Tailored scientific studies play a key role in combatting misinformation about renewable energy.

How Tailored Scientific Studies are Combatting Misinformation About Renewable Energy Development

Study Shows Typical Wind **Project Setbacks are Protective of Public Safety**









Flights conducted in the wake of an operating wind turbine to study concerns about wake turbulence.



Watch flight video here

Case Study: Aircraft Flight in Wind Turbine Wakes

Intro

- Renewable energy developers are increasingly faced with **misinformation** from project opposition groups during siting processes
- Persimia has worked with renewable energy developers to perform targeted, peer-reviewed studies that address common opposition talking points
- These studies have proven to be effective in countering misinformation

Case Study: Setbacks and Safety

- 2022 peer-reviewed study by Persimia CEO Dr. Jonathan Rogers showed that typical **1.1 x tip height setback to public roads is** protective of public safety
- Study used state-of-the-art simulation of blade failure and probabilistic analysis

- 2024 peer-reviewed study by Dr. Rogers showed that general aviation aircraft can safety fly though wind turbine wakes
- Used data from dedicated **flight** experiments
- Videos have been used by several developers to address questions of aviation safety and aerial application

How Can Scientific Studies Help?

- Peer-reviewed studies from independent analysts are helpful in **providing data that** decision-makers can trust when addressing opposition issues
- Persimia partners with developers to address issues that can benefit from additional scientific study



Typical 1.1 x tip height setback to public roads yields < 1 in 1 million year risk from blade failure (commensurate with risk of being struck by lightning)

Study shows that typical **1.1 x tip height road** setback is sufficient and protective of public safety.

J. Rogers, "Experimental Evaluation of Wind Turbine Wake Turbulence Impacts on General Aviation Aircraft," Wind *Energy Science*, Vol. 9, 2024, pp. 1849-1868.





J. Rogers, M. Costello, "Methodology to Assess Wind Turbine Blade Throw Risk to Vehicles on Nearby Roads," Wind Engineering, Vol. 46, No. 4, 2022, pp. 1187-1202.

Contact: Jonathan Rogers (jonny@persimia.com)

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