July 2011
DOE/EA-1853

Department of Energy, Western Area Power Administration
Finding of No Significant Impact
And Floodplain Statement of Findings
Perrin Ranch Wind Energy Interconnection Project

Summary-

Western Area Power Administration (Western), a power-marketing agency of the U.S. Department of Energy, is responding to an application from Perrin Ranch Wind, LLC (Perrin Ranch Wind) a subsidiary of NextEra Energy Resources, LLC (NextEra Energy) to interconnect the Perrin Ranch Wind Energy Center (the Project) to the Moenkopi-Yavapai transmission line, which is part of the Navajo Project, Southern Transmission System. Perrin Ranch Wind, LLC (Perrin Ranch Wind), proposes to develop, operate, and maintain this wind energy facility. The Project would be constructed on private and state trust land located north of Williams in Coconino County, Arizona. Arizona State Land Department would authorize new right-of-way (ROW) for access roads that cross state trust land. Coconino County approved a conditional use permit for the Project on December 16, 2010.

Western is the lead Federal agency responsible for preparing the environmental assessment (EA) under the National Environmental Policy Act (NEPA). The U.S. Bureau of Reclamation (Reclamation) is a cooperating agency. The United States owns 24% of the Moenkopi-Yavapai transmission line, requiring that the Project be reviewed under NEPA. Through a memorandum of understanding, Reclamation agreed that Western would perform the NEPA process for the Project according to the DOE NEPA-implementation regulations and rules.

The EA, titled "Public Draft Environmental Assessment DOE/EA-1853: Perrin Ranch Wind Energy Interconnection Project," was distributed on May 6, 2011, for pre-approval review by the public, including affected landowners. In response to comments received, a final EA was prepared to clarify and correct information in the draft EA. The final EA is approved concurrently with this finding of no significant impact (FONSI).

Based on findings and analysis in the EA, Western has determined that with the resource protection measures, the Perrin Ranch Wind Energy Interconnection Project (Proposed Action) would not result in any significant environmental impacts. Therefore, preparation of environmental impact statement (EIS) will not be required. The basis for this determination is described in this FONSI.

Additional information and copies of the final EA and FONSI are available to all interested persons and the public through the following contact:

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Purpose and Need

Western's purpose and need is to respond to the interconnection request in accordance with applicable Large Generator Interconnection Procedures. The applicant's purpose for the Project is to provide wind-generated electricity from a site in Arizona to further the objectives of the President's National Energy Policy to diversify energy sources by making greater use of non-hydroelectric renewable sources, such as wind power (National Energy Policy Development Group 2001), and to meet customer demand for competitively priced energy from renewable resources. Per an existing power purchase agreement with APS, Perrin Ranch Wind needs to develop, operate, and maintain the generation infrastructure in order to develop the renewable wind resource.

Project Description

The proposed Project would include sixty-two 1.6-megawatt (MW) General Electric turbines, with a total Project output capacity of 99.2 MW of renewable energy. Due to the wind regime at the site, the average MW output is anticipated at 50% of 99.2 MW at any given time (the average annual MW would be less than 49.6 MW).

In addition, the Project includes the following components: six meteorological towers, underground electrical collection lines, access roads (existing and proposed), a 138-kV substation, a 138-kV generation-tie transmission line and 21-kV backfeed line, a 500-kV step-up substation, an APS 500-kV switchyard, a 21-kV Project power line, three microwave towers, an operation and maintenance facility, a temporary concrete batch plant, two temporary construction laydown areas, and an existing material source pit.

Access to the Project area would be via State Route 64 and Espee Road. Access to the Project facilities, including individual turbines, would be provided by existing Perrin Ranch roads and proposed access roads to be constructed for the purposes of Project construction and operation. The Project footprint includes short-term disturbance (construction) and long-term disturbance (operation and maintenance)

Perrin Ranch Wind proposes to implement Western's standard construction practices, where applicable, to avoid and minimize impacts to the environment to the extent practicable. These measures are part of Perrin Ranch Wind's proposed Project, in addition to applicant-committed best management practices and conservation measures.

Reclamation and restoration of the construction footprint would be completed following construction and cleanup, as specified in the Native Plant Revegetation and Noxious Weed Management Plan that was prepared for this Project. All disturbed soil, other than surfaces intended for permanent access roads, would be reseeded with a native seed mix free of invasive seed.

Agency Consultation and Public Participation Process

On January 17, 2011, Western sent scoping letters to the public announcing Western's decision to prepare an EA and request comments on Western's proposal to approve the interconnection request. Western also solicited public comment through the local library in Williams and local newspaper notifications. Numerous public comments were received as a result of these notifications. Western held a public meeting on February 2, 2011, at the Williams High School in Williams, Arizona. Representatives from Western and the Project team were available to meet with interested members of the public to discuss the EA activities and the Project in general. Approximately 24 people were in attendance. Western provided a detailed description of the Project and requested that the public identify issues and management concerns related to the project.

Western distributed an Administrative Draft EA for pre-approval review to Reclamation (a cooperating agency) on April 11, 2011. Comments received were incorporated into the Public Draft EA that was released to the public on May 6, 2011. The comment period for the Public Draft EA ended June 23, 2011, after a 2-week extension had been granted to the original June 6, 2011 comment period deadline. Comments received were incorporated into the final EA and considered in Western's determination of whether an EIS is required. The final EA is approved concurrently with this FONSI.

Consultation with the Arizona State Historic Preservation Office (SHPO) in accordance with procedures provided in Section 106 of the National Historic Preservation Act (36 CFR Part 800 "Protection of Historic Properties") was conducted. Western's March 29, 2011 letter to the SHPO contained determinations of eligibility and a finding of "No Historic Properties Affected" for the project. Western provided supplemental information to the SHPO on June 24, 2011, regarding the Grand Canyon Railway and reiterated the finding of "No Historic Properties Affected." The SHPO concurred with Western's determinations and findings on July 6, 2011.

Western initiated consultation with Native American tribes with a notice of Project letter sent on January 21, 2011. Tribes contacted include the Havasupai, Hopi, Hualapai, Yavapai-Apache, Yavapai-Prescott, and Navajo Nation.

Representatives from the Havasupai and Hualapai tribes visited the site on May 6, 2011, accompanied by representatives from Western, SWCA, and the project proponent and landowner. During the visit, the Hualapai requested: that a formal presentation about the project be made to the Hualapai Cultural Department in Peach Springs, and extended the invitation to the Havasupai to attend the presentation; that a formal Burial Agreement be drafted by the Arizona State Museum (ASM) and incorporated into the Avoidance Plan; that Red Mesa be analyzed as a Key Observation Point (KOP) and included in the presentation at Peach Springs; and that copies of the plant and biology inventories be provided.

Western met on May 26, 2011 with the Hualapai Tribe along with NextEra, SWCA and the ranch owner, at Peach Springs, Arizona to discuss the project and the draft EA. Presentations were made about the proponent, the project, the archaeological survey and results, development and contents of the avian and bat protection plan, and the visual impacts of the project from the vantage of Red Mesa, Arizona, a sacred site for the Hualapai and Havasupai. The Havasupai representatives were unable to attend the meeting. Western and the Hualapai Tribe agreed if the project goes forward: tribal monitors will be present during construction; the Hualapai Tribe will be contacted directly in the event of a discovery of cultural resources; and the Hualapai Tribe will be able to participate in the treatment of a discovery.

Alternatives

DOE's NEPA regulations require that an EA include a discussion of the No Action Alternative (10 CFR 1021.362(c)). Under the No Action Alternative the proposed Project wind energy facility would not be constructed.

Environmental Impacts-

Findings on the impacts and their significance resulting from the Proposed Action are based on information contained in the final EA. In reaching conclusions about the Proposed Action's environmental impacts, Western considered resource protection measures and construction practices as defined in the final EA. For this Project, some resources were dismissed from further consideration because the resource would either not be affected or would sustain negligible impacts from the Project. Resource areas dismissed from further analysis include climate and air quality, cultural resources, environmental justice, hazardous materials, intentional destructive acts, and land use.

The existing environmental and potential environmental impacts were identified and evaluated for the following resources: aesthetics and visual resources; noise; water resources (including floodplains, groundwater, and surface water); vegetation (including vegetative communities, rare plant populations, and noxious and invasive weeds); wildlife (including raptors, non-raptor avian species, bats, big game, reptiles and amphibians, and small mammals); socioeconomics (including demographics, economic activity, quality of life, property values, and property taxes); Native American religious concerns; transportation; recreation; human health and safety; and geology, mineral resources and soils. Cumulative impacts are also addressed in the EA.

Western has concluded that the Proposed Action would not result in any significant impacts. The basis for Western's conclusion is summarized below.

Aesthetics and Visual Resources. Construction activities associated with the Proposed Action would introduce visual contrasts to the color, line, form, and texture of the existing characteristic landscape. Visual contrasts would result from ground disturbance, removal of vegetation, presence of construction personnel and vehicles, and the temporary storage of equipment and materials. Direct and indirect impacts from construction of the Proposed Action on aesthetics and visual resources would be local, minor, short term, and adverse. Visual contrasts would result from the presence of the Project's facilities; namely the new access roads, turbines, met towers, and project interconnection power lines/towers. Construction and operation of the Proposed Action would not create a dominant visual change that would degrade the existing character or scenic quality or create a visual eyesore. The direct and indirect impacts from operation of the Proposed Action on aesthetics and visual resources would be local, minor, long term, and adverse. Western had determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to aesthetics and visual resources.

Noise. Noise generated by construction equipment would vary, depending on type, model, size, and condition of the equipment. Because construction activities are short term (occurring over a five- to seven-month period), the associated impacts of noise would be temporary and intermittent. No hospitals, schools, or churches are located in or adjacent to the Project. No sensitive receptors would be exposed to harmful noise levels. The direct and indirect impacts from noise of the construction of the Proposed Action would be local, minor, short term, and adverse. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative noise impact.

Water Resources. The Proposed Action would result in direct and indirect impacts to water resources from the use of water during construction of the Proposed Action. Because groundwater would be

withdrawn from the local aquifer, the impacts to groundwater would be direct and local. With respect to surface water, best management practices would be in place during construction to protect against contamination of surface water and erosion; therefore, direct and indirect impacts to surface water resources would be short term and minor.

Floodplain Statement of Findings. The only major wash on the property is Cataract Creek, which drains northward in Cataract Canyon. Several tributaries, including Lo Draw and K Four Draw, drain the majority of the property into Cataract Creek. Cataract Canyon continues toward the northwest for approximately 70 miles before it joins Havasu Creek near the Grand Canyon and enters the Colorado River at the Grand Canyon. Because the area of disturbance in the Project Area is very low (0.04% and 0.002%) compared to the entire contributing area of the affected watersheds, impacts to surface water or flooding in the Cataract Canyon and upper Verde River watersheds are likely to be negligible and below the level of measurable effects. The current FEMA Flood Insurance Rate Maps (FIRMs) indicate that the Project area is located in an area with no special flood hazard, and that all Project disturbances would be conducted outside any 100-year floodplains. None of the structures included in the Proposed Action would occur within any delineated boundary of 100-year floodplains.

With respect to groundwater, only a small amount of water (60 acre-feet one time use) from groundwater sources would be used during construction, and all impacts to water resources during construction would be short term and minor. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to water resources.

Vegetation. The construction phase of the Proposed Action would include ground-disturbing activities for the development of a substation, switchyard, wind turbines, access roads, transmission lines, and associated facilities (i.e., substations, operation and maintenance facilities, and switchyards). Adverse direct and indirect impacts to vegetation from construction of the Proposed Action would be long term and short term, local, and minor. The primary impacts to vegetation would come from road construction and maintenance, and from clearing of work area. Construction activities would result in the short-term disturbance of 648 acres, which is 1.6% of the Project Area. Construction activities would result in the long-term disturbance of 226 acres, 0.6% of the Project Area. Adverse, indirect, long-term impacts may occur from the spread and establishment of noxious weeds within the Project Area; however the introduction of noxious weeds would be minimized through implementation of resource protection measures. Adverse impacts to vegetation resources are anticipated to be minimal during the operation of the Proposed Action. Indirect adverse impacts to vegetation communities may result from increased road access within the Project Area and would consist of increased legal and illegal take of plants, introduction of invasive vegetation, and increased risk of wildfire through campfires, off-highway vehicle use, and cigarettes. Vegetation removal associated with the Proposed Action would not result in a loss of any population or sensitive plants that would jeopardize the continued existence of that population and would not result in a species being listed or proposed for listing as endangered or threatened. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to vegetation.

Wildlife. Construction activities would result in a number of permanent and temporary adverse impacts to wildlife, potentially including direct injury or mortality, habitat disturbance, introduction or spread of invasive vegetation, interference with behavioral activities, increased levels of fugitive dust, and increased noise. The operation phase of the Proposed Action is anticipated to adversely impact wildlife through impacts related to wind turbines (i.e., avian and bat collisions and/or barotraumas for bats). Other adverse impacts to wildlife may result from electrocution from power lines, collisions with meteorological towers, increased predation, increased levels of noise, disturbance from maintenance activities, and interference with behavioral activities. Adverse impacts to raptors resulting from the operation phase of the Proposed Action may include collisions with wind turbines; electrocution from the

138-kV overhead transmission line, interference with behavioral activities, increased noise, and increased disturbance from maintenance activities. Indirect short-term adverse impacts to big game may occur from of human activity throughout the Project Area required for maintenance and repair of the site facilities. However, these impacts would be brief in duration and big game species are expected to return to the habitat within and adjacent to the Project Area following any maintenance activities. Based on the above findings, Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to wildlife.

Socioeconomics. Construction of the Project could result in a short-term increase in local employment. Because the construction workforce is expected to draw from the existing workforce, there would be adequate housing and associated infrastructure to support construction workers. Construction-related expenditures, as well as sales and use taxes for goods and services purchased during construction, would also result in a short-term boost to the local economy. Project construction would likely increase traffic in and around the Project Area and could result in some travel restrictions within Perrin Ranch; therefore, access for area recreationists would be affected. Construction could also result in short-term impacts to area quality of life, as well as a short-term reduction in recreational visitors who may choose to avoid the area during construction. Direct and indirect impacts to socioeconomics from construction of the Proposed Action would be regional, short term, and beneficial. Operation-related expenditures, as along with sales and use taxes, would result in a long-term boost to the local economy. In terms of residential property value, housing prices in the area are not expected to be directly affected by the physical presence of the proposed Project but may be affected by the perception of loss in value by real estate purchasers. Western has determined that the Proposed Action would not cause a significant direct, indirect, or cumulative impact to socioeconomics.

Native American Religious Concerns. Construction of the Project would avoid 69 archaeological sites, so there would be no short-term impact to these sites as a result of construction. Therefore, there would be no direct or indirect impacts to archaeological sites and, subsequently, Native American religious concerns as a result of construction of the Proposed Action. Operation of the Project would not create barriers to tribal members from accessing the sites. The presence of the Project would not impair the cultural functions of the archaeological sites; therefore, there are no indirect impacts from the operation of the Project. Western has determined that there would be no significant direct, indirect, or cumulative impacts to archaeological sites and Native American religious concerns as a result of operation of the Proposed Action.

Transportation. Approximately 39 miles of roads would be constructed and/or maintained within the Project Area to provide construction and delivery personnel with access to turbine sites and associated Project facilities. Transportation of equipment and materials during construction would result in increases in the traffic levels on Interstate 40 (I-40) and State Route 64 by up to 1.5%. Traffic levels on Espee Road and other unnamed secondary roads in the Project footprint would also increase during the construction period. The additional traffic associated with Project construction could result in access delays to current travelers on Espee Road. However, traffic control measures would not prevent emergency services from accessing the existing roadways. Western has determined that the Proposed Action would not cause significant direct, indirect, or cumulative impact to transportation.

Recreation. The Proposed Action does not include disturbances to the existing campgrounds within the Project Area; these designated camping areas are not located within short- or long-term disturbance areas and no closures are planned. Hunters and other recreationists, as well as wildlife sought by hunters, would be temporarily displaced during construction due to construction-related noise and traffic; however, wildlife are expected to return to the area once construction is complete, and hunters are expected to return once the wildlife does. The temporary hunting restriction would result in the possible displacement of up to 550 to 600 hunters per month during the 2011 fall hunt season from the Perrin Ranch to other

areas within GMU 10. The Perrin Ranch boundary of 43,715 acres is 3.1% of the total area of GMU 10. Therefore due to the small relative percentage reduction in hunting area and the short timeframe, it is anticipated that hunters in GMU 10 would be able to hunt in other areas of the GMU during the 2011 season and would return to using the ranch in 2012. Western has determined that the Proposed Action would not cause a significant direct, indirect or cumulative impact to recreation.

Human Health and Safety. There are few existing risks to human health and safety in the Study Area. Wildland fire is the primary existing health and safety risk. Although some clearing would occur, overall fuel levels during construction and operation of the Project would be similar to current conditions; therefore no measurable effect from fuels and fire management is expected from implementation of the Proposed Action. There are possible risks to human health and safety if the Proposed Action were implemented; however the Proposed Action includes several protection measures designed to minimize these impacts. Nevertheless, specific actions have been identified for implementation during construction so the Proposed Action would not result in serious injuries to visitors or residents to the area or interfere with emergency response capabilities or resources. During construction, standard health and safety practices would be conducted following Occupational Safety and Health Administration (OSHA) policies and procedures. Western has determined that the Proposed Action would not cause significant direct, indirect or cumulative impacts to human health and safety.

Geology, Mineral Resources, and Soils. The Project area is within the Colorado Plateau physiographic province, which is characterized by generally horizontally stratified sedimentary rocks that have eroded into numerous incised canyons and high desert plateaus. Construction of the Project would not directly or indirectly affect local geology and geologic events. Shallow disturbances for roadways and foundations, would have a negligible effect on local geology. Earth grading and excavation activities would be shallow, and would not contribute to increased probability or magnitude of seismic or geological hazards in the project area. With the exception of cinders, no saleable mineral resources are known to occur on the Project area. Direct and indirect impacts to mineral resources from construction of the Proposed Action would be long-term localized, and negligible. The most common soils on the project area, within the areas that would be impacted, are Deama-Rock outcrop complex (8%–30% slopes), Showlow gravelly fine sandy loam (8%-30% slopes), and Tusayan-Lynx association (gently sloping). Direct and indirect impacts to soil resources from construction of the Proposed Action would be long-term and short-term, local, and minor. During construction of the Project, short-term disturbance of soils would occur on approximately 648 acres (1.63% of the Project area), resulting in a conversion from natural soils to construction rights-of-way, laydown areas, turbine foundations, and other related infrastructure. Western has determined that direct impacts would not cause a significant direct, indirect or cumulative impact to geology, mineral resources, and soils.

Determination-

The analyses contained in the EA indicate that the Proposed Action, implemented with the resource protection measures, is not a major Federal action significantly affecting the quality of the human environment. Western has determined that preparation of an EIS is not required.

Issued:

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