New energy

More efficient solar cells mean each solar panel can generate more electricity, saving on materials and the land needed. Manufacturing silicon solar cells is also an energy-intensive process. Experts warn that renewable power capacity must triple by 2030 to limit global warming to 1.5°C, and solar is predicted to play a major role, so the ...

The IEA"s World Energy Outlook 2021 report says there are encouraging signs that change is starting to happen, prompted partly by the COVID-19 pandemic which dampened energy demand and saw electric vehicles claim a bigger market share. "The new energy economy will be more electrified, efficient, interconnected and clean," says the IEA.

The World Bank Group supports Morocco, India and other countries in developing renewable energy resources cheaper, faster, and better by unlocking a pipeline of bankable renewable energy projects. In the last few years, the World Bank has invested more than $8 billion in clean energy, renewable energy access, and related infrastructure, and ...

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 ...

Clean energy boomed in 2023, with 50% more renewables capacity added to energy systems around the world compared to the previous year. Additional renewable electricity capacity reached 507 gigawatts (GW) in 2023, with solar PV making up three-quarters of global additions, according to the International Energy Agency"s (IEA) Renewables 2023 ...

The world is generating more renewable energy than ever before. Wind and solar power are the biggest sources of green electricity. Renewables and nuclear will provide the majority of global power supplies by 2030, according to the IEA. A new generation of green power plants will add to renewables capacity worldwide.

2. New energy security challenges. While global reliance on hydrocarbons will decline, new dependencies on critical minerals and technology will arise. Minerals powering the energy transition - like lithium, copper, cobalt, nickel, and rare earth elements - need additional investment. Their supply sources and demand centres will become new ...

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.

The IEA says 2021"s 6% growth will be followed by an 8% rise in installed capacity in 2022, led by a surge in solar power. However, progress has been uneven, with a 17% decline in new wind installations in 2021 offset by the rise in solar and hydropower. In India, the rate of growth in renewable energy doubled in 2021 after a record slowdown ...

Renewable world One study in the collection looked at global warming, air pollution and energy insecurity, creating Green New Deal roadmaps for 143 countries to overcome these problems. The roadmaps call for these countries, which are collectively responsible for 99.7% of global CO2 emissions, to switch to 100% clean, renewable wind, ...

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