

Illinois, Indiana, & Missouri Wind Energy & Wildlife Virtual Workshop

October 4-6, 2022

[Register for the Workshop](#)

Goals and Outcomes:

- Understand current wind development and future projections in Illinois, Indiana, and Missouri, including opportunities and challenges.
- Learn about:
 - State of the science on wind and wildlife, with a focus on bats and raptors.
 - Federal, state, and local laws, guidance, and regulations.
 - Permitting siting strategies, risk, and project economics.
- Explore opportunities for problem-solving and improving collaboration.

The Illinois, Indiana, & Missouri Wildlife & Wind Energy Virtual Workshop is possible thanks to generous support from the National Renewable Energy Laboratory (NREL), the U.S. Department of Energy's Wind Energy Technology Office, and the input and guidance from the workshop Planning Committee:

Matt Buffington, Indiana Department of Natural Resources
Kathryn Bulliner, U.S. Fish and Wildlife Service
Jennifer Campbell, Missouri Department of Conservation
Jeff Danielson, Clean Grid Alliance
Joelle Ghering, U.S. Fish and Wildlife Service
Jennifer Frazier, Missouri Department of Conservation
Janet Haselrig, Missouri Department of Conservation
Rebecca Heffren, Liberty Utilities
Cris Hein, National Renewable Energy Laboratory
Karen Herrington, U.S. Fish and Wildlife Service
Andrew Horton, U.S. Fish and Wildlife Service
Goni Iskali, Apex Clean Energy

Rachel London, U.S. Fish and Wildlife Service
Geoff Marke, Missouri Office of the Public Counsel
Sean Marsan, U.S. Fish and Wildlife Service
Clint Miller, The Conservation Fund
Nick Morgan, The Conservation Fund
Holly Neill, The Nature Conservancy
Erin O'Shea, EDP Renewables
Heather Osborn, Illinois Department of Natural Resources
Beth Soholt, Clean Grid Alliance
Christine Sutter, NextEra Energy
France Whalen, Illinois Department of Natural Resources
Allen Wynn, Pattern Energy Group

Tuesday, October 4, 2022

Central Time	Topic	Speakers
11:00 am	I. Welcome <ul style="list-style-type: none"> • Welcome and open workshop • Review agenda, logistics, and ground rules • Opening remarks from U.S. Department of Energy Wind Energy Technologies Office 	Abby Arnold, <i>Renewable Energy Wildlife Institute (REWI)</i> Joy Page, <i>U.S. Department of Energy Wind Energy Technologies Office</i>
11:10 am	II. Wind Energy in Illinois, Indiana, and Missouri <ul style="list-style-type: none"> • Wind energy buildout • State of the current technology • Overview of current wind energy operation and development in Illinois, Indiana, and Missouri • Current and planned transmission • Building It: A company perspective • Panel Discussion: Going forward <p>Q&A</p>	Moderator: Christina Marshall, <i>REWI</i> Jeff Danielson, <i>Clean Grid Alliance</i> Ray Fakhoury, <i>Pattern Energy</i> Anthony Lopez, <i>National Renewable Energy Laboratory (NREL)</i>
12:20 pm	III. Wind Project Development Process & Site Selection <ul style="list-style-type: none"> • What are non-wildlife challenges/constraints/considerations for wind energy siting & development, and where do considerations for wildlife and habitat fit in • Wind project prospecting, siting, resources used to identify sites, project development, and operation timeline and process/cycle • Land-based WEGs • What should state and local agencies plan for and what is the role of the local planning Board/Commission? • Panel Discussion: <ul style="list-style-type: none"> ○ What is the role of public acceptance? ○ What is the importance of collaboration early and often? <p>Q&A</p>	Moderator: Christina Marshall, <i>REWI</i> Rachel London, <i>U.S. Fish and Wildlife Service</i> Geoff Marke, <i>Missouri Office of Public Counsel</i> Holly Neill, <i>The Nature Conservancy</i> Erin O’Shea, <i>EDP Renewables</i>
1:30	<i>Break</i>	
2:35-2:45	Keynote: Sara Parker Pauley, Director of the Missouri Department of Conservation	
2:45 pm	IV. Overview of Federal, State, and Local Regulations and Environmental Considerations <ul style="list-style-type: none"> • FWS Migratory Bird Program <ul style="list-style-type: none"> ○ Migratory Bird Treaty Act ○ U.S. Fish & Wildlife Service’s Voluntary Land-Based Wind Energy Guidelines ○ Bald and Golden Eagle Protection Act • FWS Ecological Services <ul style="list-style-type: none"> ○ Listing of Endangered Species Act 	Moderator: Abby Arnold, <i>REWI</i> Matt Buffington, <i>Indiana Department of Natural Resources</i> Jennifer Campbell, <i>Missouri Department of Conservation</i> Jennie Geiger, <i>Apex Clean Energy, Inc.</i>

	<ul style="list-style-type: none"> ○ National Environmental Policy Act ○ Compensatory mitigation ● State Regulations (Illinois, Indiana, and Missouri) ● Public Utility Commission: Economic Regulation <p>Q&A</p>	<p>Andrew Horton, <i>U.S. Fish and Wildlife Service</i></p> <p>Geoff Marke, <i>Missouri Office of the Public Counsel</i></p> <p>Heather Osborn, <i>Illinois Department of Natural Resources</i></p> <p>Margaret Rheude, <i>U.S. Fish & Wildlife Service</i></p> <p>Elizabeth Rigby, <i>U.S. Fish & Wildlife Service</i></p>
4:00 pm	ADJOURN	Christina Marshall, <i>REWI</i>

Wednesday, October 5, 2022

Central Time	Topic	Speakers
11:00 am	Welcome and Recap/Review of Day	Christina Marshall, <i>REWI</i>
11:05 am	<p>V. State of the Science: Bats and Eagles with an eye to the Midwest</p> <p>Bats:</p> <p>A. State of Science: Bats and Wind</p> <ul style="list-style-type: none"> ● Overview of bats and wind energy ● Overview of the population status of bats ● Case studies from projects in region to better understand bat ecology/populations/movements <p>B. Research and Minimization Strategies</p> <ul style="list-style-type: none"> ● Detection technologies and methodologies for monitoring impacts and conducting experimental research ● Overview of minimization strategies ● Case studies from projects in the region testing minimization strategies <p>C. Panel Discussion: Research needs and questions</p> <p>Q&A</p>	<p>Moderator: Cris Hein, <i>National Renewable Energy Laboratory (NREL)</i></p> <p>Matthew Becker, <i>Avangrid Renewables</i></p> <p>Amanda Hale, <i>Western EcoSystems Technology, Inc. (WEST)</i></p> <p>Amber Schorg, <i>U.S. Fish and Wildlife Service</i></p> <p>Christine Sutter, <i>NextEra Energy</i></p>
12:45 pm	<i>Break</i>	
1:30 pm	<p>V. State of the Science: Bats and Eagles with an eye to the Midwest</p> <p>Eagles:</p> <p>A. Bald Eagles:</p> <ul style="list-style-type: none"> ● Population health, risk assessment ● Discussion of Service-proposed rule for expediting and simplifying the eagle permit process 	<p>Moderator: Taber Allison, <i>REWI</i></p> <p>Chris Farmer, <i>Western EcoSystems Technology, Inc. (WEST)</i></p> <p>Tim Hayes, <i>Duke Energy Sustainable Solutions</i></p>

	<ul style="list-style-type: none"> ○ Summary of proposed changes ○ Opportunities for more information and public comment <p>B. Golden Eagles:</p> <ul style="list-style-type: none"> ● Population health, risk assessment ● Discussion of Service-proposed rule for expediting and simplifying the eagle permit process ● Opportunities for mitigation ● Where do we go from here? <p>C. Avoidance and minimization measures</p> <ul style="list-style-type: none"> ● Siting ● During Operation (Operational Challenges with an Expanding Bald Eagle Population) <p>D. Panel Discussion: Monitoring</p> <ul style="list-style-type: none"> ● What is the goal of monitoring? ● What level of effort is required for modeling which outcomes? <p>Q&A</p>	<p>Margaret Rheude, <i>U.S. Fish & Wildlife Service</i></p> <p>Elizabeth Rigby, <i>U.S. Fish & Wildlife Service</i></p>
3:00 pm	ADJOURN	Christina Marshall, <i>REWI</i>

Thursday, October 6, 2022

Central Time	Topic	Speakers
11:00 am	Welcome and Recap/Review of Day	Christina Marshall, <i>REWI</i>
11:05 am	<p>VI. Bats: Streamline Permitting: Opportunities and Challenges</p> <p>A. HCP 10(a)(1)(B) for Bats permitting process (<i>permitting tools</i>) <i>Early coordination</i></p> <ul style="list-style-type: none"> ● Low Effect / Short Term HCP <ul style="list-style-type: none"> ○ Status and how to use it? ○ Where and which species? ● Other tools <ul style="list-style-type: none"> ○ Technical Assistant letters ○ 10(a)(1)(A) Research Permits <p>B. Case Study: Kings Point (SW Missouri)</p> <ul style="list-style-type: none"> ● 10A1A research permit to inform HCP <ul style="list-style-type: none"> ○ Gray and Tri Colored Bats ● Smart Curtailment strategy (ABIC – ‘activity based’ modeled curtailment) <p>Q&A</p>	<p>Moderator: Abby Arnold, <i>REWI</i></p> <p>Becky Heffren, <i>Liberty Utilities</i></p> <p>Andrew Horton, <i>U.S. Fish and Wildlife Service</i></p> <p>J.T. Layne, <i>Stantec</i></p> <p>Allison Poe, <i>EDP Renewables</i></p>

12:05 pm	<p>VII. Bats: Monitoring, Reporting, Adaptive Management, and Mitigation</p> <p>A. Monitoring and Reporting</p> <ul style="list-style-type: none"> • Pre- and post-construction monitoring and reporting (EofA, GenEST, and gvalue) interests and concerns • FWS new fatality reporting form – status, questions, and comments <p>B. Conservation Strategies for incidental take permits</p> <ul style="list-style-type: none"> • Adaptive management <p>C. Bat Compensatory Mitigation Options (including case studies)</p> <ul style="list-style-type: none"> • Conservation banks • PRM (permittee responsible mitigation) • 22-State iBAT & NLEB In-Lieu-Fee Program • Apex Conservation Grant <p>Q&A</p>	<p>Moderator: Abby Arnold, <i>REWI</i> Kathryn Bulliner, <i>U.S. Fish & Wildlife Service</i> Goni Iskali, <i>Apex Clean Energy</i> Sarah Livesay, <i>Grand Prairie Friends</i> Josiah Maine, <i>Burns & McDonnell</i> Natasha Skelton, <i>The Conservation Fund</i> Molly Stephenson, <i>Stantec</i></p>
1:00 pm	Break	
1:45 pm	<p>VIII. Looking to the Future: Breakout Sessions</p> <p><i>Each group will discuss the following topics:</i></p> <ul style="list-style-type: none"> • Identify priority research gaps. • What lessons have you learned about balancing energy production and staying within take thresholds? • What do we need to support decision-making considering uncertainty? • What are our expectations of communications between industry, state, federal, and regional government? 	Facilitated Discussions
2:30 pm	<p>VIII. Looking to the Future: Report Out</p> <ul style="list-style-type: none"> • Each group report takeaways • for future discussion • Prioritize • Discussion <ul style="list-style-type: none"> ○ Identify steps/actions participants would like to take forward 	<p>Moderator: Abby Arnold, <i>REWI</i></p>
3:30 pm	ADJOURN	Christina Marshall, <i>REWI</i>