U.S. DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
UPPER GREAT PLAINS CUSTOMER SERVICE REGION

FINDING OF NO SIGNIFICANT IMPACT

Baldwin Wind Energy Center Project
Burleigh County, North Dakota
DOE/EA-1698

AGENCY: U.S. Department of Energy, Western Area Power Administration

ACTION: Finding of No Significant Impact

SUMMARY: Baldwin Wind, LLC (Baldwin Wind) has requested to interconnect their proposed new Baldwin Wind Energy Center (Proposed Project) to the Western Area Power Administration's (Western) transmission system at Western's existing Hilken Switchyard. Under its Open Access Transmission Service Tariff (Tariff), Western is required to respond to Baldwin Wind's interconnection requests. Western's Tariff conforms to Section 211 of the Federal Power Act and Federal Energy Regulatory Commission's (FERC) Final Orders addressing non-discriminatory transmission system access. Western's Tariff provides for new interconnections to Western's transmission system by all eligible entities, consistent with Western requirements and subject to environmental review under the National Environmental Policy Act (NEPA) and other environmental regulations.

In accordance with applicable regulations, Western prepared an Environmental Assessment (EA) entitled *Baldwin Wind Energy Center Environmental Assessment* (DOE/EA-1698). Western's Federal action is limited to making a determination to approve or deny Baldwin Wind's interconnection request and to make any necessary system modifications to accommodate the interconnection of Baldwin Wind's Proposed Project.

The Project Sponsor, NextEra Energy Resources, LLC, (NextEra) submitted an application May 12, 2010, to the DOE Loan Guarantee Program for a Federal loan guarantee for the Baldwin Wind Energy Center. Although Western's Federal action does not include Baldwin Wind's *Baldwin Wind Energy Center* Project, which would be constructed, owned, operated, and maintained by Baldwin Wind, Western's EA analyzes and discloses the potential environmental impacts of Baldwin Wind's Proposed Project which is under consideration for a loan guarantee. In addition to addressing Western's action, the EA evaluates and compares the environmental impacts of a No Action Alternative and the Proposed *Baldwin Wind Energy Center* Project. Mitigation measures to minimize any environmental impacts were incorporated directly into the Proposed Project options. The EA identified no potentially significant impacts to environmental resources resulting from either Western's Federal action or Baldwin Wind's Proposed Project.

The EA was distributed to interested agencies, tribes, groups, and individuals on June 17, 2010. The public comment period ended on July 9, 2010. No comments were received during the comment period.

Based on the information contained in the EA, Western has determined that approval of the interconnection request and Baldwin Wind's Proposed Project does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Preparation of an environmental impact statement is not required, and Western is issuing this "Finding of No Significant Impact" (FONSI).

FOR FURTHER INFORMATION, CONTACT: Additional information and copies of the EA and this FONSI are available to all interested parties and the public from the following contact:

Mr. Nicholas Stas, Environmental Manager
Western Area Power Administration
Upper Great Plains Regional Office
P.O. Box 35800
Billings, MT 59107-7408
Phone: (406) 247-7399
Fax: (406) 247-7408
Email: stas@wapa.gov

For further information on the DOE NEPA process, contact:

Ms. Carol M. Borgstrom
Director, Office of NEPA Policy and Compliance, GC-54
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585
Phone: (202) 586-4600 or (800) 472-2756

SUPPLEMENTARY INFORMATION: This FONSI was prepared in accordance with the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, 40 CFR 1508.13, and the DOE NEPA Implementing Procedures, 10 CFR 1021.322.

The FONSI briefly presents the reasons why Western's proposal to approve an interconnection agreement for the *Baldwin Wind Energy Center* Project and the project itself, including the described impact mitigation measures outlined in the EA, will not have a significant impact on the human environment. Approval of the interconnection agreement would allow Baldwin Wind to interconnect their proposed new *Baldwin Wind Energy Center* to Western's transmission system at its existing Hilken Switchyard. In accordance with the regulations cited above, Western prepared an EA entitled *Baldwin Wind Energy Center Environmental Assessment* (DOE/EA-1698) on Western's Federal action and on Baldwin Wind's Proposed Project. The EA identifies and evaluates the potential environmental impacts associated with Western's decision on the

interconnection agreement and of Baldwin Wind's Proposed Project. The EA is incorporated in whole by reference into this FONSI, in accordance with 40 CFR 1508.13, which allows a summary discussion in this document.

Prior to making a decision to approve the interconnection of the Baldwin Wind Project, Western is required to prepare an EA to address NEPA and related environmental requirements. The EA examines the potential environmental effects of approving the application for interconnection as well as the No Action Alternative. Under the No Action Alternative, Western would not approve the interconnection request. For purposes of providing a no-project environmental baseline, the No Action Alternative also assumes that the Proposed Project would not be constructed. This No Action Alternative may also be a result of a decision by the project proponent to withdraw its application as a result of a decision by DOE not to approve a loan guarantee. The EA also analyzes the potential environmental impacts of constructing, operating, and maintaining the *Baldwin Wind Energy Center*. The North Dakota Public Service Commission (NDPSC) has siting and regulatory authority for utility projects in the State. Their permitting requirements for the wind farm project were integrated into the EA process. Baldwin Wind is, concurrently with the NEPA process, independently completing the NDPSC permitting process. The EA evaluates and compares the Action Alternative, as well as the No Action Alternative.

WESTERN'S FEDERAL ACTION: Western must decide whether to approve or disapprove Baldwin Wind's interconnection request of up to an annual average 50 megawatts (MW) at the Hilken Switchyard. Under its Tariff, Western must offer access to capacity on its transmission system when capacity is available and on a non-discriminatory basis. Western also needs to ensure that by offering such capacity, existing transmission system reliability and service is not degraded by new interconnections. Transmission system studies are being conducted to determine the effects on power flows in the event the interconnection request was to be approved. These studies will indicate if the interconnection of Baldwin Wind's Proposed Project would adversely affect transmission system operation or reliability or impact power deliveries to existing customers. If the studies determine that there is an impact to the transmission system or impact power deliveries, it would result in requiring system upgrades to be made by Baldwin Wind to ensure system stability and reliability. These potential system upgrades would undergo individual NEPA analysis to determine the level of NEPA review appropriate.

The applicant's objectives are also considered in Western's decision process. Subject to NEPA review, the FERC Orders direct that interconnection requests be approved unless the transmission system would be adversely affected by the interconnection.

DOE LOAN GUARANTEE FEDERAL ACTION: DOE must decide whether or not to approve a loan guarantee for the Baldwin Wind Energy Project under Title XVII of the Energy Policy Act of 2005 (EPAct 05), as amended by Section 406 of the American Recovery and Reinvestment Act of 2009, P.L. 111-5 (the "Recovery Act"). EPAct 05 established a Federal loan guarantee program for eligible energy projects and was amended by the Recovery Act to create

Section 1705 authorizing a new program for rapid deployment of renewable energy projects and related manufacturing facilities, electric power transmission projects, and leading edge biofuels projects. The primary purposes of the Recovery Act are job preservation and creation, infrastructure investment, energy efficiency and science, assistance to the unemployed, and State and local fiscal stabilization. The Section 1705 Program is designed to address the current economic conditions of the nation, in part, through renewable energy, transmission, and leading edge biofuels projects.

PROPOSED PROJECT DESCRIPTION: Baldwin Wind proposes to construct, own, operate, and maintain a new 102.4-MW wind farm. The Proposed Project is located near the rural communities of Wilton and Baldwin in central North Dakota, approximately 18 miles north of Bismarck, North Dakota. The Proposed Action would consist of the following components:

- 64 1.6-MW General Electric (GE) turbines;
- 3 meteorological (met) towers;
- Access roads;
- Underground electrical collection lines; and
- A collection substation and a 240-foot overhead 230-kV tie line.

In addition, one structure and approximately 250 feet of the existing transmission line will be re-routed.

PUBLIC INVOLVEMENT: The EA contains specific information on notifications to tribes, local, State and Federal agencies, landowners, and the public. Public scoping meetings were held to discuss the Proposed Project, determine important issues, obtain local information relevant to the Proposed Project, and the general scope and shape of the EA analyses. The pre-decisional EA was distributed to interested agencies, tribes, groups, and individuals on June 17, 2010. All correspondence is available in Western's Upper Great Plains Regional Office.

COMMENTS RECEIVED ON THE PREDECISIONAL EA: No comments were received as a result of the public review of the pre-decisional EA.

ALTERNATIVES: DOE's NEPA regulations require that an EA include, at a minimum, the proposed action and the No Action Alternative (10 CFR 1022.321(c)). Western's action is to respond to Baldwin Wind's interconnection request. If approved, Western would execute an interconnection agreement with Baldwin Wind for up to an annual average of 50 MW generation and would allow the modifications necessary to tie the Baldwin Wind Energy Center into Western's Hilken Switchyard. Under the No Action Alternative, Western would not execute an interconnection agreement with Baldwin Wind, and the new wind farm would not be interconnected. The No Action Alternative provides a baseline against which the environmental impact of the Action Alternative is compared. For Western's action, the difference is the amount of electricity allowed into the Hilken Switchyard. DOE's Loan Guarantee action would be to approve NextEra's request for a Federal loan guarantee for the Baldwin Wind Project. Under the No Action Alternative, DOE would not approve the loan guarantee request for this project.

In order to identify and analyze the potential environmental impacts of Baldwin Wind's Proposed Project and compare them to no action, it was assumed that the Proposed Project would not be constructed if the interconnection request and loan guarantee application were not approved. Since Baldwin Wind is proposing to fill some of the demand for renewable energy, it has gone forward with the Proposed Project to meet this perceived need. However if the Proposed Project is denied approval, it is conjectural whether this action would be the same project interconnected elsewhere, a similar project, or an entirely different project. The Proposed Project, as defined above, is the only project that Western was requested to consider for interconnection.

ENVIRONMENTAL IMPACTS OF WESTERN'S ACTION: Western's decision to approve the interconnection may result in very minor modifications within Western's Hilken Switchyard. The existing switchyard area has been previously graded and covered with gravel aggregate and is surrounded by a security fence to prevent unauthorized entry and injury. Vegetation is controlled for operational and safety reasons. Modifications to accommodate the proposed interconnection will have no impacts to environmental resources.

ENVIRONMENTAL IMPACTS OF BALDWIN WIND'S PROPOSED PROJECT AND DOE'S APPROVAL OF THE LOAN GUARANTEE: The EA evaluated the potential for Baldwin Wind's Proposed Project to impact environmental resources found in the Proposed Project area. Baldwin Wind incorporated mitigation measures and best management practices into the description of its Proposed Project. In addition to the included mitigation measures, Baldwin Wind has entered into a Memorandum of Understanding (MOU) with Ducks Unlimited, Inc., (DU) and the American Foundation of Wildlife that commits them to provide $220,000 of funding for the purchase of conservation easements for the purpose of protecting and maintaining 236 acres of suitable whooping crane migratory stopover habitat, located on DU's Coteau Ranch in Sheridan County, North Dakota. The MOU is incorporated in whole by reference into this FONSI. The analysis of environmental impacts identified no potential impacts that would be considered significant and no mitigation measures that should be implemented, additional to those already embedded within the Proposed Project description. The principal reasons for the lack of significant environmental impact was the avoidance of sensitive resources during siting of the wind turbines, undergrounding of the electrical collection system, and minimization of new overhead electrical lines.

Geology and Soils: Baldwin Wind located the Proposed Project on pasture and rangeland to the extent practicable to minimize impacts to cultivated land. Permanent loss of land for the Proposed Project would be no more than 325 acres to wind turbines, access roads, and the collector substation. While the lands under lease agreement for the wind farm would have temporary impacts during construction, landowners would continue to have access to and the use of the land adjacent to the wind turbines and access roads. Environmental impacts were determined to be temporary and not significant.

The wind farm would unavoidably cross some Prime and Unique Farmland and Farmlands of Statewide Importance. Temporary disturbance of Prime and Unique Farmland and Farmlands of Statewide Importance is estimated to be about 1,142 acres. These temporary impacts would be for one season, and landowners would be reimbursed for any crop losses. Permanent impacts, or land

removed from production, would be approximately 18 acres. Given that Burleigh County has over 120,000 acres of Prime and Unique Farmland and Farmlands of Statewide Importance, the loss of these acres is not significant considering the amount of cropland in the region.

Impacts of the Proposed Project to available mineral resources are likely to be highly limited. No sand, gravel, or coal resources are actively mined in the Project Area, and economic deposits of the latter are constrained to the northernmost extent of the Project Area. Subsidence hazards related to the potential presence of abandoned underground coal mines will be mitigated by thorough field studies and geotechnical analyses and subsequent micrositing. Consequently, geologic hazards are unlikely to impact the Proposed Project. Impacts to geology and soils are therefore not anticipated to be significant.

Air Resources: The Proposed Project area is presently in attainment of the National and State Ambient Air Quality Standards. Construction equipment emissions would result in localized and temporary air quality impacts during construction activities. Construction equipment movement and operation would result in airborne dust. Compared with agricultural operations, the impacts to air quality from construction activities would be negligible. No Federal or State air quality standard would be violated by the construction of the Proposed Project.

Water Resources: Drainages and flood-prone areas were avoided during siting. No structures would be placed in floodplains, and drainages and wetlands would be avoided. These areas would also be avoided by construction vehicles during construction. Horizontal Directional Drilling techniques would also be used to avoid wetland areas. Structures are typically located on higher areas. Because of avoidance and erosion control measures on upland construction areas, hydrology and drainage would not be adversely affected.

Vegetation: Vegetation communities most sensitive to disturbance are native prairie and wetlands. Potential impacts to native prairie due to the Proposed Project's construction activities were analyzed. The proposed turbine layout included 64 1.6-MW GE wind turbines and 44 alternative locations. Under the proposed configuration, 19 turbines and two meteorological towers will be placed within surveyed native prairie. Approximately 93 acres of the 5,006 total acres of surveyed native prairie (2 percent) will be permanently affected by the Proposed Project. During the planning phase, access roads and turbine locations would be placed to avoid impacts to wetland areas.

Proposed Project facilities have been sited within previously disturbed agricultural land as much as practicable, and the total Proposed Project's footprint (roads, collection lines) has been minimized to reduce impacts to native prairie.

Access road construction will result in the greatest effects to native vegetation resulting in permanent loss of these habitats where they occur along selected routes. Installation of the proposed buried collector system will result in some temporary effects to native and non-native grasslands. Effects will be mitigated by re-seeding the trenched areas with native grasses following completion of construction activities.

New road construction will also include dust control measures to reduce impacts from dust on adjacent vegetation communities. Introduction of noxious weeds will be mitigated through prompt re-vegetation with regionally native species or restoration of prior land use.

As no threatened or endangered plants were observed or previously documented to occur within the Proposed Project Area, the Proposed Project is unlikely to impact any listed threatened or endangered plant. The impacts to vegetation of the Proposed Action are not anticipated to be significant.

Wildlife: The majority of wildlife species in the Proposed Project area would temporarily relocate during construction activities and return after construction is complete. Some of the ground-dwelling and/or less mobile species could be lost to construction activities, but the losses would be biologically insignificant. The amount of available forage and cover would be temporarily reduced but would recover quickly naturally or as a result of mitigation measures outlined in the previous section. Impacts to nesting migratory birds would be mitigated through pre-construction nesting surveys and the establishment of buffers around active nests as necessary.

No impacts to fisheries or aquatic species are anticipated. Aquatic habitat was either avoided or spanned. The installation of line marking devices along the entire length of line would reduce the overall avian collision risk of the transmission line.

Sensitive Wildlife Species: Federally-listed species in the Proposed Project area include the gray wolf, pallid sturgeon, interior least turn, piping plover, and whooping crane. The gray wolf (if present) is highly mobile and would avoid human construction activity. The North Dakota Game and Fish Department considers the gray wolf to be extirpated in the State. The Proposed Action would not affect water quantity or quality in the Missouri River or its major tributaries. It is unlikely that the sturgeon would occur in the ephemeral streams in the Project Area, and the Proposed Action is therefore unlikely to affect the pallid sturgeon. The whooping crane, interior least turn, and piping plover are the only federally listed species that could be impacted by the Proposed Project.

The United States Fish and Wildlife Service (USFWS) has made a determination that the presence of a wind farm will cause whooping cranes to avoid the wetlands in the vicinity of the Proposed Project (personal communication from Jeff Towner of the USFWS). As a result, in the opinion of the USFWS, the Proposed Action would result in the long-term, indirect impact of the loss of potential roosting habitat. There are 144 acres of potentially suitable wetland habitat within the Project Area (less than 1 percent of Project Area). However, potential roosting habitat is not limiting on the landscape with suitable habitat available in the immediate surroundings (221,983 acres of suitable roosting habitat occur within the 35-mile buffer); therefore, it is unlikely that this loss of potential habitat will negatively affect whooping cranes at the individual or population level. Based on the low magnitude of potential habitat loss, the low probability of site usage, and avoidance and minimization measures (e.g., buried collection systems), the Proposed Action may affect, but is not likely to adversely affect, the whooping crane. Baldwin Wind will comply with recommended mitigation measures described in the biological assessment to minimize risk to the whooping crane.

The Proposed Project is located more than 5 miles to the east of interior least tern habitat, the Project Area contains no sizeable rivers with sandbars, and Proposed Project development will not affect water quantity or quality in the Missouri River or its major tributaries. Therefore, the Proposed Project will have no impact on breeding interior least terns. Furthermore, the limited extent of wetlands close to the Proposed Project, and the low likelihood that existing wetlands (e.g., farm ponds) contain enough fish to attract foraging terns, suggests that the likelihood of terns occurring near the Proposed Project is very low. In the highly unlikely event of this species occurring in the Project Area, there will be no new transmission lines as part of the Proposed Action, and all new electrical collection lines will be buried so the potential for collisions with transmission lines will be eliminated. No interior least terns were observed during the fall 2008 and spring 2009 avian surveys (WEST 2009). In summary, the Proposed Action may affect, but is not likely to adversely affect, the interior least tern.

There are no alkali lakes within 0.5 miles of the Proposed Project, minimizing the possibility of piping plovers breeding in the Project Area. The closest parcel of designated critical habitat to the Proposed Project (the Missouri River) is over 5 miles away; breeding piping plover rarely travel more than 1 mile from their nest sites during the breeding season, thereby minimizing the potential for piping plovers to occur on site while foraging during the breeding season. In the highly unlikely event of this species occurring in the Project Area, the avoidance of permanent wetland impacts and the burying of all new utility lines will minimize potential impacts. No piping plover were observed during the fall 2008 and spring 2009 avian surveys. As a result, the Proposed Project may affect, but is not likely to adversely affect, the piping plover. As there would be no construction in designated critical habitat and no changes to water quantity or quality associated with the Proposed Project, the Proposed Action will not result in the destruction or adverse modification of designated critical habitat.

In a letter dated July 16, 2010, the USFWS concurred with the finding that the Proposed Project may affect, but is not likely to adversely affect the whooping crane, the interior least tern, and the piping plover.

Tetra Tech evaluated the biological and landscape features of the Project Area to determine the potential for bats to occur. The analysis estimates the likelihood of occurrence of bats within the Project Area based on a suite of variables that are related to occurrence and potential mortality. Bat presence is more likely to occur over the life of a project at a project with a higher rating, thus indicating higher likelihood of occurrence, and thus, potential for turbine-related fatalities given the patterns of bat fatalities at other wind farms in the United States. Overall, Tetra Tech estimates a low likelihood of occurrence for bat species for the entire Baldwin Project Area. Should bats occur in the Project Area, the potential for direct impacts (e.g., mortality resulting from turbine collisions or barotraumas) will be minimized by turbine siting away from areas of potential bat activity (e.g., wetlands).

Land Use: It is estimated that the Proposed Project would require the permanent disturbance of 325 acres and the temporary disturbance of 1,142 acres (construction easement area). Note that the full 32-foot width of impacts was assumed for access roads, even where existing roads are only being expanded, so actual impacts are likely to be much smaller.

Approximately 1,467 acres (6.9 percent of the total Project Area) would be disturbed during the construction of the Proposed Project. At the wind energy facilities immediately north of the Proposed Project, as well as other wind developments in the upper Midwest, landowners frequently plant crops and/or graze livestock to the edge of the access roads and turbine pads. The access roads will be 32 feet wide and low profile so they are easily crossed while farming. Baldwin Wind will work closely with landowners in locating access roads to minimize land use disruptions to the extent possible. Consideration will be taken in locating access roads to minimize impact on current or future row crop agriculture and environmentally sensitive areas. During the construction of the wind power facilities, additional areas may be temporarily disturbed for contractor staging areas and underground power lines. These areas will be graded to original contour and, if necessary, reseeded with appropriate vegetation. The development of the Proposed Project will not result in a significant change in land use.

Socioeconomics and Environmental Justice: The Proposed Project would have positive economic impacts for the local population, including lease and royalty payments for participating landowners, employment, and property and sales tax revenue. Up to 325 acres (1.5 percent) of the total Project Area will be permanently affected due to conversion to turbine sites, access and service roads, and substation. Landowner compensation will be established by individual lease agreements but are anticipated to total over $600,000 annually. Annual property tax payments to local entities are estimated at $200,000. In general, agricultural areas surrounding each turbine can still be farmed. In addition, in an environment of uncertain and often declining agricultural prices and yields, the supplemental income provided to farmers from wind energy leases will provide stability to farm incomes and thus will help assure the continued viability of farming in the Project Area.

The Proposed Project is expected to create at least five full-time permanent jobs and up to 125 peak construction jobs. Expenditures made for equipment, energy, fuel, operating supplies, and other products and services will benefit businesses in the county.

No effects on permanent housing are anticipated. During construction, out-of-town laborers will likely use lodging facilities in and around Burleigh County. Operation and maintenance of the facility will require few laborers. Sufficient permanent housing is available within the county to accommodate these laborers.

Local businesses such as motels, restaurants, bars, gas stations, and grocery stores would likely experience some increase in revenue resulting from new employment of the non-resident portion of the Proposed Project's construction crews. In particular, the consumption of goods, services, and temporary lodging in and near Bismarck, Wilton, and surrounding cities could be expected to minimally increase due to the presence of these non-native workers. This relatively small increase in demand for local goods and services would be minimal due to the small size of the

non-local workforce and the short-term nature of the construction phase of the Proposed Action. For the same reasons, the effects to infrastructure such as schools, hospitals, housing, and utilities would also be minimal.

While the Proposed Action will be capable of generating electricity to power over 24,000 homes in the region, it will not produce significant air or water pollution, will have minimal water use, and will allow most of the land in the Project Area to remain in agricultural use.

With regard to environmental justice, there is no indication that any minority or low-income population is concentrated in any one area of the Project Area or that the wind turbines will be placed in an area occupied primarily by any minority group. Although the Project Area block groups have a higher percentage of persons below the poverty level compared to the county, the Proposed Project would have positive economic impacts. Additionally, the Proposed Project impacts do not appear to be high and adverse, and therefore no determination was made regarding whether the low-income and minority populations would be disproportionately affected by the Proposed Project. The Proposed Action will not have significant socioeconomic impacts.

Visual Resources Setting: The uppermost portion of the turbine blades would reach almost 400 feet above ground surface and would be visible for up to several miles, changing the visual character of the area from agricultural to quasi-industrial. Some of these structures would likely be visible from key observation points (KOPs). Some of the turbines would require strobe lights for aircraft safety, potentially changing the view from KOPs at night. Visual effects would decrease as the distance from the *Baldwin Wind Energy Center* increases. The Project Area does not contain any highly distinctive or important landscape features or unique viewsheds. Significant impacts to visual resources are not anticipated. Impacts on visual resources within the Project Area were determined by considering the post-construction views from the KOPs, as discussed above. In addition, there are no visual quality standards in place within Burleigh County. Population densities are low, limiting the number of viewers. North Dakota Highways 1804 and 1806, on the east and west side, respectively, of the Missouri River, are designated Lewis and Clark auto tour routes. The route is a network of roads that generally tracks the Lewis and Clark National Historic Trail (Trail) and provides vistas as well as historic markers. The closest point along the route is located over 6 miles west of the Project Area. The Proposed Project will be visible at three KOPs along the Trail, as are other adjacent existing wind farms. Given the distance, the presence of other existing wind farms, with the use of computer modeling and photo simulation, significant impacts are not anticipated.

A total of 134 sensitive receptor locations (including 94 occupied residences) were identified in the vicinity of the Project Area. Nine of the 134 receptors modeled had expected shadow flicker impacts predicted for more than 30 hours per year. Two of these receptors are occupied residences, while the others include two cemeteries, vacant residences, and other structures. The maximum predicted shadow flicker impact at any active receptor is 45 hours, 17 minutes per year, which is approximately 1.0 percent of the potential available daylight hours. The analysis of potential shadow flicker impacts from the Proposed Project on nearby residences (receptors) shows that shadow flicker impacts within the area of study are not expected to be significant.

The addition of the Proposed Project would result in unavoidable visual impacts, but they are considered to be less than significant.

Noise: The construction of the Proposed Project would generate vehicle noise for the 4- to 6-month duration of the construction phase. Operation of the Proposed Project, once completed, would not generate appreciable noise. Acoustic modeling results show that at maximum rotational operation, no occupied residences would reach the Environmental Protection Agency noise criterion, and none would exceed it at maximum rotational operation under anomalous meteorological conditions. Baldwin Wind is considering some facility modification or mitigation to reduce the Proposed Project-related noise impacts at this residence. Existing noise levels are established by wind, farm equipment operation, and vehicle traffic. Construction noise would be similar to farm equipment and would move from structure site to structure site. Noise would be very temporary at any given location as a result. Noise impacts would be sporadic and temporary at most locations and would cease with the completion of the Proposed Project.

Transportation: Construction of the Proposed Project would increase traffic on local roads to the Project Area, possibly causing temporary impacts to local traffic flow while equipment is hauled to the site. There are several roads adjacent to the Project Area in which construction-related traffic would be concentrated. Construction-related vehicles would use State Highway 36 as they access the Project Area off of U.S. Highway 83. The construction company hired to build the Proposed Project would obtain any necessary permits for transporting equipment.

Construction activities associated with the Proposed Project would use the existing section line roads whenever possible. The Proposed Project would include approximately 16 miles of access roads associated with the turbines. These roads would be constructed to assist with access and maintenance of the proposed facilities.

Operation of the Proposed Project is not expected to result in any significant traffic issues on the area highways or state roads because there would be only a minor increase in traffic (only a few vehicles per day). In addition, the necessary permits will be obtained and safety protocols will be implemented.

Safety and Health Issues: The installation of wind turbines creates a potential for impacts to air traffic. Due to minimal air traffic, generally good visibility, and lighting, etc., no impact to air traffic is anticipated. The Proposed Project will be in the radar line of sight of the Bismarck, North Dakota, Weather Surveillance Radar-1988 Doppler and has a low risk of impacting radar data; no further analysis or follow-up was requested. While the general consensus is that electric fields pose no risk to humans, the question of whether exposure to magnetic fields can cause biological responses or health effects continues to be the subject of research and debate. Based on the most current research on electromagnetic fields (EMF), and the distance between any turbines or collector lines and houses, the Proposed Project will have no impact to public health

and safety due to EMFs. There is the potential for oil or grease to leak from the turbine and spill onto the surrounding area underneath. There is also the potential for hazardous materials or hazardous waste to be generated during decommissioning, but the risk of these events is minimal and no significant impacts to the environment are anticipated.

Security measures will be taken during construction and operation, including temporary and permanent (safety) fencing at the substation, and warning signs and locks on equipment and wind power facilities. Also, turbines will sit on solid-steel-enclosed tubular towers in which all electrical equipment will be located, except for the pad-mounted transformer. Access to the turbines will only be through a solid steel door that will be locked when not in use. These measures will also act to reduce potential sabotage and terrorism-related impacts. Western believes that the Proposed Project presents an unlikely target for an act of terrorism, with an extremely low probability of attack. The potential for the Proposed Project to be targeted in terrorism-related activity will be negligible.

Cultural Resources: As currently designed, all 18 prehistoric stone feature sites and the prehistoric rock-lined pit feature site would be avoided by reroutes, turbine shifts, and fencing during construction. Provided that the prehistoric sites are fenced and avoided, a finding of No Historic Properties Affected was determined by Western and concurred with by the North Dakota State Historic Preservation Officer on July 9, 2010. Construction and operation of the Proposed Project would not directly impact these sites. If historic or prehistoric materials are discovered during monitoring of earth-disturbance construction activities, construction would be halted and Western would be notified in order to initiate procedures outlined in 36 CFR Part 800. There are no NRHP-listed or NRHP-eligible buildings, structures or objects within the area of potential effect (APE). Therefore, there will be no impacts to significant historic resources within the APE.

Native American Religious Concerns: As currently designed, all 18 prehistoric stone feature sites would be avoided and fenced during construction and no impacts are anticipated. In the event that burials or cultural sites with Native American religious values are identified during construction of the Proposed Project, work would halt within 200 feet of the site until Native Americans are notified and consulted about mitigation measures.

Cumulative Effects: The rural character of the area is expected to be maintained for the immediate future. The cumulative impact analysis identified a number of past, present, and reasonably foreseeable future actions such as the Wilton I and II Wind Energy Center, Minnkota Power Cooperative, Inc. Center to Grand Forks Transmission Line, and rural housing subdivisions that could contribute to cumulative impacts. Wind energy development is anticipated to have a positive cumulative impact on several resources, including air quality, and minimal impacts to geology, soils, water, noise, safety and health issues, and cultural resources. Socioeconomic impacts are anticipated to be positive, as the rural economy and energy production is diversified. None of the expected environmental impacts of the Baldwin Wind Proposed Project were found to be significant. It is not anticipated that the cumulative effects of this and those developments discussed above would be significant.

DETERMINATION: Based on the information contained in the EA, neither Western's Federal action nor Baldwin Wind's Proposed Project would result in significant environmental impacts. Western has determined that its action to approve the interconnection request for up to an annual average 50 MW does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Therefore, considering the impact mitigation measures and best management practices as described in the EA that are to be implemented over the course of the Proposed Project, preparation of an environmental impact statement is not required and Western is issuing this FONSI.

Issued at Billings, Montana, on July 29th, 2010.

Robert J. Harris
Regional Manager