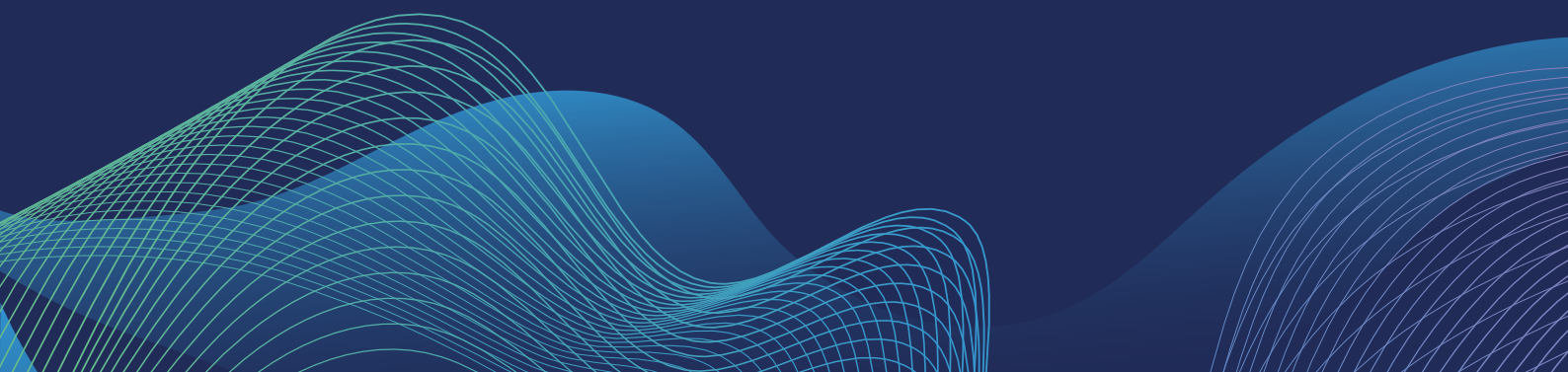


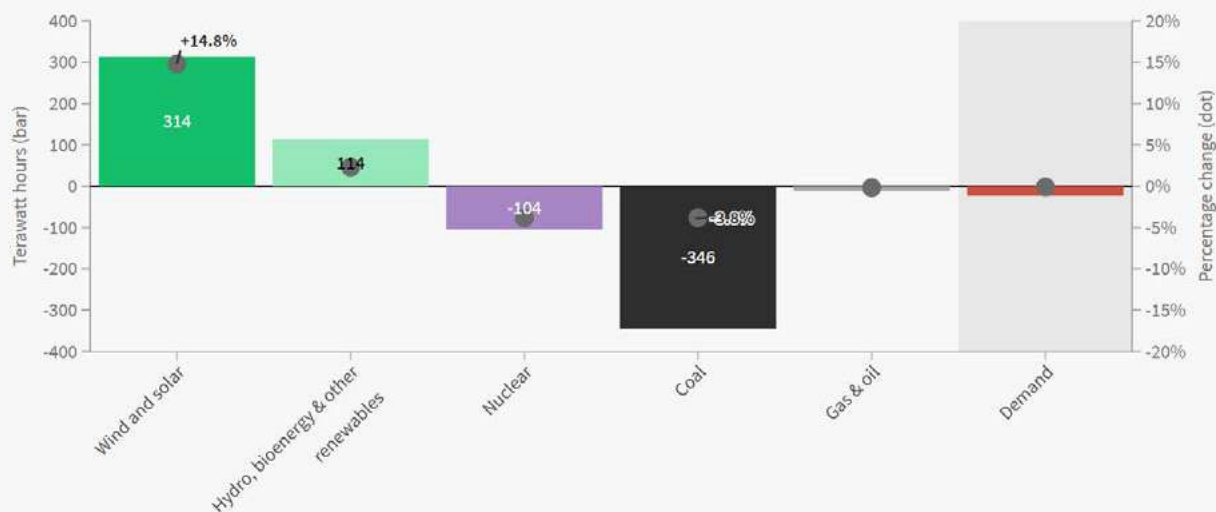
WHAT HAPPENED IN 2020?

Electricity generated by new wind and solar helped to force a record fall in global coal power in 2020. However, this was only possible because the pandemic paused the world's rising demand for electricity. Only China saw a large increase in coal in 2020.



Wind and solar cause record fall in coal as demand growth paused

Electricity generation change in 2020 versus 2019, by source



Ember's Global Electricity Review, March 2021.

Wind and solar generation rose by 15% (+315 TWh) in 2020, more than the UK's entire electricity production. That helped coal to fall a record 4% (-346 TWh).

This dwarfed all the other changes to electricity in 2020. Nuclear generation fell 4%, while hydro generation rose 3% due to rainy conditions in China, EU-27 and Russia. Gas and oil generation registered a very small fall of 0.2% (-0.9% for gas, +3.5% for other fossil). It was only the second year gas generation fell this century.

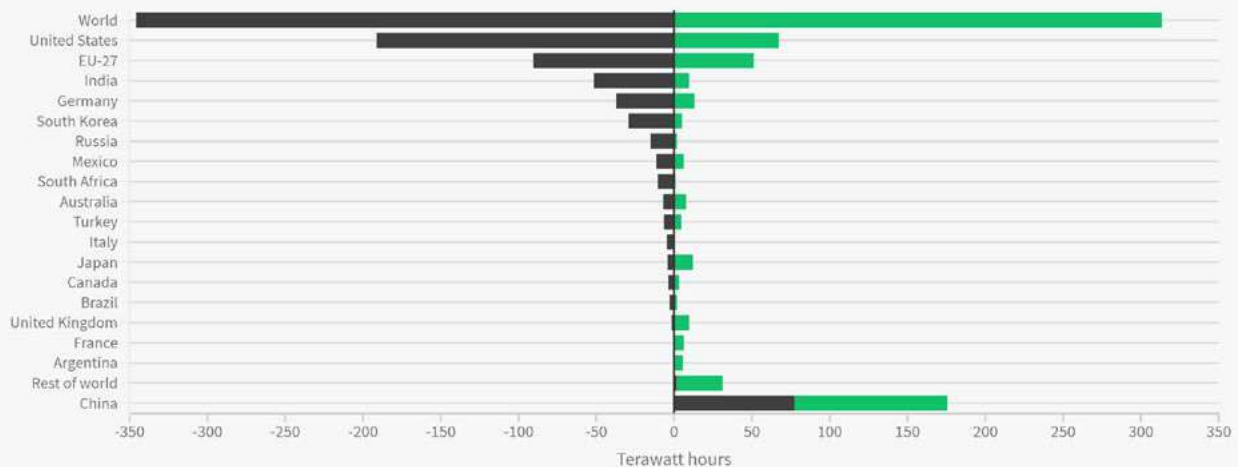
Electricity demand remained almost unchanged year-on-year, falling 0.1%. It was only the second time this century that electricity demand fell; it fell 0.3% in 2009 due to the global recession.

The increase in global wind and solar generation was the biggest ever in absolute terms, rising a record 315 TWh. However in relative terms it was the smallest on record, rising 15% year-on-year. So although wind and solar generation is steadily rising every year, it's not yet accelerating in a way needed to reach climate targets.

China isolated as the world turns away from coal power in 2020

Electricity generation change in 2020 versus 2019, for G20 countries

■ Coal ■ Wind and solar



Indonesia and Saudi Arabia are not included as no 2020 data exists.
Ember's Global Electricity Review, March 2021.

In 2020, almost every G20 country saw a rise in wind and solar generation and a fall in coal generation. This contributed to the record fall in global coal generation.

In many countries, wind and solar only partly contributed to the fall in coal. It was also caused by a fall in electricity demand. In the US, electricity demand fell 2.5%, the EU-27 fell 3.5%, India fell 2.3%. This—alongside increases in wind and solar generation—meant that coal generation saw particularly large falls in these countries. If electricity demand grows rapidly in 2021, it is possible that wind and solar growth will not be enough to ensure coal continues to fall.

China was an exception, seeing a 4% increase in electricity demand, which meant it was the only G20 country to show a large increase in coal generation (+1.7%), and despite large growth in wind and solar, clean generation was unable to wholly meet increased demand. Only a third of China's increase in electricity demand was met from gains in wind and solar generation, and another third from increased hydro, nuclear and bioenergy, leaving the need for increased coal generation.

PROGRESS SINCE PARIS

Wind and solar doubled in five years to generate almost a tenth of global electricity in 2020. Although coal's market share is falling, absolute coal generation is only 0.8% lower than five years ago. Coal is collapsing in OECD countries. But coal still rose in Asia; the clean electricity boom still isn't keeping up with fast-rising electricity demand. In fact, the world generated more electricity from fossil fuels in 2020 than in 2015 when the Paris Agreement was signed.