



Wind and solar power generation is growing by around 15-20% per year ??? based on a 10-year average ??? and looks set to outstrip any increases in annual electricity demand by the end of 2023 as they are, in many countries, already cheaper and strategically more secure than fossil fuels. Other non-fossil fuels are also generating more power



The need for renewable energy innovation has never been greater. In its 2023 report, Fostering Effective Energy Transition, the World Economic Forum says that 95% of countries have improved their total Energy Transition Index score over the past decade, but there has been only "marginal growth" in the past three years. Discover.



From solar to hydrogen, Vibhuti Garg explored the future of energy across the country. Investment in renewable energy hit record levels in India in the 2021-22 financial year, according to a new report from the Institute for Energy Economics and Financial Analysis. A total of \$14.5 billion was invested in renewable energy, up by 125% compared

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In theory, yes. Wave energy globally could meet the world's annual electricity needs, if it was fully harnessed, scientists have estimated. Indeed, the waves around the United States coasts could provide 66% of the country's electricity, according to the US Energy Information Administration. Many countries - including Australia, China

- 2028: Renewable energy sources account for over
42% of global electricity generation, with the share of wind and solar PV doubling to 25%. "The new
IEA [Renewables 2023] report shows that under current policies and market conditions, global renewable capacity is already on course to increase by two-and-a-half times by 2030.



After all, solar photovoltaic systems produce the most during long sunny summer days when the demand for electricity is high and it costs more money to generate power. Thus, according to this argument, the excess solar generation deposited onto the grid during the day is more valuable than the electricity withdrawn at nighttime.

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3. Thermal energy storage. Thermal energy storage is used particularly in buildings and industrial processes. It involves storing excess energy ??? typically surplus energy from renewable sources, or waste heat ??? to be used later for heating, cooling or power generation. Liquids ??? such as water ??? or solid material - such as sand or rocks

Offshore wind farms are hitting the headlines across the globe for their sheer scale - and as countries increasingly turn to them to decrease their dependency on energy from Russia as well as speed up their energy transition. Global capacity of large-scale wind farms is expected to increase 10-fold, from 34 GW in 2020 to 330 GW in 2030, and



India is also particularly vulnerable to climate change. Solar power could be the answer to both problems. With 300 sunny days a year, India can lead the world in solar capacity. Doing so will require strong policy-making and foreign investment ??? but the rewards will be manifold. A quarter-century of growth has transformed the lives of

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Investing in Africa's renewables. According to the International Energy Agency (IEA), Africa has 60% of the world's best solar resources, but only 1% of solar generation capacity. To achieve its energy and climate goals, Africa needs \$190 billion of investment a year between 2026 to 2030, with two-thirds of this going to clean energy, the