

Wind farms are cheaper than you think, and could have prevented Fukushima nuclear disaster, says global review

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Offshore wind could have prevented the Fukushima disaster, according to a review of wind energy led by the University of Surrey.

The paper is [published](#) in the journal *National Institute Economic Review*.

The researchers found that offshore turbines could have averted the 2011 [nuclear disaster](#) in Japan by keeping the cooling systems running and avoiding meltdown. The team also found that [wind farms](#) are not as vulnerable to earthquakes.

Suby Bhattacharya, Professor of Geomechanics at the University of Surrey's Department of Civil and Environmental Engineering, said, "Wind power gives us plentiful clean energy—now we know that it could also make other facilities safer and more reliable. The global review finds that greener really is cheaper—thanks to falling [construction costs](#) and new ways to reduce wind turbines' ecological impact."

One of the report's starkest findings was that new wind farms can produce energy over twice as cheaply as new nuclear power stations.

The lifetime cost of generating wind power in the UK has fallen dramatically, from £160/MWh to £44/MWh. This includes all the costs of planning, building, operating and decommissioning the wind farm over its entire life.

By comparison, the UK Government has agreed to pay £92.50/MWh for energy produced at Hinkley Point C nuclear power station.

Professor Bhattacharya said, "What makes wind so attractive is that the fuel is free—and the cost of building turbines is falling. There is enough of it blowing around the world to power the planet 18 times over. Our report shows the industry is ironing out practical challenges and making this green power sustainable, too."

Although less power is generated in calmer conditions, the electricity generated could be stored in batteries—as planned for the Ishikari

project off the coast of Hokkaido, Japan. Or it could be used to produce hydrogen from seawater—giving us the fuel of the future.

More information: Subhamoy Bhattacharya et al, GREENER IS CHEAPER: AN EXAMPLE FROM OFFSHORE WIND FARMS, *National Institute Economic Review* (2024). [DOI: 10.1017/nie.2024.5](https://doi.org/10.1017/nie.2024.5)

Provided by University of Surrey

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