



This is the print version of the [Skeptical Science](#) article '[Shadow flicker from wind turbines can trigger seizures in people with epilepsy](#)', which can be found at <http://sks.to/windshadow>.

Can shadow flicker from wind turbines trigger seizures in people with epilepsy?

What The Science Says:

Even at its peak, shadow flicker from wind turbines typically remains far weaker than what is known to trigger seizures in people with epilepsy.

Climate Myth: Shadow flicker from wind turbines can trigger seizures in people with epilepsy

"Wind farms are more than just an eyesore. They can cause epileptic fits." [Daily Mail](#)

Even at its peak, shadow flicker from wind turbines typically remains far weaker than what is known to trigger seizures in people with epilepsy¹.

A 2021 academic study found that wind turbines operate between 0.5 to 1 Hz, much lower than the threshold frequency of 3 Hz typically required to cause a seizure (Karanikas et al. 2021). Similarly, a 2012 report prepared for the Massachusetts Department of Environmental Protection found that shadow flicker frequencies from wind turbines are "usually in the range of 0.3–1.0 Hz, which is outside of the range of seizure thresholds according to the National Resource Council and the Epilepsy Foundation."² If shadow flicker were to reach 3 Hz, the probability of causing a seizure in a member of the photosensitive population would be approximately 1.7/100,000.²

Additional public-health studies have likewise found that wind turbines do not cause seizures (Zaporozhets et al. 2022, Knopper et al. 2014). Wind turbines with three blades, for example, would need to rotate at a speed of 60 rpm to cause a seizure. However, modern turbines typically operate at maximum speeds between 15 and 17 rpm, depending on model, well below the 60 rpm threshold.

Footnotes:

[1] Wind Energy Technologies Office, [Frequently Asked Questions about Wind Energy](#), Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy (last visited March 25, 2024)

[2] [Wind Turbine Health Impact Study: Report of Independent Expert Panel](#), Massachusetts Department of Environmental Protection, 36 (2012)

This rebuttal is based on the report "[Rebutting 33 False Claims About Solar, Wind, and Electric Vehicles](#)" written by Matthew Eisenson, Jacob Elkin, Andy Fitch, Matthew Ard, Kaya Sittinger & Samuel Lavine and published by the [Sabin Center for Climate Change Law](#) at Columbia Law School in 2024. Skeptical Science sincerely appreciates Sabin Center's generosity in collaborating with us to make this information available as widely as possible.

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