RENEWABLES

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Renewable energy plays a crucial role in the transition to zero-carbon energy. Understanding the current role of renewable energy sources in the decarbonization of various sectors is key to ensuring a smooth path to net-zero (Global Energy Review (2021) p. 2).

One of the most promising developments is in the field of perovskite solar cells. These cells have seen a pivotal breakthrough, which could have significant implications for renewable energy. The evolution of perovskite solar cells represents a huge step forward in harnessing solar power more efficiently.

Another exciting development is the use of artificial intelligence (AI) algorithms for controlling the heating and cooling of office buildings. These systems do not require ambient sensors or specific knowledge of the building's rooms, making them highly adaptable and efficient.

According to the International Energy Agency's Global Energy Review 2021, renewable energy use grew by 3% in 2020, while demand for all other fuels fell. The main driver was almost a 7% increase in renewable electricity generation. (Renewables 2021)

Renewable electricity generation in 2021 is expected to increase by more than 8% and reach 8,300 TWh, marking the fastest annual growth since the 1970s. Solar photovoltaics and wind power are expected to make up two-thirds of renewable growth. (Renewables 2021)

In 2021, China alone is expected to account for almost half of the global increase in renewable electricity generation, followed by the United States, the European Union, and India. (Renewables 2021)

References:

1. Global Energy Review (2021) – Analysis - IEA
2. Renewables 2021 – Analysis - IEA - International Energy Agency. Retrieved from https://www.iea.org/reports/global-energy-review-2021/renewables