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Introduction: The United States has high-energy demands that are for the most part satisfied by the fossil fuel industries. Fossil fuel is a finite resource that will only become more valuable as supplies inevitably become more limited and as demand increases. Wind-generated energy may represent an alternative to fossil fuels for meeting electricity needs because harnessing wind energy does not generate the pollutants that burning fossil fuels produces. Furthermore, other than constructing the facility and supporting infrastructure, ecological communities are not disturbed to the same extent as occurs when coal deposits are extracted from the earth.

Nevertheless, wind-energy facilities do impact natural resources. Although an individual wind turbine has a small footprint, wind farms consisting of dozens to hundreds or more turbines can cover hundreds to thousands of acres. The infrastructure required to install and maintain turbines in a wind farm can directly damage sensitive ecological communities through road building, clearing of tower pads, maintenance buildings, and electrical distribution lines. The presence of vehicles and personnel in wind farms may indirectly impact environmental resources through disturbance. So there is the risk of negatively impacting plant and animal communities associated with establishing financially viable wind farms. However, the primary concern associated with constructing wind farms may be the impacts that wind turbines might have on birds and bats.

The purpose of this paper is to discuss the possible impacts of wind development to birds along the lower Gulf Coast, including both proposed near-shore and off-shore developments. I do this by summarizing wind resources in Texas, discussing the timing and magnitude of bird migration as it relates to wind development, reviewing research that has been conducted throughout the world on near- and off-shore developments, and providing recommendations for research that will help guide wind development that minimizes negative impacts to birds and other wildlife resources.