Global landscape of renewable energy finance

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About IRENA

» Intergovernmental organization established in 2011 headquartered in Abu Dhabi, UAE

» **Mandate**: To promote the widespread adoption and sustainable use of all forms of renewable energy worldwide

» **Membership**: 168 Members and 16 States in Accession
Global investments in renewable energy, by technology,

- In 2022, RE investments increased by 16% reaching almost USD 0.5 trillion
- Solar PV attracted 43% of investment in 2020, followed by onshore (35%) and offshore wind (12%)
- Investment are increasingly concentrated in China and the United States
- Investments need to more than triple according to IRENA’s 1.5°C Scenario

Note: CAGR = compound annual growth rate; CSP = concentrated solar power; PV = photovoltaic.
Source: CPI (2022a). Investments for 2021 and 2022 are based on data from BNEF (2023).
Regional differences in renewable energy investment per capita

- **LDCs** received less than 1% of investments.
- More than half of the world’s population receive only 15% of investments.
- **Disparities** in per capita investments have halved in 2015 - 21.

Progress in **renewables** deployment along with their benefits are **unequally distributed** across regions.
Deployment policies driving investments in ASEAN

**Renewable energy investments by country, 2012-2021**

- Vietnam
- Thailand
- Indonesia
- Philippines
- Malaysia
- Singapore

**Renewable energy investments by technology, 2012-2021**

- Solar PV
- Solar Thermal
- Onshore Wind
- Offshore Wind
- Biomass and Waste
- Biofuels
- Geothermal
- Small hydro

Source: Based on BNEF
Investment in decentralized renewable energy (DRE) in developing countries

To date, the **DRE sector** has received **almost USD 4 billion** in investments.

More than **200 million people** have gained **access** from DRE solutions in the last 10 years.

**High return on investment** especially when considering associated **socio-economic benefits**.
Investment in DRE in developing countries

- Investments reached USD 558 million in 2021, a 27% increase from 2020.
- Investments driven by:
  i. Strong growth in Africa
  ii. Increased public financing
  iii. Few large companies with strong market position
- Average transaction size more than doubled between 2020-2021.
- Overall investments are far short of the USD 15 billion needed annually between 2021 and 2030.

Based on Wood Mackenzie (2022).
Investment in DRE by technology and sector

- Majority of investments went to SHSs and residential applications between 2010 and 2021 (USD 1.74 billion, 56%)
- Micro- and mini-grids attracted about USD 650 million (21% of total)
- The share going to commercial and industrial (C&I) applications has expanded from 8% in 2015 to 32% in 2021
- Powering C&I applications can promote local economies by creating jobs and spurring economic growth, while enhancing food security and resilience

Based on Wood Mackenzie (2022).
Conclusions and way forward
The way forward

- The availability of capital for public investments will need to be increased, and lending to developing nations transformed

- Funds with more grants and concessional loans will be needed

- Multilateral and bilateral DFIs provided around 3% of total renewable energy investments in 2020 but portion of Grants and concessional loans remains low

- Even the JETPs mainly provide loans with very few grants
• Financing needs vary for various stakeholders:
  • **Technology providers/distributors** need capital for R&D, innovation, distribution, and designing consumer financing products
  • **End-users** need tailored consumer finance products, at concessional rates, and long tenures

• Changing role for decentralized solutions: transition from a tech-focused approach to a needs-based approach
  • Links to public services and resilient livelihoods