



Technology Licensing

CATEGORY

Bat fatality reduction

BENEFITS

- Inexpensive lighting device on wind turbines to protect economically and ecologically important bat species
- Involves low-intensity UV light
- Passive behavioral cue to bats
- Invisible to human eyes
- Easier to implement than existing deterrence methods



Selectively Perceptible Wind Turbine System

Wind turbines cause tens of thousands of bat fatalities each year on several continents, leading to growing concerns about ecological and economic impacts. Fatalities of endangered species and evidence that bats may be attracted to wind turbines have energy producers and resource managers searching for effective solutions. USGS research demonstrated bats can see and avoid landscape objects dimly lit with ultraviolet (UV) light. This invention involves illuminating turbines at night with flickering, low-intensity UV intended to trigger bat avoidance of unnaturally lit structures. USGS has developed a system and conducted year-long prototype tests on operating wind turbines. We now seek industry partners to test efficacy of this novel and low-cost approach to reducing or eliminating bat fatalities. If proven effective, this selectively perceptible wind turbine system will allow operation of wind turbines without curtailment.

For licensing opportunities, contact James Mitchell at:
gs_usgs_patents@usgs.gov

U.S. Patent 9,995,282