Department of Energy
Western Area Power Administration
Rocky Mountain Customer Service Region
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U.S. DEPARTMENT OF ENERGY
WESTERN AREA POWER ADMINISTRATION
ROCKY MOUNTAIN REGION

FINDING OF NO SIGNIFICANT IMPACT

South Table Wind Farm Project
Kimball County, Nebraska
DOE/EA-1909

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

ACTION: Finding of No Significant Impact

SUMMARY: In September 2008, Generation Energy, Inc. (GEI), submitted an interconnection request to the Western Area Power Administration (Western) to connect its proposed South Table Wind Farm Project (Project) to Western's existing Sidney-Archer 115-kilovolt (kV) transmission line. Under a joint venture agreement, GEI and Bechtel Development Company have formed South Table Wind, LLC (STW), and STW will be the developer, contractor, and operator of the Project.

Under its Open Access Transmission Service Tariff (Tariff), Western is required to consider GEI's interconnection request. 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 Tariff requirements and subject to environmental review under the National Environmental Policy Act (NEPA) and other environmental regulations. 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.

In accordance with applicable regulations, Western prepared an environmental assessment (EA) entitled *South Table Wind Project Environmental Assessment* (DOE/EA-1909). Western's purpose and need is to consider the interconnection request in accordance with its Tariff. Western's proposed Federal action is to execute an interconnection agreement to connect the proposed Project to Western's 115-kV Sidney-Archer transmission line. The Federal action is limited to the execution of the interconnection agreement and taking possession of certain

substation equipment. Western's Federal action does not include STW's proposed Project, which would be constructed, owned, operated, and maintained by STW and, absent a statewide utility siting authority, is subject to Kimball County approval. However, Western's EA analyzes and discloses the potential environmental impacts of STW's proposed Project. The EA identified no significant impacts to environmental resources resulting from either Western's Federal action or STW's proposed Project.

The EA was distributed to interested agencies, tribes, groups, and individuals on March 9, 2012. The public comment period ended on April 13, 2012. Two comments from the general public were received during the comment period, both expressing general support for the Project. In addition, a comment letter from the Nebraska Game and Parks Commission (NGPC) was received dated April 6, 2012, expressing several concerns regarding the project's effects on wildlife. Another letter was received from the U.S. Fish and Wildlife Service (USFWS) on April 23, 2012, expressing similar concerns as the NGPC. Comments are addressed in the Final EA.

Based on the information contained in the EA, Western's Federal action would not result in significant environmental impacts. Western has determined that its action to execute an interconnection agreement with STW and take possession of certain substation equipment 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). The final EA is approved concurrently with this 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:

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For further information on the DOE NEPA process, contact:

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SUPPLEMENTARY INFORMATION: This FONSI was prepared in accordance with 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 execute an interconnection agreement for the South Table Wind Project will not have a significant impact on the human environment. Execution of the interconnection agreement would allow STW to interconnect their proposed Project to Western's existing Sidney-Archer 115-kV transmission line. Western prepared an EA entitled *South Table Wind Project Environmental Assessment* (DOE/EA-1909) on Western's proposed Federal action and also included an analysis and disclosure of the potential environmental impacts of STW's proposed Project.

WESTERN'S PROPOSED FEDERAL ACTION: Western's Proposed Action is to execute an interconnection agreement to connect the proposed Project to Western's 115-kV Sidney-Archer transmission line and allow the construction, maintenance, and operation of certain electrical equipment and physical interconnection with Westerns existing 115-kV Sidney-Archer transmission line. The Federal action is limited to the execution of the interconnection agreement and taking possession of certain substation equipment. A separate tap line will not be necessary for the proposed Project as the substation would be adjacent to the existing Sidney-Archer transmission line.

Transmission system studies were conducted to determine the effects on power flows in the event the interconnection agreement is executed. These studies indicate that interconnection of STW's proposed Project would not adversely affect transmission system operation or reliability, or impact power deliveries to existing customers.

STW's PROPOSED PROJECT DESCRIPTION: STW proposes to construct and operate a maximum 60-MW wind energy facility located on privately owned land southeast of the town of Kimball in Kimball County, Nebraska. STW has obtained leases from the private landowners to construct and operate the Project on private properties within the Project boundary.

STW's Project would consist of the installation of up to a maximum of 40 1.5-MW (or 24 2.5-MW) wind turbines (or a combination thereof) and associated facilities. Individual turbines would be supported by approximately 260-feet tall tubular towers. Underground transmission collection lines extending from the turbines would connect to a new electric power transmission substation that would be constructed and operated by STW. The Project footprint (i.e., the area to be disturbed during construction and throughout the 30-year life of the Project) would be limited to the areas immediately adjacent to turbines, access roads, and other facilities.

Support facilities would include underground power collection and communication lines, the Project substation, site roads, and an operation and maintenance building. During the construction phase, a large crane would be used to erect towers and turbines, and it would be walked either along Project access roads, along collection line corridors, or cross-country along corridors referred to as crane paths. Access to the Project area would be via a network of

existing improved county roads within the Project area. Access to Project facilities, including individual turbines, would be provided by new access roads that would be constructed for the purposes of Project construction and operation. A full and complete Project description is included in the EA.

PUBLIC INVOLVEMENT: The EA contains specific information on notifications to tribes, landowners, members of the public, and various local, State and Federal agencies. Public scoping meetings were held to discuss the proposed Project, to help determine important issues, and obtain local information relevant to the proposed Project. The pre-approval EA was distributed to interested agencies, tribes, groups, and individuals on March 9, 2012. All correspondence is available for review at Western's Rocky Mountain Regional Office.

COMMENTS RECEIVED ON THE PRE-APPROVAL EA: Two comments were received from the public expressing general support for the Project during the public review period. In addition, a comment letter from the NGPC was received dated April 6, 2012, expressing several concerns regarding the project's effects on wildlife as well a letter from USFWS on April 23, 2012, expressing similar concerns.

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 proposed action is to execute an interconnection agreement with STW and accept ownership of certain equipment in a new substation adjacent to Western's existing Sidney-Archer 115-kV transmission line.

Under the no action alternative, Western would not execute an interconnection agreement. Although Western's decision to not execute an interconnection agreement would not necessarily stop construction of the STW's proposed Project, Western's no action alternative assumes that STW's proposed Project would not be constructed.

ENVIRONMENTAL IMPACTS OF WESTERN'S ACTION: The execution of an interconnection agreement and accepting ownership of equipment to accommodate the proposed interconnection will have no impacts to environmental resources.

ENVIRONMENTAL IMPACTS OF STW's PROPOSED PROJECT: The EA evaluated the potential for STW's proposed Project to impact environmental resources found in the Project area. STW has incorporated mitigation measures and best management practices into the description of its proposed Project. 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 facility, the minor amount of disturbance at structure locations, and STW's efforts to work cooperatively with affected landowners. Each landowner had different priorities and concerns. STW worked successfully with the landowners to determine how structure locations could be adjusted to meet their individual needs and preferences to minimize impacts.

- **Jurisdictions, Land Use, and Agricultural Practices:** STW located the proposed wind generation facility on disturbed agricultural and pasture land to the extent practicable to minimize impacts to sensitive native rangeland. All collector lines will be buried and permanent loss of land for these lines was held to a minimum. While the rights-of-way within the Project area would have temporary impacts during construction, landowners would continue to have access to and the use of the land. Environmental impacts were determined to be temporary and minor.

  13 different soil types occur in the Project area, but no unique soils. No prime farmland is affected. Approximately 259.9 acres of soils would be impacted during initial construction, and approximately 54.1 acres would remain for roads, turbines, and facilities for the expected 30-year life of the Project. Temporary impacts to production would be for one season, and landowners would be reimbursed for any crop losses. Considering the amount of cropland in the region, these relatively small areas of disturbance do not constitute a significant impact to soils.

- **Physiography, Geology, and Minerals:** The topography of the area is relatively flat with areas of small swales draining to Sand Draw. No areas of unique geological features such as caves occur in the Project area, and there are no known geological hazards in the Project area. The only mineral extraction in the area is oil and gas, with several wells scattered throughout the northern portion of the Project area. Except for small local gravel pits, no other known mineral deposits are known to occur.

- **Hydrology and Drainage:** No floodplains or riparian areas occur in the Project area. Any cut-and-fill areas that are not needed for operations would be re-graded to the approximate original contour and reclaimed in accordance with landowner wishes. Construction would not occur in ephemeral channels. During construction, temporary drainage structures such as ditches, culverts, waterbars, and/or check-dams would be used, as needed, to divert runoff around construction areas. Because of avoidance and erosion control measures on upland construction areas, hydrology and drainage would not be adversely affected. There would be no direct impacts to surface water during construction because no permanent surface water bodies occur in the Project area. In addition, STW would develop and implement a Spill Prevention, Control, and Countermeasure Plan and a Storm Water Pollution Prevention Plan to minimize potential impacts to surface water resources.

- **Vegetation and Wetland Resources:** Vegetation in the Project area is a mosaic of about 57 percent cultivated farmland, 32 percent rangeland, and 10 percent Conservation Reserve Program land, with a few small shelterbelts scattered throughout the area. Because no floodplains, lands subject to Clean Water Act compliance, or wetlands occur within the Project area, these resources would not be impacted during the construction, operations, or decommissioning of the Project.

Best management practices would limit the extent and level of disturbance to rangeland, and would include tilling compacted soils and reseeding where needed. Impacts to cropland would be temporary and would be restored with the planting of new crops. Trees and shrubs removed during construction would be replaced.

Noxious weeds occur in the proposed Project area. Equipment would be washed before entering the proposed Project area, certified weed-free straw and re-seeding mixtures would be used, and disturbed areas would be monitored following construction for weed infestations. Control of any infestations would be coordinated with appropriate State, and local agencies and landowners.

- **Wildlife and Fisheries:** The majority of wildlife species in the Project area would temporarily relocate during construction activities and return after construction is complete. Some individuals of ground-dwelling and/or less mobile species could be lost to construction activities, but the losses would not be biologically significant. 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 aquatic habitat occurs in the Project area so impacts to fisheries or aquatic species would not occur.

- **Special Status Species:** Federally-listed species in the Project area include one endangered species: the black-footed ferret (*Mustela nigripes*); and two threatened species: the gray wolf (*Canis lupus*) and the Colorado butterfly plant (*Gaura neomexicana coloradensis*).

  Prairie dogs comprise approximately 90 percent of the black-footed ferret's diet; therefore, suitable habitat for this species is dependent upon the presence of prairie dog colonies. No prairie dog colonies occur in the Project area. The nearest known prairie dog colonies are located north of I-80 about 4 miles north of the Project area. Due to the lack of suitable black-footed ferret habitat and given that the nearest ferret reintroduction area is near the Badlands of South Dakota, the potential for black-footed ferrets within the proposed Project boundaries is highly unlikely. The Project would not impact the black-footed ferret.

  The gray wolf is highly mobile and would avoid human construction activity. The nearest known wolf populations are likely in northwest Wyoming in the Greater Yellowstone ecosystem. A single male grey wolf was recently identified at Spalding, Nebraska, approximately 300 miles east of the Project Area. The probability of gray wolf to occur in the Project area is extremely low. The Project would not impact the gray wolf.

  The Colorado butterfly plant occurs on sub-irrigated alluvial soil on level or slightly sloping floodplains and drainage bottoms associated with streams at elevations of 5,000 to 6,400 feet. The Lodgepole Creek drainage, located approximately 6 to 10 miles northwest of the Project area, contains the only known population of Colorado butterfly in Nebraska. No suitable habitat for Colorado butterfly plant occurs in the Project area; therefore, the Project would not impact the Colorado butterfly plant.

- **Raptors:** The Project area contains nesting and foraging habitat for several raptors, including golden eagles. In an effort to better understand the potential impacts of their Project on avian species and in particular on migratory birds and golden eagles in and around the Project area, STW has produced six separate avian surveys and studies from 2009 through 2011. These avian surveys and studies include 2 years of pre-construction avian use surveys, a 10-mile radius survey of raptor nesting sites, and a golden eagle flight pattern and use study. The six avian reports are: *Avian Fall and Spring Migration Monitoring Studies, South Table Wind Energy Project, Kimball County, Nebraska* (TRC, 2010); *Avian Spring 2011Migration Monitoring Studies, South Table Wind Energy Project, Kimball County, Nebraska* (TRC, 2011); *Avian Fall 2011Migration Monitoring Studies, South Table Wind Energy Project, Kimball County, NE* (TRC, 2011); *2011 Spring Raptor Nest Survey Results, South Table Wind Energy Farm, Kimball County, Nebraska* (TRC, 2011); *Golden Eagle Use and Flight Pattern Studies, South Table Wind Farm Project, Kimball County, Nebraska* (TRC, 2011); and the *Ten-Mile Golden Eagle Nest Inventory, South Table Wind Farm Project, Kimball County, Nebraska (TRC, 2011).*

  Based on these surveys and studies, three active golden eagle nests were located. The closest golden eagle nest is located on the north side of the Project area, located in Section 22, T14N, R54W now over 1 mile from the nearest turbine. Based on the results of golden eagle use of the Project area and flight heights, STW relocated five turbines from their original turbine array that were located within 1 mile of the golden eagle nest located in Section 22, T14N, R54W. Additionally, these surveys and studies indicate a golden eagle use pattern predominately situated to the northwest, away from the Project area, and towards the only prairie dog colonies (or ground squirrel population) within a 10-mile radius of the Project area. The four prairie dog colonies are located north of Interstate-80 and approximately 4 miles from the Project area, and appear to be a main food source location of the golden eagles occupying the active nest in Section 22, T14N, R54W. The surveys and studies also located two other active golden eagle nests, one approximately 4 miles to the west and one approximately 5 miles to the south of the Project area.

  It is noted that USFWS and the NGPC have both recommended "adjustment of the proposed wind project" so that it "maintain[s] a buffer distance of at least 4 miles away from all golden eagle nests located within or near the proposed wind Project." However, based on the local avian surveys and the Golden Eagle Use and Flight Pattern Study, STW has concluded that a 1-mile buffer away from the active nest in Section 22, T14N, R54W and in the opposite direction of the predominant eagle use and flight pattern is sufficient to reduce the level of risk for impacts from the Project on nesting golden eagles to less than significant levels. STW has moved all proposed turbine locations outside of a 1-mile buffer from the known nesting location consistent with *Guidelines for Wind Energy and Wildlife Resource Management* (located at http://outdoornebraska.ne.gov/wildlife/windwildlife.asp). It is noted that a 4-mile setback from the subject eagle nest would remove approximately 38 of the 40 Project turbine sites, making the Project uneconomical. Western encourages STW to continue to work closely with the USFWS and NGPC in protecting golden eagles and all avian species in the Project area.

The following measures would be implemented by STW to minimize impacts to raptors.

- STW would not install any wind turbines within 1 mile east and south of the golden eagle nest located in Section 21, T14N, R54W, near the northwest border of the Project area.

- Prior to construction, raptor nest surveys would be conducted within a 1-mile radius of proposed construction areas during the raptor nesting season (January 1 through July 31) to determine nest location, activity status, and, if possible, species prior to construction.

- If raptors are found nesting within or near the project area, construction would be sequenced to avoid construction activities within 0.25 miles of any active Swainson's or red-tailed hawk nest and 50 feet from any burrowing owl nest until the young have fledged or the nest is abandoned or has failed.

- Additional mitigation for raptors would be designed on a site-specific basis, as necessary, in consultation with USFWS and NGPC. STW would notify the USFWS or NGPC immediately if raptors are found nesting on project facilities (i.e., power poles, towers).

- Construction of new power lines would follow the recommendations of the Avian Power Line Interaction Committee to avoid electrocution of raptors and other avifauna.

- Post-construction avian and bat mortality surveys would be conducted for 2 years following construction.

- Lighting the wind turbines would be in accordance with USFWS and Federal Aviation Administration recommendations to aid in the reduction of avian and bat mortalities.

Based on the above no significant impacts to raptors are anticipated.

- **Archaeological and Historic Resources:** Class I and Class III surveys, were completed for the Project. Of the 19 sites identified, a single site (25KM22) was found to be eligible for the National Register. This site would not be adversely affected by the proposed Project. The Nebraska State Historic Preservation Officer concurred with this finding by letter dated May 10, 2012.

- **Native American Setting:** No traditional cultural use areas, sacred sites, or other potentially sensitive areas were identified by Native American tribes with past or present affiliation to the proposed Project area.
- **Paleontological Resources:** STW's proposed Project is located in the area of exposed Miocene-aged Ogallala Formation which is well known for yielding important vertebrate fossils. No fossil bearing formations were found during initial or subsequent surveys. Since damage to fossils during construction is a possibility, monitoring during construction or any other ground-disturbing activities that would disturb bedrock by STW or its contractors would be conducted by a trained paleontologist. Employee education about the value of these resources would minimize any indirect effects. Any impacts to paleontological resources are very unlikely. No impacts to paleontological resources are expected.

- **Transportation:** Regional transportation facilities would be used to transport materials and workers to the proposed Project site. Kimball County Road 59 is the only paved road in the Project area, bisecting the proposed Project area north to south. An extensive network of gravel-surfaced county roads throughout the Project area would serve as the primary access to construction areas. The nearest Nebraska state highway is State Highway 71, which is located 6 miles west of the western Project boundary. Local traffic in this sparsely populated area would increase during construction. About 45 construction workers would be expected at the peak, and they would be traveling locally to several work areas in the Project area. Pickup trucks, flat bed trucks, semi-tractor trailers, large assembly cranes, and other typical construction equipment are expected to use the local roads during construction. The increase in traffic would be locally noticeable. There could be a negligible increased risk of traffic accidents or temporary inconveniences to area residents due to the presence of large trucks and construction equipment on the county roads. These impacts would be localized, temporary, and minor.

- **Socioeconomics:** The impact of the proposed Project on socioeconomics would be mixed and can best be characterized as temporarily beneficial. Construction crews would bring outside dollars into the local economy for goods and services such as fuel, meals, lodging, concrete, seed, aggregate, and machinery repair. Housing vacancies would be expected to be low, and hotels and motels would likely be fully booked during construction. Socioeconomic impacts would be temporary, short term, and minor.

- **Public Health and Safety:** Transportation of materials would be in conformance with U.S. Department of Transportation regulations. While some risk of injury is always present on construction sites, compliance with regulations would hold this risk to a minimum.

- **Environmental Justice:** There would be no disproportionately high or adverse health or environmental impacts on minority or low income populations as the result of constructing, operating, and maintaining the proposed Project.

- **Visual Resources Setting:** The wind turbines would change the aesthetics of the landscape with the addition of more tall towers and rotating blades. Based on the viewshed analysis and local topography, the wind turbines would not be visible from Kimball, Potter, or I-80. However, the turbines would be visible from the community of Dix about 5 miles north of the Project area, and from Highway 71, 4 miles west of the Project. There are no designated overviews, vistas, or scenic highways in the region. Two other wind farms would be visible from the Project: the small 10.6-MW Municipal Energy Agency of Nebraska's Kimball Wind Farm, located about 2 miles northwest of Kimball; and the much larger 430-MW Peetz Table Wind Project, located about 10 miles south of the Project area. Population densities are low, limiting the number of viewers overall. Visual impacts are considered to be minimal.

- **Noise:** The construction of the proposed Project would generate vehicle and equipment noise during the construction phase. 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 during construction would be sporadic and temporary at most locations and would cease with the completion of the end of the construction phase.

The wind turbines identified for the Project are expected to have a maximum sound level of less than 104 decibels on the A-weighted scaled (dBA). According to a Bureau of Land Management (BLM) document *"Final Programmatic Environmental Impact Statement on Wind Energy Development on BLM-Administered Lands in the Western United States"* (BLM 2005), a wind turbine with a sound power level of 104 dBA would have a resulting sound level of 58 to 62 dBA at a distance of 164 feet from the turbine, which is comparable to a conversational speech at a distance of about three feet. It should also be noted that as wind speeds increase, background noise levels (from the wind) also increase and would likely be louder than the operating wind turbine. In this sparsely populated area, turbine noise would not be significant.

- **Air Quality:** The proposed Project area is presently in attainment of the National 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. No Federal or state air quality standard would be violated by the construction of the proposed Project.

- **Intentional Destructive Acts:** Transmission lines can be the target of intentional destructive acts ranging from random vandalism and theft to sabotage and acts of terrorism. In this remote area, random vandalism (often damage to equipment from firearms) and theft are the major concerns. Vandalism risk should be low due to the predominance of private property and landowner vigilance. Substantial hardships would not result if any turbine or other equipment were to be taken out of service due to an intentional destructive act, and the damaged facility would be quickly repaired and returned to service.

- **Cumulative Impacts:** The rural character of the area is expected to be maintained for the immediate future. Despite other developments that have affected the region, including the 430-MW Peetz Table Wind Project, the 10.6-MW Municipal Energy Agency of Nebraska's Kimball Wind Farm, oil and gas development, and transportation projects, the area remains largely rural and undeveloped beyond agricultural use. It is not anticipated that the cumulative effects of this and those developments discussed are significant.

DETERMINATION: Based on the information contained in the EA, Western's Federal action would not result in significant environmental impacts. Western has determined that its action to execute an interconnection agreement with STW and take possession of certain substation equipment does not constitute a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Therefore, considering the Project 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 Loveland, Colorado, on August 28, 2012.

Bradley S. Warren
Regional Manager