

# Wind power generation costs less than coal

Are solar PV & onshore wind the cheapest new coal option?

With record low auction prices of USD 1.1 to 3 cents per kWh today, solar PV and onshore wind continuously undercut even the cheapest new coal option without any financial support. IRENA's report also shows that new renewables beat existing coal plants on operating costs too, stranding coal power as increasingly uneconomic.

Is coal more expensive than solar power?

In India, 141 GW of installed coal is more expensive than new renewable capacity. In Germany, no existing coal plant has lower operating costs than new solar PV or onshore wind capacity. Globally, over 800 GW of existing coal power costs more than new solar PV or onshore wind projects commissioned in 2021.

Do new renewables cost more than existing coal plants?

IRENA's report also shows that new renewables beat existing coal plants on operating costs too, stranding coal power as increasingly uneconomic. In the United States for example, 149 GW or 61 per cent of the total coal capacity costs more than new renewable capacity.

Are renewables undercutting coal's operational costs?

Concentrating solar power (CSP) fell by 16 per cent, onshore wind by 13 per cent, offshore wind by 9 per cent and solar PV by 7 per cent. With costs at low levels, renewables increasingly undercut existing coal's operational costs too.

Is renewable power cheaper than fossil fuels?

Renewable power is increasingly cheaper than any new electricity capacity based on fossil fuels, a new report by the International Renewable Energy Agency (IRENA) finds. Renewable Power Generation Costs in 2019 shows that more than half of the renewable capacity added in 2019 achieved lower power costs than the cheapest new coal plants.

Are renewables a viable alternative to coal?

With costs at low levels, renewables increasingly undercut existing coal's operational costs too. Low-cost renewables give developed and developing countries a strong business case to power past coal in pursuit of a net zero economy. Just 2020's new renewable project additions will save emerging economies up to USD 156 billion over their lifespan.

The lifetime cost per kWh of new solar and wind capacity added in Europe in 2021 will average at least four to six times less than the marginal generating costs of fossil fuels in 2022. Globally, new renewable capacity added in 2021 could ...

The outlook till 2022 sees global renewable power costs falling further, with onshore wind becoming 20-27

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per cent lower than the cheapest new coal-fired generation option. 74 per cent of all new solar PV projects ...

**Advantages of Wind Power.** Wind power creates good-paying jobs. There are nearly 150,000 people working in the U.S. wind industry across all 50 states, and that number continues to grow. According to the U.S. Bureau of Labor ...

This renewable power source was 710% more expensive than the cheapest fossil fuel-fired solution in 2010 but cost 29% less than the cheapest fossil fuel-fired solution in 2022. The fossil fuel price crisis of 2022 was a telling reminder of ...

Because wind cannot dispatch power in response to demand, the electricity it produces is less valuable, and its cost should not be compared directly against dispatchable resources like coal, nuclear power, or natural gas ...

The European example shows that fuel and CO<sub>2</sub> costs for existing gas plants might average four to six times more in 2022 than the lifetime cost of new solar PV and onshore wind commissioned in 2021. Between ...

A UK government auction has secured a record 11 gigawatts (GW) of new renewable energy capacity that will generate electricity nine times more cheaply than current gas prices.. The projects are all due to start ...

A comparative analysis of the Levelized Cost of Energy (LCOE) for various sources of electricity generation, based on available literature, shows that energy from wind and solar electricity is ...



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