July 2005
DOE/EA-1524

DEPARTMENT OF ENERGY
Western Area Power Administration
Finding of No Significant Impact
East Side Peaking Project, South Dakota

Summary -- Basin Electric Power Cooperative (Basin) applied to the U.S. Department of Energy (DOE), Western Area Power Administration (Western) to interconnect the East Side Peaking Project (Project), an electric generating peaking facility proposed to be constructed in Brown County, South Dakota, to Western's Groton Substation. Western proposes to modify its substation to accommodate a new transmission line linking the peaking facility to the substation. Basin would construct the peaking facility and associated features. All financial responsibility for the Project would be borne by Basin.

Basin also applied to the Rural Utilities Service (RUS) for funding for the peaking facility. The RUS prepared an environmental assessment (EA) for the Project, East Side Peaking Project (DOE/EA-1524). The EA was distributed for public and agency review on May 4, 2004. Western was designated a cooperating agency for the EA by RUS in February 2005. Western provided comments and the Final EA was completed on June 20, 2005. After an independent review of the Final EA, Western concluded that its comments and suggestions have been satisfied and with this finding is adopting the RUS EA for its participation in the Project. Based on the EA, Western has determined that the proposed East Side Peaking Project would not result in any significant environmental impacts, and the preparation of an environmental impact statement (EIS) will not be required. The basis for this determination is described in this Finding of No Significant Impact (FONSI).

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Additional information and copies of the EA and FONSI are available to all interested persons and the public from the person named above. For general information on DOE National Environmental Policy Act (NEPA) activities contact:

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Purpose and Need -- Basin applied to Western for an interconnection at Western's Groton Substation and for transmission services on Western's system. Western is responding to Basin's request. Western would provide transmission service once requirements of its Open Access Transmission Service Tariff (Tariff) and General Requirements for Interconnection have been met. These requirements include evaluating available transmission capability, ensuring that system reliability and service to existing customers is not adversely affected, and assessing the environmental impacts of the proposal.

Project Description -- Western's action for the Project involves modifying the Groton Substation and authorizing an interconnection. Modifications to the substation would be required to accommodate transmission service, including additional substation equipment and other transmission system enhancements. Western would enter into a contract authorizing an interconnection with Western's transmission system through an Interconnection Agreement. Western would also enter into a construction agreement with Basin to provide the interconnection.

Western analyzed the environmental impacts not only of its action but of the impacts associated with the entire Project. The connected actions analyzed in the EA include the following:

1. Constructing and operating the East Side Peaking Plant, a peaking generation facility containing a simple-cycle, natural gas-fired combustion turbine with a net capability of about 80-100 Megawatts (MW), and ancillary facilities. The yearly output of the facility would be less than 50 average MW. The facility is proposed to meet peak electrical energy needs of Basin's customers, primarily during the summer season.
2. Constructing and operating a gas pipeline that interconnects with Northern Border Pipeline's interstate gas pipeline approximately 11.5 miles south of the Project site.
3. Modification of Western's Groton Substation to accommodate the interconnection.
4. Construction of about 0.5 mile of new transmission line from the power generation facility to the point of interconnection in Western's Groton Substation.

DOE's NEPA Implementing Procedures require an EA to be prepared for the addition of new generation resources greater than 50 average MW. Because of this restriction, Basin has agreed to limit the yearly electrical energy output to less than 50 average MW. If the 50 average MW threshold is exceeded, Western will open the point of interconnection at the interconnection breaker and

isolate the generator until the following year. The Project would be operated in this manner until an EIS is completed that evaluates the effects of the increased output. Additionally, Basin may, at any time, pursue completion of an EIS to evaluate operation of the Project above the 50 average annual MW limit.

The Public Process -- To allow an early and open process for determining the scope of issues and concerns related to the proposed action (40 CFR 1501.7), public scoping was provided by Basin following RUS requirements. Basin notified Federal, state and local agencies and Tribes of the project on June 22, 2004, and the South Dakota Public Utilities Commission on July 6, 2004. The South Dakota Departments of Natural Resources; Game, Fish and Parks; Tourism and State Development; and Transportation; and the U.S. Army Corps of Engineers; Deuel County Auditor; and U.S. Fish and Wildlife Service (USFWS), responded and provided input during scoping. RUS placed a Notice of Intent to Prepare an EA in the Federal Register on June 17, 2004 (Vol. 69 FR 33883) and placed legal notices and advertisements on the intent to prepare an EA in the *Watertown Public Opinion* (Watertown, South Dakota; June 25, 26, 2004), and the *American News* (Aberdeen, South Dakota; June 26, 2004). Western was designated a cooperating agency by the RUS in February 2005. Scoping comments were taken into consideration when preparing the EA.

The EA was distributed for review to Federal, state and local agencies and Tribes that have jurisdiction or permitting authority for the proposed Project. Legal notices of availability of the EA for public review were published in the *American News* (May 2 and 3, 2005). Copies of the EA were also placed in libraries in Watertown and Aberdeen, South Dakota and the Northern Electric Cooperative, Inc. office in Bath, South Dakota. Western provided additional comments on the EA, which were incorporated in the Final EA (June 2005). RUS did not receive comments from any other parties on the EA.

RUS distributed the EA to Native American tribes known to have ancestral, aboriginal or ceded land ties to the proposed Project area. Tribes contacted include the Lower Brule Sioux Tribal Council, Sisseton Wahpeton Sioux Tribe, Cheyenne River Sioux Tribe, Standing Rock Sioux Tribal Council, Yankton Sioux Tribal Business & Claims Committee, Prairie Island Indian Community and Flandreau Santee Sioux Executive Committee. None of the tribes responded with comments on the EA.

RUS distributed the EA to the South Dakota State Historic Preservation Office (SHPO). Western prepared a follow-up consultation letter on June 27, 2005 to meet Western's obligations under the National Historic Preservation Act (NHPA), (16 U.S.C. 470, et seq.) with the eligibility recommendations and determination of no effect on cultural and historical resources. Western received a letter of concurrence from the SHPO on July 8, 2005.

As part of the Endangered Species Act (16 U.S.C. 1531-1544), Section 7 consultation process, the USFWS was consulted regarding the review of the Project's effects on federally-listed threatened and endangered species. RUS determined the proposed action would not affect endangered, threatened, proposed or candidate species or Critical Habitat. A letter of concurrence with this conclusion was received from the USFWS on May 9, 2005.

Additionally, Basin applied for and received the following permits and approvals for the project:

- U.S. Army Corps of Engineers (USACE) Nationwide Permit No. 12 (April 14, 2005)
- South Dakota Department of Transportation Right-of-Way Occupancy (July 15, 2004).

Alternatives -- DOE's NEPA regulations require that an EA include a discussion of alternatives to the proposed project and the no action alternative (10 CFR 1021.321(c)). The no action alternative provides a baseline against which the effects of the proposed action may be compared. Under the no action alternative, the proposed action would not be implemented and the site-specific and direct impacts associated with the proposed East Side Peaking Project would not occur in the Project area.

The analysis included evaluation of the Watertown SE Alternative. The Watertown SE Alternative has similar environmental impacts as the Proposed Project but would require land purchase, construction of a new substation, and is located in prime farmland. However, it is not located in a floodplain.

Environmental Impacts -- Western's conclusions about the proposed Project's environmental impacts are based on information contained in the EA issued in June 2005. The EA is available upon request. In reaching conclusions about the proposed Project's environmental impacts, Western has considered the best management practices (BMP) and environmental protection measures proposed by RUS and Basin.

The existing environment and the potential environmental impacts were identified and evaluated for the following resources:

- Land Use (recreation and public interest areas and prime and unique farmlands)
- Floodplains
- Wetlands
- Cultural Resources (historical and archaeological resources)

- Biological Resources (threatened and endangered species, fish and wildlife, and vegetation)
- Geology, Topography and Soils
- Air Quality
- Water Quality/Resources
- Aesthetics
- Transportation
- Noise and Radio and Television Interference
- Human Health and Safety
- Socioeconomic Conditions and Community Resources (socioeconomics, environmental justice, infrastructure and waste management)
- Cumulative Impacts
- Plant Decommissioning

Based on the EA, Western concluded that, with the BMPs and environmental protection measures proposed for the Project, constructing and operating the proposed Project would not require mitigation beyond that already proposed by RUS and Basin to mitigate potentially adverse environmental impacts.

The basis for Western's conclusions about the impacts to these resources from the proposed East Side Peaking Project is summarized below.

Land Use: The Project would remove less than 15 acres of non-prime farmland from agricultural use for the life of the gas turbine facility and transmission line. Construction of the gas pipeline connection would temporarily disturb land within the right-of-way of State Highway 37 but would be reclaimed soon after construction is completed. Direct long-term impacts of loss of crops, hay or livestock forage would occur, but would have a relatively small impact on a county-wide basis. Based on the small amount of land permanently removed from agricultural use and the return of disturbed land after construction, Western has concluded that the proposed Project would not cause a direct, indirect or cumulative significant impact to land use.

Floodplain Statement of Findings: The Project would not cross into, or be located within, a 100-year floodplain, thus there would be no impacts to, or from, a 100-year floodplain. The Project is located in a 500-year flood zone. Per "Compliance with Floodplain/Wetlands Environmental Review Requirements" (10 CFR part 1022), an assessment of impacts to and from the 500-year floodplain are included in the EA. Impacts from the 500-year flood zone include disruption of utility service for a considerable period during a 500-year flood event, creation of barriers that could unnaturally divert flood waters, or increase flood hazards in

other areas, alteration of the natural floodplains and protective barriers that help channel or accommodate flood waters and the creation of scour and other turbulence that could erode channel banks. The Project would be designed and constructed in accordance with all Federal, state, and local floodplain requirements and to withstand forces associated with a 500-year flood. Thus, Western has concluded that the Project would conform with all applicable floodplain protection standards. Because the Project would not be located within a 100-year floodplain and includes measures to prevent alterations to the flood-handling capability of the 500-year floodplain, Western has determined that significant impacts to and from a 500-year flood zone would not occur.

Wetlands: Less than 10 acres of isolated herbaceous wetlands would be impacted by constructing the Project. An additional storm water retention pond for the project would be constructed and the existing retention pond for Basin's existing substation would remain in place. A small isolated wetland area is located within the road right-of-way that would be minimally affected by trenching and backfilling for construction of the gas pipeline. Impacts to the wetland would be covered under the USACE Nationwide Permit No. 12 for constructing utility lines in waters of the U.S. The Permit contains mitigation measures required to protect the wetlands. Impact to wetlands from constructing the gas turbine and pipeline could include crushing of wetland vegetation and compaction of soils that could increase runoff and water-holding capacity leading to impaired function of the wetland. Western determined that there would be a net increase in wetlands on the Project site and Basin would use BMPs for stormwater and erosion control during construction and operations. Therefore, there would not be a significant impact to wetlands.

Cultural Resources: Research and pedestrian surveys completed to date identified one historical site within the area of potential effect but recommended the site as ineligible for inclusion on the National Register of Historic Places. Western forwarded its determination of no effect to historic properties to the South Dakota State Historic Preservation Office on June 27, 2005. Western received a response from the SHPO on July 8, 2005. Therefore, Western concluded that the proposed Project would not cause a direct, indirect or cumulative significant impact to cultural or historic resources.

Biological Resources: Field observations as well as database queries for the area within the Project boundaries indicated an absence of threatened or endangered species. The habitat types near or within the study site were rated unsuitable for the listed species. The area is dominated by cropland, pasture and grassland habitats, and provides habitat only for species adapted to farmland and grassland areas. Short-term disruptions to wildlife include human presence, construction, noise and the installation of the underground pipeline. Long-term, permanent displacement of wildlife would occur at the gas turbine construction site due to the permanent loss of habitat. Western concluded that

there would be no significant disruptions or impacts to wildlife as a result of the Project.

Vegetation in the area would experience both short-term and long-term impacts; short-term impacts include disturbance, removal and soil compaction, while long-term impacts include loss of habitat or acreage due to structures. The influx of construction equipment and subsequent soil transport could induce the spread of noxious weeds. Mitigation efforts to reduce the impact of construction on soil and vegetation, as well as reduce the spread of noxious weeds would reduce the impacts of the Project on vegetation resources to insignificant. The local natural vegetation regime has been interrupted by farming, resulting in many non-native species within the area. Due to the lack of natural habitat and the mitigation efforts to control adverse conditions, Western concludes that there would be no destruction or adverse modification to plant species, and thus, no significant impacts on vegetation.

Geology, Topography, and Soils: There are no known metallic mineral or sand and gravel deposits in the Project area. No fill would be required for construction. Potential adverse impacts to soil include increased erosion from runoff due to compaction and loss of vegetation from construction equipment movements. Western concluded that the proposed Project would not cause a direct, indirect or cumulative significant impact to geology, topography and soils based on the BMPs proposed, including adequate spill prevention, and the lack of known mineral deposits in the Project area.

Air Quality: The Project would impact air quality from fugitive dust generation and operating construction equipment as well as from emissions during plant operations. The limited duration of construction, along with implementing BMPs, is expected to mitigate air quality effects during construction to levels below Federal and state standards. The power plant would operate under an air permit issued by the South Dakota Department of Natural Resources. As a result, Western has concluded that no direct, indirect or cumulative significant impacts to air resources would occur from constructing and operating the proposed Project.

Water Quality/Resources: Construction of the proposed Project has the potential to degrade water resources due to erosion, sediment deposition and storm water discharge that exceeds water quality limits. Mitigation measures to control issues such as the deposition of sediment into water resources, groundwater/surface water contamination and overdrafts of aquifers would limit the impact of the issues. Western concluded that no direct, indirect or cumulative significant impacts to surface water would occur as a result of the measures adopted to protect water quality. Based on the preventative measures indicated, Western concluded that no significant impact to groundwater quality would occur during construction of the proposed Project.

Aesthetics: Many existing roads, fences, subsurface gas lines and power lines are located within the Project area. Due to the linear features of the existing landscape, Western concludes that the addition of the gas turbine and the transmission interconnection to the area would have no significant, direct or cumulative impacts.

Transportation: The height of all facilities associated with the Project fall well below guidelines set forth by the FAA for facilities near airfields. Because no airfields are located within 15 miles of the site, no facilities would penetrate into the protected air space. Motor vehicle traffic near the proposed Project would increase due to the construction labor force using the adjacent roads. However, due to the rural area of the Project site, Western determined there would be no significant impact upon the transportation systems in the Project area.

Noise and Radio and Television Interference: The proposed Project area is located in a rural, predominantly agricultural area. Modeling results conducted for the EA predict a noise level range of between 52 to 54 A-weighted decibels (dBA) to the nearest residence (1,700 feet distance) during plant operations. Based on the predicted noise levels at nearby residences and comparison of those levels to the range typically considered acceptable by regulatory agencies per the Noise Pollution Clearinghouse identified in the EA, Western concluded that no direct, indirect or cumulative significant noise impacts would occur as a result of the proposed Project. Because the project is located in an area that already contains transmission lines, the addition of a 0.5 mile transmission line to interconnect the plant to the substation would have minimal additional impact on radio and television interference.

Human Health and Safety: The EA includes an analysis of the potential impacts of the Project on human health and safety consisting of electric and magnetic field (EMF) exposure, safety and electric hazards to the public. Basin's standard grounding policies and proposed fencing of the site would mitigate the possibility of shock and access to high-voltage equipment. The major exposure to EMF would come from existing transmission lines in the area; the addition of 0.5 mile of new transmission line would not significantly increase EMF exposures. The gas pipeline would be buried and clearly marked in accordance with local and Federal regulations. Western concluded that the proposed Project would not cause significant adverse impacts related to human health and safety.

Socioeconomic Conditions and Community Resources: The Project would have a positive direct socioeconomic impact on the local communities from increased tax revenue and additional jobs and services needed during construction of the Project and operation of the power plant. Because the minority and low-income population in the area is statistically small, discrimination or disproportionate impacts to low-income, minority and subsistence populations resulting from the proposed Project are not anticipated, and a significant impact would not occur.

Cumulative Impacts: Because the Project is located in a relatively stable farming community, no currently existing or substantial industrial activity is planned near the Project site. The power plant would comply with its air permit and would not contribute significantly to air pollution in the area. Additional emissions from construction activities would be short term and Basin would apply BMPs to control fugitive dust. Basin does not have plans to increase the plant size. Based on the BMPs and the location of the Project in a rural area with no industrial activity, Western concluded that the Project, when added to other past, current, and reasonably foreseeable actions in the Project area, would not result in a significant cumulative impact.

Plant Decommissioning: At the end of the useful life of the plant, the power plant would be dismantled and disconnected from the substation. The site would be regraded and reseeded. The gas pipeline would be disconnected, capped and left in place. Environmental impacts would occur from dust generated from removing the power plant. No significant impacts would occur to local drainages. Based on this analysis, decommissioning of the site would not have significant environmental impacts.

Determination – Based on the analysis in the EA, Western concluded that, with the BMPs and environmental protection measures proposed for the Project, the construction and operation of the proposed Project would not require mitigation beyond that already proposed by RUS and Basin to mitigate potentially adverse environmental impacts. A separate mitigation action plan is not required for the Project. The analyses contained in the EA indicate that the proposed action is not a major Federal action significantly affecting the quality of the human environment. Western determined that preparation of an EIS is not required.

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