

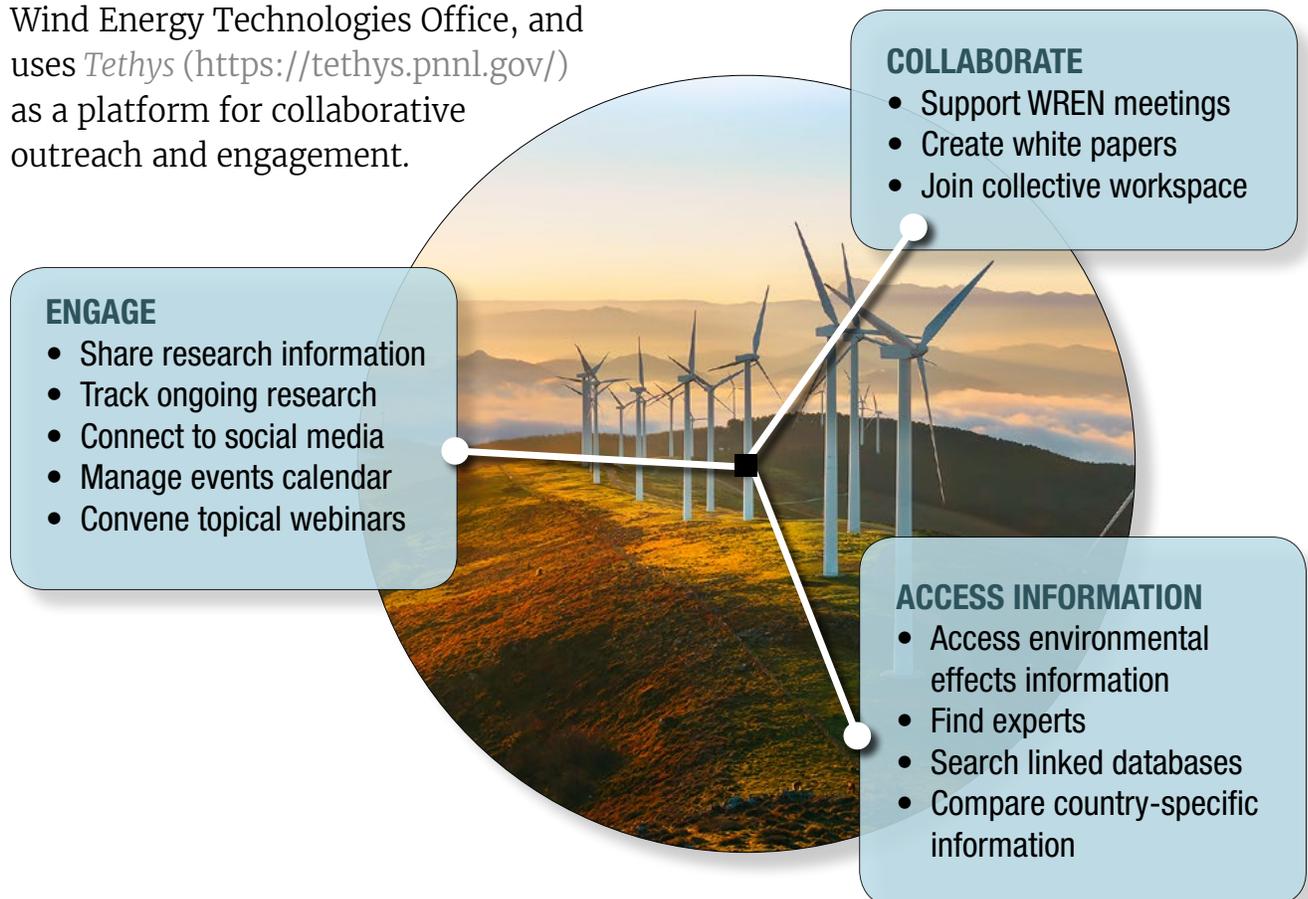
WREN

WHO WE ARE

WREN (**W**orking Together to **R**esolve **E**nvironmental Effects of Wind Energy), also known as IEA Wind Task 34, was established in 2012 to address environmental issues associated with development of land based and offshore wind energy projects. There are currently 12 WREN member nations, including Belgium, Canada, France, Ireland, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and United States. WREN is led by the U.S. Department of Energy's National Renewable Energy Laboratory with support from Pacific Northwest National Laboratory and the U.S. Department of Energy's Wind Energy Technologies Office, and uses *Tethys* (<https://tethys.pnnl.gov/>) as a platform for collaborative outreach and engagement.

WHAT WE DO

As wind energy development continues at a fast pace globally, concerns about potential effects on wildlife remain. The goal of WREN is to facilitate international collaboration and advance the global understanding of such environmental effects of wind energy to progress the industry in an environmentally responsible manner. To achieve this and engage the international wind energy community, WREN disseminates research findings and information; writes white papers on topics of common interest; develops short sciences summaries; hosts webinars, expert forums, and workshops; and convenes WREN member nation meetings. Specifically, WREN addresses challenges that are not the sole purview of developers, regulators, or researchers. WREN guides these efforts to promote responsible development of the wind energy industry that avoids or limits negative impacts to the environment and to support and inform permitting/consenting processes, while maximizing the production of energy.





WHAT WE KNOW

White papers developed by WREN contribute to advancing the understanding of environmental effects of wind energy. Information developed in the white papers is not readily available within the existing literature, promoting increased focus on management activities and research directions that can facilitate discussion within the wind community, and may lead to improved outcomes for wind and wildlife interactions. The following white papers are completed or underway:

- ◆ Adaptive Management
- ◆ Individual to Populations
- ◆ Cumulative Effects Assessment
- ◆ Green versus Green
- ◆ Risk-Based Environmental Management
- ◆ Interconnectivity of these Management Strategies

WREN also develops one-page Fact Sheets or Short Science Summaries that synthesize scientific understanding about the interactions between wind energy development and wildlife including one on Harbor Porpoises and Offshore Wind Energy.



WHERE TO FIND OUT MORE



Tethys is a web-based knowledge management system that supports

WREN by enhancing collaboration among WREN member nations. As WREN seeks to engage the wind energy community, *Tethys* facilitates the exchange and dissemination of information on environmental effects of wind energy development. Documents are collected, curated, and disseminated on the *Tethys Knowledge Base*. The *Tethys* platform is also used to promote engagement among users through weekly *Tethys* Blasts, *Tethys* Stories, and collaborations with WREN such as environmental webinars and white papers.

FOR MORE INFORMATION

Go to <http://tethys.pnnl.gov> for a robust collection of papers, reports, archived presentations, and other media about wind energy development.

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