



Tripling Renewables by 2030

For Prelims: Tripling Renewables by 2030, [Renewables Energy](#), [COP \(Conference of Parties\) 28](#), Net Zero [emissions by 2070](#).

For Mains: Tripling Renewables by 2030, Environmental Pollution & Degradation.

Source: [DTE](#)

Why in News?

Recently, a report has been published by **Think-Tank Climate Analytics** titled **Tripling renewables by 2030: Interpreting the global goal at the regional level**, which breaks down what a **1.5°C-aligned Renewables rollout would look like** at the regional level and calculates the associated investment needs.

- At [COP \(Conference of Parties\) 28](#), governments agreed to triple global renewable capacity by 2030. This, alongside **doubling energy efficiency**, is possibly the most powerful action the world can take in the transition away from fossil fuels this critical decade.

What are the Key Highlights of the Report?

- **Tripling Renewables for 1.5°C Target:**
 - To align with the 1.5°C target set in the [Paris Agreement](#), global renewable capacity needs to grow to **11.5 TW by 2030**, which is 3.4 times higher than 2022 levels.
 - To achieve this, different regions scale at different rates relative to their current renewable capacity, driven by the pace of fossil **phase-out needed and future electricity demand growth**.

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A regional breakdown of 1.5°C compatible renewables deployment

	Renewable capacity in 2030 (GW)	Capacity additions needed over 2023–2030 (GW)	Renewable capacity in 2030 (relative to 2022)	Renewable capacity growth from 2014–2022
Sub-Saharan Africa	300	260	x 6.6	x 1.9
Middle East and North Africa	500	460	x 11.8	x 1.8
Latin America	730	420	x 2.3	x 1.6
Eurasia	340	240	x 3.6	x 1.2
Asia	5350	3850	x 3.6	x 2.7
OECD	4290	2910	x 3.1	x 1.7
World	11510	8130	x 3.4	x 2.0

Regional Contributions:

- **Asian Region:** Asia makes the biggest **overall contribution**, providing around half (47%) of the 8.1 TW of renewable capacity additions needed globally by 2030.
 - Asia is the only region that is broadly on track to triple renewables in line with 1.5°C by 2030.
 - This is primarily driven by growth in China and India which compensates for laggards like South Korea, where renewable capacity is set to grow at half the rate of the region as a whole.
 - However, the spree of coal-fired power plant construction in China and India is a huge concern. If this **continues**, it will either **jeopardise a 1.5°C-aligned power sector transition** or create large-scale stranded assets.
- **OECD:** The **OECD (Organisation for Economic Co-operation and Development)** provides the next biggest share of global capacity additions at around a third (36%).
 - Renewables in the region scale at a slower rate of 3.1x due to **lower electricity demand growth** and a higher level of existing renewable capacity installed in 2022.
- **Sub-Saharan Africa:** Sub-Saharan Africa scales **relatively quickly at 6.6x due to low levels of existing renewable capacity** and high energy access needs.
 - Electricity demand is forecast to grow 66% per capita between 2020-2030 in the region, resulting in a renewables scale up rate that is double the global average.
 - Achieving such a rapid renewables rollout in Sub-Saharan Africa would require significantly upscaled international climate finance.

Investment Requirements:

- Achieving the 1.5°C-aligned target requires USD 12 trillion of investment in the power system by 2030, with an average of USD 2 trillion per year from 2024 onwards.
- Two-thirds of this investment would be allocated to renewable installations, while the remainder would be for grid and storage infrastructure.

- **Investment Gap and Potential Solutions:**
 - There exists a considerable investment gap, with the world set to invest USD 5 trillion less than required over 2024-2030.
 - Shifting investments from fossil fuels to renewables and grids could cover this gap entirely, **aligning the power sector with the 1.5°C target.**
- **Challenges and Urgency:**
 - Sub-Saharan Africa faces significant challenges due to a lack of investment and international support, risking millions missing out on the benefits of renewable energy.
 - Urgent action is needed to mobilise finance and support renewables deployment in less wealthy regions to ensure the COP28 pledge is fulfilled.
- **Policy Recommendations:**
 - In addition to scaling up renewables, governments must end public support and subsidies for fossil fuels to effectively reduce emissions.
 - To guide efforts towards the goal, governments need a clear roadmap and information on investment and climate finance needs, while civil society needs benchmarks to hold governments to account.

What are the Indian Initiatives towards Clean Energy Transition?

- **India has signalled a commitment to clean energy** with ambitious targets like 500GW of non-fossil, including 450 GW **Renewable Energy (RE)** capacity addition and 43% RE purchase obligation by 2030.
 - These targets are supported through complementary policy and legislative mandates (**Energy Conservation (Amendment) Act**), missions (**National Green Hydrogen Mission**), fiscal incentives (**production-linked incentives**) and market mechanisms (upcoming **national carbon market**).
- **Net Zero Target:**
 - India has set itself an ambitious long-term goal of reaching net zero **emissions by 2070**.
 - In August 2022, India updated its **Nationally Determined Contributions (NDC)** under the Paris Agreement to reflect its aim of achieving 50% cumulative electric power installed capacity from non-fossil fuel based energy sources by 2030.
- **Energy Conservation Amendment Bill, 2022:**
 - In August 2022, the Lok Sabha passed the Energy Conservation Amendment Bill, 2022 which aims to **mandate the use of non-fossil fuel sources** including green hydrogen, green ammonia, biomass and ethanol for energy and feedstock in industries.
 - The Bill also gives the power to the Central Government to establish carbon markets.

INDIA'S CLIMATE TARGETS: EXISTING AND NEW			
Target (for 2030)	Existing: First NDC (2015)	New: Updated NDC (2022)	Progress
Emission intensity reduction	33-35 per cent from 2005 levels	45 per cent from 2005 levels	24 per cent reduction achieved in 2016 itself. Estimated to have reached 30 per cent
Share of non-fossil fuels in installed electricity capacity	40 per cent	50 per cent	41.5 per cent achieved by the end of June this year
Carbon sink	Creation of 2.5 to 3 billion tonnes of additional sink through afforestation	Same as earlier	Not clear.

Read more: [IEA Report Electricity 2024](#), [Indian Oil Market Outlook to 2030: IEA](#)

UPSC Civil Services Examination Previous Year Question (PYQ)

Prelims

Q. With reference to the Agreement at the UNFCCC Meeting in Paris in 2015, which of the following statements is/are correct? (2016)

1. The Agreement was signed by all the member countries of the UN, and it will go into effect in 2017.
2. The Agreement aims to limit greenhouse gas emissions so that the rise in average global temperature by the end of this century does not exceed 2°C or even 1.5°C above pre-industrial levels.
3. Developed countries acknowledged their historical responsibility in global warming and committed to donate \$ 1000 billion a year from 2020 to help developing countries to cope with climate change.

Select the correct answer using the code given below:

- (a) 1 and 3 only
- (b) 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

Ans: B

Mains

Q. Describe the major outcomes of the 26th session of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC). What are the commitments made by India in this conference? (2021)