubled** from 19 million in 2012 to 41 million in 2021.
- Countries are seeking to strengthen their supply chains for renewable energy manufacturing through schemes such as tax incentives, tenders and auctions, and bans on exports of unprocessed raw minerals.

Regional Facts

Africa

- Africa is experiencing **significant growth** in renewable energy installations, but related investment in the region remains low due to the higher cost for debt and equity.
- **Access to electricity remains a significant challenge** in many parts of Africa. A key solution in the region is distributed renewable energy, with record growth in solar PV and off-grid capacity.

Asia

- The share of renewables in Asia's electricity mix grew 10% in the decade from 2012 to 2022, from 17% to 27%, due mainly to an increase in solar and wind power.
- **China's** overall investment in renewables increased sharply in 2022, rising 56.2% to reach USD 274.4 billion, or 55% of the global total.

- **India's** production-linked scheme is set to increase domestic manufacturing capacity of renewable energy and enabling technologies, and the country is projected to become the world's second largest renewable energy manufacturer.
- Total pumped storage capacity increased by 10.6 GW in 2022, for a global total of 175 GW. **China** accounted for most (82%) of the new capacity.

Europe

- The European Union's RepowerEU plan aims to increase the renewable energy share in the region from the current 40% up to 45% by 2030. It allocates a total investment of USD 222 billion during 2023-2027 to phase out fossil fuel imports.
- Several European countries ranked in the top ten globally in wind power additions in 2022.

Latin America

- Latin America and the Caribbean continued to have the highest renewable electricity share among world regions in 2022, at 61% (up from 56% in 2012).
- **Brazil**'s total investment in renewables increased 18.3% in 2022, to USD 14.8 billion.
- A common framework for sustainable finance taxonomies was officially initiated across Latin America and the Caribbean in 2022, to clarify the definition of "sustainable" and "green" in economic activities.

Middle East

- Despite abundant solar and wind resources and growing water scarcity, the Middle East continued to lag behind other regions in the share of renewable electricity, which reached only 3.4% in 2022.

North America

- The US Inflation Reduction Act allocates USD 370 billion in new spending and tax credits and addresses all main energy demand sectors. In buildings and transport, it provides tax credits for electric vehicles, energy-efficient appliances, rooftop solar, geothermal heating, and home batteries, and for the industry and agriculture sectors it provides tax incentives for private investment in renewables.
- More than USD 70 billion in investment in clean technology manufacturing was announced between the Act's passage in August 2022 and late May 2023.