World Energy Outlook 2021

WEO Week Day 3 - Electricity sector transitions: policy and finance

20 October 2021

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Fossil fuels accounted for 61% of electricity generation in 2020, the lowest level in 30 years, and renewables for nearly 30%, by 2030, wind and solar PV growth lead renewables to nearly 50% under announced pledges & potentially much higher.
Towards a decarbonised electricity sector

New policies and announced climate pledges have pulled the projected emissions curve down. Almost 60% of the 2030 ambition gap to keep a 1.5 °C path within reach could be closed with cost-effective measures.
As new coal power drops, policy focus shifts to the existing fleet

After decades of growth, new unabated coal power plants sharply decline under announced pledges, and strategies to retrofit, repurpose or retire existing plants cut 100 Gt of emissions to 2050.
Significant investment is needed by 2030 to fill the ambition gap

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Grid investment must rise to support orderly transitions

Advanced planning and network-wide coordination become increasing priorities to ensure grid infrastructure readiness in tandem with the growth of low emissions generation.
Flexibility is the cornerstone of electricity security

Quadrupling of flexibility needs in the NZE and more than tripling in the APS would require rapid deployment of dispatchable low-emissions capacity alongside greater use of demand response and scaling up of electricity storage.
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