Wyoming produces 10% of the United State's natural gas and 40% of its coal (EIA 2010), and contains vast wind resources that are being developed for electricity generation. Wind generation is increasing in Wyoming. In 2010, Wyoming was ranked 7th in the United States for new wind capacity added and 10th in overall capacity installed (AWEA 2011). At the end of 2010 Wyoming was producing 1412 MW of wind energy with 7869.5 MW of wind energy currently under construction (AWEA 2011). Landscapes containing valuable wind resources often coincide with habitats of wintering ungulates. Evaluating the influences of energy development on ungulates is particularly critical given that they occur at higher densities and encounter elevated energetic demands during winter. Few studies have documented effects of wind energy development on ungulates. Consequently, the implications of wind energy development for ungulates are largely unknown. We are evaluating the response of pronghorn (*Antilocapra americana*) to wind energy development on crucial winter range in the Shirley Basin north of Medicine Bow, Wyoming. Our study focuses on the 62.2-km^2 Dunlap Ranch, a site containing crucial pronghorn winter range where PacifiCorp installed 74, 1.5-MW turbines, a substation, and 17.7-km of transmission line beginning in April 2010. In addition, Wyoming Highway 487, which runs north-south, bisects the Dunlap Ranch. Our study is designed as an impact-reference study, where 35 doe pronghorn were captured in January 2010 and equipped with store-on-board GPS transmitters on or near the Dunlap Ranch Wind Energy facility (Impact study area). The movement and habitat selection patterns for these animals will be compared to those of 35 doe pronghorn captured at the same time near Walcott Junction (Reference study area with no wind energy development) in Carbon County, Wyoming and also equipped with GPS transmitters. Specific objectives of our study are to (1) evaluate differences in winter habitat selection patterns as influenced by anthropogenic infrastructure including roads, turbines, and transmission lines, (2) model survival risk for pronghorn in each landscape and compare differences in risk based on environmental and anthropogenic variables that influence survival, and (3) estimate avoidance or habituation to wind energy infrastructure for those animals that select habitats near the Dunlap Ranch Wind Energy Facility. Our study will include data from 3 winters (2010, 2010-2011, and 2011-2012) and is the first of its-kind, providing critical information for a species that faces continued threats due to energy development. Results of our study will be invaluable in better understanding the influences of wind energy development on winter range to wintering pronghorn and other ungulates. These results should provide opportunities to develop mitigation steps to make wind energy development more harmonious with wildlife populations during the critical winter time period.

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