RENEWABLE ENERGY WILDLIFE RESEARCH FUND

RESEARCH FUND 2024

Renewable Energy Wildlife Research Fund

Pooling Resources for Renewable Energy Wildlife Research and Solutions

The Renewable Energy Wildlife Research Fund is an industry-led initiative of 30+ companies that provides funding to advance priority research on renewable energy (wind and solar) - wildlife and related natural resource impacts and benefits, enabling developers to optimize conservation while expanding the clean energy transition.

RAY KELLY, SENIOR DIRECTOR, ENVIRONMENTAL - CLEARWAY ENERGY GROUP LLC

"The Fund provides an opportunity for solar and wind developers to proactively identify opportunities to continue working in harmony with local wildlife. This resource helps our teams maintain healthy and thriving ecosystems for all the wildlife that call our sites home."

THE FUND EXPANDS INTO SOLAR POWER

Building on 4+ years of wind-wildlife research successes, in 2023 the Fund expanded to include solar-related research priorities. The Fund supports independent, peer-reviewed research to:

- Implement new, cutting-edge projects and high-impact results
- Apply science-based solutions to address top-priority solar and wind-wildlife challenges
- Leverage investment and reduce costs for expanding responsibly sited and operated solar and wind energy

By sharing priority research, the Fund provides insights to the energy sector, government agencies, and conservation organizations about science-based best practices for siting and operating renewable energy projects while conserving wildlife. Empowering clean energy growth and conservation alike, the applied science reduces renewable energy-wildlife impacts as renewables accelerate to meet clean energy demand.

By addressing top research priorities, the Fund ensures that wind and solar energy development and wildlife/ habitat conservation go hand-in-hand.

FUND PROJECTS ARE ANSWERING PRIORITY QUESTIONS

Wind-Focused:

- Enhancing understanding of bat and bird activities and fatality risk
- Refining smart curtailment practices for bats
- Refining eagle fatality estimates and informed curtailment
- Evaluating habitat-based impacts for grouse

Solar-Focused:

- Ecological value and impacts of utility-scale solar development
- Evaluating impacts of utility-scale solar facilities for Grouse
- Additional research priorities coming soon

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Renewable Energy Wildlife Research Fund Projects

The Research Fund supports priority research projects that expand the understanding of the challenges and the potential solutions for solar/wind-wildlife interactions.
All project proposals, scopes of work, and results undergo independent expert review and are published as peer-reviewed journal articles or as REWI technical reports.

WIND-FOCUSED RESEARCH PROJECTS

ENHANCING UNDERSTANDING OF BAT AND BIRD ACTIVITIES AND FATALITY RISK

- Understanding differences between collision risk of male and female bats of different species to inform minimization strategies
- Evaluating the effect of turbine size on bird and bat mortality *Published*
- Landscape factors associated with fatalities of migratory tree-roosting bats at wind energy facilities *Published*
- Investigating of the relationships between insects and bat fatalities at wind turbines

REFINING SMART CURTAILMENT PRACTICES FOR BATS

- Validating optimized smart curtailment for risk reduction to bats *New in 2024*
- Reassessing bat collision risk using acoustic exposure
- Using the passage of weather fronts to predict hoary bat mortality
- Using local and regional weather data to improve smart curtailment strategies for bats *Published*
- Comparing the effectiveness of curtailment strategies in reducing bat fatalities: *Published*
- Validating a Bat Fatality Detection System

REFINING EAGLE FATALITY ESTIMATES AND INFORMED CURTAILMENT

- Using machine learning to model eagle behavior and improve turbine curtailment strategies *Published*
- Incorporating incidental eagle carcass detection to improve eagle take estimates *Published*

EVALUATING HABITAT-BASED IMPACTS FOR GROUSE

- Lek Persistence of Lesser Prairie Chicken in Vicinity of Wind Energy Infrastructure

SOLAR-FOCUSED RESEARCH PROJECTS

UNDERSTANDING THE ECOLOGICAL VALUE AND IMPACTS OF UTILITY-SCALE SOLAR DEVELOPMENT

- Assessing wildlife diversity & use of utility-scale solar in agricultural environments *New in 2024*
- Examination of biodiversity outcome patterns at solar PV facilities across regions *New in 2024*
- Soil health impacts of solar PV on agricultural land

EVALUATING HABITAT-BASED IMPACTS FOR GROUSE

- Assessing greater sage-grouse use of a solar energy facility

View Fund Projects