NATIONAL WILDLIFE FEDERATION

# Wires and Wildlife: Offshore Transmission Development and the Benthos

Marine wildlife depend on healthy benthic, or seabed, resources to survive and thrive. The benthos plays a role in nutrient cycling, food webs, and ecosystem health. It provides biomass to large predators, nursery areas for their young, and supports many economically important species.

Natural phenomena alter benthic ecosystems, as do human-caused disturbances such as climate change and offshore development, including the construction and operations of offshore transmission. The latter provides challenges to understanding and protecting the benthos, as development introduces hard surfaces to marine environments, and construction and operations disturb habitat and may also have physical and behavioral impacts on species.

Offshore wind and transmission together provide an urgently needed solution to address climate change, and meeting growing electrification demands. Some of the best places to generate clean, reliable, and renewable energy are along the coasts with offshore wind. To export this energy, transmission lines must carry this energy over long distances to shore.

NWF's report***, Wires and Wildlife: Offshore Transmission Development and the Benthos***, shows how offshore wind energy development can advance clean energy goals while protecting vital benthic habitats. It provides an overview of the threats facing benthic species and resources, and underscores the need to better understand the potential implications of offshore transmission development on the Outer Continental Shelf. The report identifies a number of regulatory mechanisms that have been used to protect these important species and resources, as well as opportunities to more consistently and clearly define requirements to provide developers with more certainty and better inform regulator decision-making.

**Research gaps remain, but the path forward is clear: expanding ecosystem-focused marine spatial planning, fostering collaboration, and encouraging data sharing can lead to better solutions.**

PHOTOS: TOP L: AMBER HEWETT, TOP R: BROOK PETERS; MIDDLE:_548901005677/GETTY IMAGES

# Key Findings from the Report
# Wires and Wildlife: Offshore Transmission Development and the Benthos


PHOTO: CHARLIE CHESVICK

- Using best available science to assess direct, indirect, and cumulative impacts of development in the context of climate change makes it possible to conserve wildlife and build an interconnected offshore power grid that can benefit people and wildlife.

- Offshore transmission has varied impacts on benthic habitats and resources, including direct mortality and habitat loss. These impacts can be mitigated with techniques such as avoidance, micrositing, and proactive planning, which is critical for protecting benthic species specifically, as much scientific attention has historically focused on other areas like marine mammals and commercial fishing.

- The Bureau of Ocean and Energy Management's (BOEM) leasing process includes opportunities for benthic habitat protections, including requirements for habitat avoidance, anchoring plans, buffer zones, and other habitat or species-specific requirements. Mitigation measures have evolved over time, with recent leases incorporating programmatic best management practices, state-enforced conditions, and measures to minimize impacts on sensitive seafloor habitats, though gaps remain in addressing transmission infrastructure.

- BOEM evaluates construction, operations, and transmission impacts, including electromagnetic frequency (EMF) and benthic effects. BOEM requires and recommends nearly 350 benthic-related mitigation and monitoring measures across 10 completed projects. These measures include benthic habitat monitoring, habitat avoidance via micrositing, less invasive construction techniques, anchoring plans, seasonal restrictions, noise mitigation, and EMF considerations.

- Collaboration from decision-makers and industry to conduct and share research on environmental impacts of offshore transmission on benthic resources is necessary to resolve outstanding knowledge gaps.


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READ *WIRES & WILDLIFE: Offshore Transmission Development and the Benthos*

www.nwf.org/transmission


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