

88 MW Simple Cycle Combustion Turbine - Application for Certificate of Site Compatibility

PU-11-631

Application Overview

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27

PU-11-631
Exhibit MDU-5

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Montana-Dakota Utilities Co., a Division of MDU Resources
Group, Inc.

Scoping Process

- Presented project at the September 1, 2011, Interagency Meeting
 - Meeting attended by:
 - Montana-Dakota
 - KLJ
 - FHWA
 - USACE
 - USFWS
 - NDDOT
 - ND Game and Fish Dept.
 - ND State Water Commission
- Montana-Dakota presented project at October 11, 2011, Morton County Commission meeting

Scoping Process

- 61 scoping packages mailed on September 14, 2011
 - 12 responses received from:
 - USDA-NRCS
 - USACE-ND Regulatory Office
 - USACE-Omaha District Office
 - BIA
 - USFWS
 - Job Service of ND
 - ND Dept. of Commerce
 - ND Dept. of Health
 - NDDOT
 - ND Parks and Recreation Dept.
 - ND State Water Commission
 - State Historical Society

Field Studies

- Wetland Delineation
- Class III Cultural Resources Inventory
- Botanical and Biological Inventory

Summary of Exclusion Areas

EXCLUSION AREA	PRESENT WITHIN PROJECT SITE	PROPOSED BUFFER	SECTION ADDRESSED
Designated or registered national areas; parks; memorial parks; historic sites and landmarks; natural landmarks; historic districts; monuments; wilderness areas; wildlife areas; wild, scenic, or recreational rivers; wildlife refuges; and grasslands.	None	N/A	7.5, 7.8
Designated or registered state areas; parks; forests; forest management lands; historic sites; monuments; historical markers; archaeological sites; grasslands; wild, scenic, or recreational rivers; game refuges; game management areas; management areas; and nature preserves.	None	N/A	7.7, 7.8
County parks and recreation areas; municipal parks; parks owned or administered by other governmental subdivisions; hardwood draws; and enrolled woodlands.	None	N/A	7.8
Prime farmland and unique farmland, as defined by the land inventory and monitoring division of the Soil Conservation Service, United States Department of Agriculture in 7 CFR part 657; provided, however, that if the PSC finds that the prime farmland and unique farmland that will be removed from use for the life of the facility is of such small acreage as to be of negligible impact on agricultural productions, such exclusion shall not apply.	Present	The project site does contain land classified as Farmland of Statewide Importance; however the USDA NRCS stated that the land is not protected under FPPA ; no buffer is proposed.	7.9
Irrigated land.	None	N/A	7.9
Areas critical to threatened or endangered animal or plant species.	None	N/A	7.16
Areas where animal or plant species that are unique or rare to this state will be irreversibly damaged.	None	N/A	7.16

Summary of Avoidance Areas

AVOIDANCE AREA	PRESENT WITHIN PROJECT SITE	PROPOSED BUFFER	SECTION ADDRESSED
Historical resources which are not designated as exclusion areas.	None	N/A	7.7
Areas within the city limits of a city or the boundaries of a military installation.	None	N/A	7.1
Areas within known floodplains as defined by the geographical boundaries of the 100-year flood.	None	N/A	7.12
Areas that are geologically unstable.	None	N/A	7.11
Woodlands and wetlands.	None	N/A	7.13, 7.14
Areas of recreational significance which are not designated as exclusion areas.	None	N/A	7.8

Summary of Selection Criteria

SELECTION CRITERIA	POTENTIAL ADVERSE EFFECT FROM PROJECT	SECTION ADDRESSED
(1) Agricultural production	No cultivated fields would be impacted; no adverse impacts to agricultural production are expected due to SCCT construction.	7.9
(2) Family farms and ranches	No adverse impacts are expected to family farms and ranches.	N/A
(3) Land which the owner demonstrates has soil, topography, drainage, and an available water supply that cause the land to be economically suitable for irrigation	No adverse impacts are anticipated.	N/A
(4) Surface drainage patterns and ground water flow patterns	No adverse impacts are anticipated to surface drainage or groundwater flow patterns.	7.11, 7.12
(5) The agricultural quality of the cropland	No adverse impacts are anticipated.	7.9
(1) Law enforcement	No adverse impacts are anticipated.	N/A
(2) School systems and education programs	No adverse impacts to school systems and education programs are anticipated.	7.5
(3) Governmental services and facilities	No adverse impacts to government services and facilities are anticipated.	N/A
(4) General and mental health care facilities	No adverse impacts to general and mental health care facilities are anticipated.	7.5
(5) Recreational programs and facilities	No adverse impacts to recreational programs and facilities are anticipated.	7.8
(6) Transportation facilities and networks	An increase in truck traffic during construction activities is expected. During facility operations no adverse impacts are anticipated.	7.5
(7) Retail service facilities	No adverse impacts are anticipated to retail service facilities.	—
(8) Utility services	No adverse impacts are anticipated to utility services.	7.4

Continued...

Summary of Selection Criteria

SELECTION CRITERIA	POTENTIAL ADVERSE EFFECT FROM PROJECT	SECTION ADDRESSED
(1) Local institutions	No adverse impacts to local institutions are anticipated.	7.4
(2) Noise-sensitive land uses	No adverse impacts to noise-sensitive land uses are anticipated.	7.6
(3) Rural residences and businesses	No adverse impacts to rural residences or businesses are anticipated.	7.6
(4) Aquifers	No aquifers occur within the project area; therefore, no adverse impacts to aquifers are anticipated.	7.11
(5) Human health and safety	No adverse impacts to human health and safety are anticipated.	7.5
(6) Animal health and safety	No adverse impacts to animal health and safety are anticipated. However, if threatened or endangered species are identified during construction, USFWS would be contacted immediately.	7.15, 7.16
(7) Plant life	Temporary and permanent vegetation impacts would occur during construction. Approximately 14.9 acres of mixed-grass prairie would be temporarily impacted and 5.5 acres permanently impacted by the project.	7.14
(8) Temporary and permanent housing	No adverse impacts to temporary and permanent housing are anticipated.	N/A
(9) Temporary and permanent skilled and unskilled labor	Short-term economic benefits may occur to temporary and permanent skilled and unskilled labor during construction. No long-term adverse impacts are anticipated.	3.6
Cumulative effects	No effects anticipated. The project would be located in an area where similar equipment exists and would comply with local ordinances.	7.17

Summary of Policy Criteria

POLICY CRITERIA	APPLICANT'S POLICIES AND PRACTICES	SECTION ADDRESSED
Recycling of the conversion byproducts and effluents	None	N/A
Energy conservation through location, process, and design	The proposed project has been designed to maximize energy conversion where available.	1.3
Training and utilization of available labor in this state for the general and specialized skills required	The proposed project is anticipated to create approximately 50 temporary construction/skilled labor jobs and 2 long-term jobs ; local construction companies would be provided the opportunity to bid or subcontract on portions of the project.	3.6
Use of a primary energy source or raw material located within the state	None.	N/A
Nonrelocation of residents	No relocation of residences is anticipated.	N/A
The dedication of an area adjacent to the facility to land uses such as recreation, agriculture, or wildlife management	The proposed project is not anticipated to impact adjacent land uses and no dedication of adjacent areas is planned.	N/A
Economies of construction and operation	Temporary construction jobs would be created, as well as two permanent jobs. All project phases would be bid out , giving local contractors the opportunity to bid for the project.	3.6, 7.2
Secondary uses of appropriate associated facilities for recreation and the enhancement of wildlife	None	N/A
Use of citizen coordinating committees	None	N/A
A commitment of a portion of the energy produced for use in this state	Power produced from the SCCT would be distributed as outlined in MISO regulations to assist in meeting Montana-Dakota's generation requirements for its integrated service territory including ND customers.	PSC Case No. PU-11-158 and PU-11-395
Labor relations	No impacts to labor relations are anticipated.	N/A
The coordination of facilities	The proposed facility would be sited by the existing Heskett Station to reduce land use impacts and increase proximity to resources that could be shared between the SCCT and Heskett Station.	PSC Case No. PU-11-395; Section 4
Monitoring of impacts	Best Management Practices would be in place wherever possible.	7.0

Summary of Impacts

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	PROPOSED MITIGATION
Demographics	No impacts	No long-term changes to demographics are anticipated	No mitigation is proposed
Land Use	No impacts	Temporary disturbance of approximately 14.9 acres and permanent conversion of approximately 5.5 acres of land in project area	No mitigation is proposed
Air Quality	No impacts	No NAAQS impacts or North Dakota state air toxics policy impacts	BACT technologies proposed to minimize air emissions
Public Services	Additional electrical capacity needs may not be met.	Additional electrical capacity needs would be met, ensuring consistent electric supply	No mitigation is proposed
Human Health and Safety	No impacts	Small quantities of hazardous materials would be used and generated	Minimization of hazardous materials use and proper management and disposal of these materials
Noise	No impacts	Noise levels would not cause a perceptible increase in the existing sound levels measured and would remain in compliance with the City of Mandan's Ordinance No. 1090	No mitigation for noise impacts would be required, though noise levels would be taken into consideration in the SCCT design.
Cultural Resources	No impacts	ND SHPO concurred with a "No Historic Properties Affected" determination	No mitigation is proposed
Recreational Resources	No impacts	No adverse impacts anticipated	No mitigation is proposed
Land Based Economics	No impacts	No impacts to land based economics anticipated.	No mitigation is proposed
Soils	No impacts	May cause soil surface to become more prone to wind and water erosion and may result in soil compaction	Erosion prevention and sediment control during and after construction, segregation of topsoil, and reseeded

Summary of Impacts

RESOURCE		ALTERNATIVE A	ALTERNATIVE B	PROPOSED MITIGATION
Geologic and Groundwater Impacts		No impacts	No adverse impacts anticipated	No mitigation is proposed
Surface Water and Floodplain Resources		No impacts	No adverse impacts anticipated	Use of BMPs such as silt fence and straw wattles during construction
Wetlands		No impacts	No impacts anticipated	No mitigation is proposed.
Vegetation		No impacts	A total of 14.9 acres of vegetation impacts would occur during construction. Approximately 9.4 acres of native mixed-grass prairie would be temporarily impacted and 5.5 acres of permanent conversion from prairie to the SCCT.	Following construction, temporarily disturbed areas would be re-vegetated with an NRCS-approved seed mixture
Wildlife		No impacts	Possible impacts to avian species	<i>Avian Protection Plan Guidelines</i> would be applied to overhead transmission line and substation construction as appropriate to minimize avian mortality
Rare and Unique Resources	Threatened and Endangered Species	No impacts	No impacts	If threatened or endangered species are identified during construction, USFWS would be contacted immediately
	Rare and Sensitive Species	No impacts	No impacts	No mitigation is proposed

Factors Considered

11 factors as outlined in Section 11, Page 34 of the Application

- Unavoidable Adverse Environmental Impacts
 - 5.5 acres of permanent land conversion
- Effect of Site on Cultural Resources
 - ND SHPO concurred with a finding of *No Historic Properties Affected*
- Effect of Site on Biological Resources
 - USFWS and ND Game and Fish Dept. did not identify any impacts
 - Committed to using avian-safe facilities
 - Committed to re-seeding temporarily disturbed areas with native seed mixture

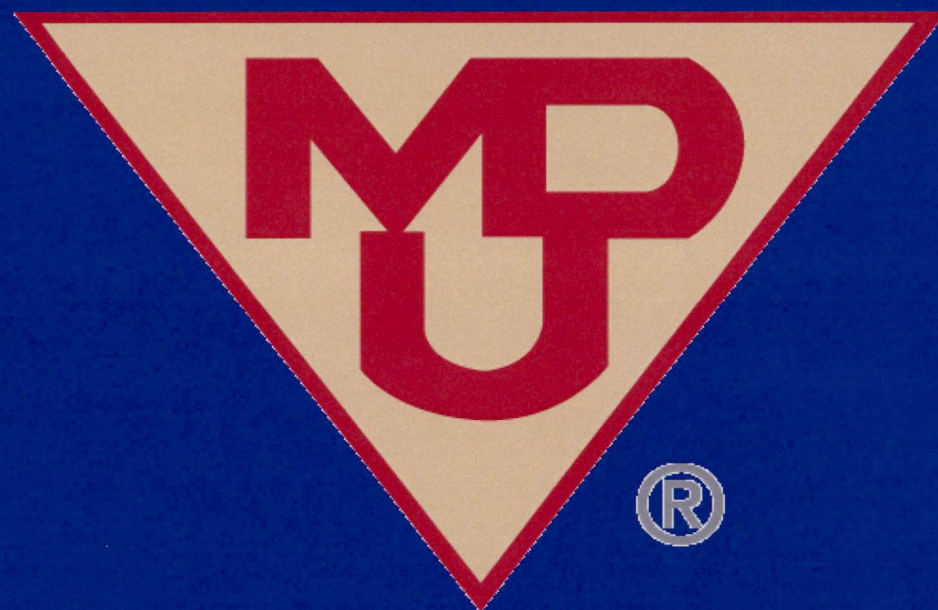
Permits Required

- Acid Rain Permit – *ND Department of Health*
- Building Permit – *City of Mandan*
- Certificate of Site Compatibility – *Public Service Commission*
- Driveway/Entrance Permit – *City of Mandan*
- Electrical Permit – *North Dakota Electrical Board*
- Morton County Transportation Permit – *Morton County*
- National Pollutant Discharge Elimination System Permit — General Construction Stormwater Discharge Permit NDR10-0000 — *ND Department of Health*
- National Pollutant Discharge Elimination System Permit — Update current Heskett Station General Industrial Stormwater Permit NDR05-0000 — *ND Department of Health*

Continued

Permits Required

- National Pollutant Discharge Elimination System Permit (ND0000264) — Advance notice to ND Department of Health indicating planned changes
- Overweight-Overheight Permit — *North Dakota Highway Patrol*
- Prevention of Significant Deterioration Permit to Construct (Air Emissions Permit) — *ND Department of Health*
- Septic System Permit — *Custer District Health Unit*
- Stormwater Permit/Stormwater Management Plan (SWMP) — *City of Mandan*
- Title V Air Emissions Operating Permit — *Update current Heskett Station Title V Air Emissions Operating Permit T5-F76001 — ND Department of Health*



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