



Hub City Energy Park

Aberdeen, South Dakota



Application for an Energy Conversion Facility Permit

Docket EL26-XXX

Submitted to:
South Dakota Public Utilities Commission

Submitted by:
NorthWestern Energy Public Service Corporation

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REFERENCES

- Reference 1 South Dakota 2024 Integrated Resource Plan
<https://northwesternenergy.com/>
- Reference 2 SPP Open Access Transmission Tariff, Sixth Revised Volume No. 1, Effective as of July 22, 2025 establishing the Expedited Resource Adequacy Procedures in Attachment AW
<https://www.spp.org/governance/>
- Reference 3 Notification of Intent, Docket EL25-038, October 31, 2025
<https://puc.sd.gov/commission/dockets/electric/2025/EL25-038/NoticeofIntent.pdf>
- Reference 4 Brown County Planning & Zoning, Ordinances, Title 4 – Zoning
<https://www.brown.sd.us/ordinance/title-4-zoning>
- Reference 5 South Dakota 10-Year Plan, July 1, 2026
<https://puc.sd.gov/commission/commissionaction/10yearplan/NWE2026.pdf>
- Reference 6 Brown County Comprehensive Plan 2020 – 2040, November 19, 2019
https://www.brown.sd.us/sites/default/files/2024-02/2020_BrownCountyDraftCompPlan_0.pdf
- Reference 7 Northern Border Pipeline Company, FERC Gas Tariff, Second Revised Volume No. 1
<https://www.hostedtariffs.com/northern/>

EXECUTIVE SUMMARY

NorthWestern Energy Public Service Corporation d/b/a NorthWestern Energy (“NorthWestern” as *Applicant*) submits this Application to the South Dakota Public Utilities Commission (the “Commission”) pursuant to South Dakota Codified Laws (“SDCL”) § 49-41B and Administrative Rules of South Dakota (“ARSD”) Ch. 20:10:22 for a permit to construct an Energy Conversion Facility (the “Application”) for the Hub City Energy Park, a nominal 131 megawatt (“MW”) (gross) natural gas combustion turbine (“CT”) facility located near Aberdeen, South Dakota in Brown County (the “Project”).

The purpose of the Project is to improve NorthWestern’s capacity position as a participating member of the Southwest Power Pool, Inc. (“SPP”) and improve system reliability in South Dakota. The need for the Project was identified through NorthWestern’s integrated resource planning (“IRP”) process and the Expedited Resource Adequacy Study (“ERAS”) Procedures by SPP, both of which identified the need for additional, reliable capacity resources. NorthWestern submitted an Interconnection Request to SPP pursuant to the ERAS Procedures in October 2025 and executed a Generator Interconnection Agreement (“GIA”) for the Project in September 2026.

The Project will be located on NorthWestern-owned land adjacent to and to the north of NorthWestern’s existing Aberdeen Generating Station (“AGS”) just south of the City of Aberdeen, South Dakota (the “Project Site”). The Project Site is located on property zoned as heavy industrial which is consistent with nearby land uses.

The Aberdeen area was selected for the Project based on its (i) robust electric transmission infrastructure, (ii) proximity to a major natural gas interstate pipeline, (iii) proximity to existing NorthWestern facilities and (iv) anticipated minimal impacts on the surrounding communities and environment. The specific Project Site does not need to be re-zoned for the Project and contains ample space for construction activities and laydown as well as for the Project facilities.

The Project is configured as a simple cycle CT facility with back-end emission controls. The CTs and the majority of equipment will be located indoors, reducing potential visual and audible impacts associated with the Project and benefiting NorthWestern operations and maintenance activities once Project construction is complete. As a simple cycle CT facility, the Project will inherently consume low quantities of water and produce minimal process wastewater, resulting in limited impacts to water resources in the area. Based on desktop and field surveys completed as of the time of this Application, the Project is not anticipated to significantly impact sensitive habitat, wetlands or waterbodies or cultural and archeological resources. The CT back-end emission controls reduce air emissions from the Project, with the air quality construction permit application, to be submitted in early October 2026, demonstrating that the Project will result in air emissions below the National Ambient Air Quality Standards (“NAAQS”).

The Project GIA is for grid interconnection at 115 kilovolts (“kV”) via the existing Siebrecht substation on the AGS site, requiring a short overhead line to connect the Project substation to the point of interconnection. The Project will utilize firm natural gas from the nearby Northern Border Pipeline Company (“NBPL”) mainline via a new natural gas lateral. NorthWestern is coordinating with NBPL for the specific main line tie-in location and also reviewing potential lateral routes, with various options available. NorthWestern anticipates connecting to municipal water supply and wastewater facilities located near the Project Site.

With the development of the Project in the advanced stages, NorthWestern has procured the CTs as well as the generator step-up (“GSU”) transformers for the Project given the long lead times associated with this equipment in the current industry landscape. Currently, NorthWestern is also in the process of securing a contractor to perform engineering, procure equipment and materials, and construct the Project. With procurements advancing and permitting well underway, construction activities are anticipated to begin in late 2027 or early 2028, with the Project coming online in the first half of 2030 to reliably and safely serve South Dakota customers in a timeline that complies with the required ERAS Procedures in-service date of October 2, 2030. The Project is anticipated to result in a peak construction workforce of approximately 200 workers along with six (6) to ten (10) permanent positions once operational. With NorthWestern encouraging the use of local labor when available, the Project is anticipated to result in significant, positive economic impacts locally and to the surrounding region.

With this Application addressing each section of ARSD Ch. 20:10:22 based upon the information known at the current stage of Project development, and with the Project improving electric system reliability, providing significant economic benefits to the surrounding region and resulting in minimal impacts to surrounding communities and environs, NorthWestern respectfully requests that the Commission approve this Application and issue a permit to construct an Energy Conversion Facility for the Project pursuant to SDCL § 49-41B.

1 INTRODUCTION

NorthWestern submits this Application to the Commission pursuant to SDCL § 49-41B and ARSD Ch. 20:10:22 for a permit to construct an Energy Conversion Facility for the Hub City Energy Park, a nominal 131 MW (gross) natural gas CT facility.¹

NorthWestern identified the need for the Project through its South Dakota IRP (Reference 1) and the SPP ERAS Procedures (Reference 2), both of which identified the need for additional capacity resources for improved system reliability.

The Project consists of three (3) CTs in simple cycle configuration, including a back-end multi-pollutant catalyst system performing the functionality of both selective catalytic reduction (“SCR”) and oxidation catalysts, associated balance-of-plant (“BOP”) systems and equipment, a new substation to facilitate electrical grid interconnection at 115 kV and natural gas lateral to connect to the nearby NBPL interstate pipeline. NorthWestern plans for the Project to connect to the local municipal system for water supply as well as sanitary and process water discharge. The Project is located on approximately 176 acres of NorthWestern-owned land adjacent to and to the north of NorthWestern’s existing AGS. Project construction is anticipated to start in late 2027 or early 2028 to facilitate a Project in-service date of mid-2030.

See Exhibit 01.1 – Site Location Map and Exhibit 01.2 – Site Location Map (5-mile) for the location of the Project Site, Exhibit 02.1 – Facilities Map and Exhibit 02.2 – Facilities Map (5-mile) for a general overview of the Project and associated facilities and Exhibit 03.1 – Surrounding Features Map and Exhibit 03.2 – Surrounding Features Map (5-mile) for major features and communities surrounding the Project Site. All Exhibits in support of this Application are consolidated and appended to the Application for reference. Additionally, refer to Appendix A – Drawings for a characterization of the Project in the form of drawings, schematics and diagrams.

This Application is submitted in sequence to Commission Docket EL25-038, which was opened in 2025.

1.1 DEFINITIONS

This Application utilizes terms defined in SDCL § 49-41B-2 and ARSD Ch. 20:10:22:01. Additional terms are identified throughout the Application.

This Application is submitted by NorthWestern, the sole Applicant.

In accordance with SDCL § 49-41B-2.1, the natural gas lateral is defined as a Transmission Facility while the electric 115 kV generation-tie line and grid interconnection facilities are distribution facilities as they do meet the Transmission Facilities definition as described in the statute.

¹ NorthWestern recently finalized the Project name as the Hub City Energy Park. The Project was formerly known as the “Aberdeen III Generating Station.” Any references to “Aberdeen III Generating Station” (or similar) in the Application are applicable to the Project.

1.2 ACRONYMS/ABBREVIATIONS

The following acronyms and abbreviations are utilized in this Application:

ABR	Aberdeen Regional Airport
ACS	American Community Survey
ADT	average daily traffic
AGS	Aberdeen Generating Station
APE	Area of Potential Effects
ARSD	Administrative Rules of South Dakota
BA	Balancing Authority
BAAH	breaker-and-a-half (substation)
BCF	billion cubic feet
bgs	below ground surface
BMPs	Best Management Practices
BOP	balance-of-plant
Btu	British thermal unit
CFR	Code of Federal Regulations
CO	carbon monoxide
CO ₂	carbon dioxide
CT	combustion turbine
CUP	conditional use permit
CWA	Clean Water Act
dBA	decibels (A-weighted)
dBc	decibels (C-weighted)
Dkt	dekatherms
EPC	engineer, procure, construct
ERAS	Expedited Resource Adequacy Study (Procedures)
ESA	Endangered Species Act
FAA	Federal Aviation Administration
GHG	greenhouse gas
GIS	geographic information systems
gpm	gallons per minute
GSU	generator step-up (transformer)
GTS	(NorthWestern) Gas Transmission & Storage
HAPS	hazardous air pollutants
HDD	horizontal directional drilling
HHV	higher heating value
IC	Interconnection Customer
IPaC	Information for Planning and Consultation
IRP	integrated resource plan (or “planning”)
JD	jurisdictional determination
JTIQ	Joint Transmission Interconnection Queue (between SPP and MISO)
kV	kilovolts
kW	kilowatts
LHV	lower heating value
MAOP	maximum allowable operating pressure
MGD	million gallons per day

MISO	Midcontinent Independent System Operator, Inc.
M _L	(noise) measurement location
MW	megawatt
NAAQS	National Ambient Air Quality Standards
NBPL	Northern Border Pipeline Company
NLCD	National Land Cover Dataset
NO _x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	National Resources Conservation Service
NRHP	National Register of Historic Places
NSPS	New Source Performance Standards
NWI	National Wetlands Inventory
OSHA	Occupational Safety and Health Administration
PHMSA	Department of Transportation Pipeline and Hazardous Materials Safety Administration
PM	particulate matter
POI	Point of Interconnection
psig	pounds per square inch gauge
RFP	request for proposals
ROW	right-of-way
RTO	Regional Transmission Organization
scf	standard cubic foot
SCR	selective catalytic reduction
SDCL	South Dakota Codified Laws
SD DANR	South Dakota Department of Agriculture and Natural Resources
SD DENR	South Dakota Department Environment and Natural Resources (merged into SD DANR in 2021)
SD DOT	South Dakota Department of Transportation
SD GFP	South Dakota Game, Fish, & Parks
SDGS	South Dakota Geological Survey
SD SHPO	South Dakota State Historic Preservation Office
SO ₂	Sulfur Dioxide
SPCC	Spill Prevention, Control, and Countermeasure (plan)
SPP	Southwest Power Pool
SWPPP	Stormwater Pollution Prevention Plan
TO	Transmission Owner
TOP	Transmission Operator
T&E	Threatened and Endangered (species)
ULSD	ultra low-sulfur diesel
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VOC	volatile organic compounds
WAPA	Western Area Power Administration
WRF	(Aberdeen) Water Reclamation Facility

2 DOCKET EL25-038

Pursuant to ARSD Ch. 20:10:22:02, NorthWestern submitted a notice of intent to apply for a permit for an Energy Conversion Facility to the Commission on October 31, 2025 (Reference 3). Subsequently, Commission Staff established a local review committee (“Local Review Committee”) and provided a Designation of Affected Area associated with the Project.

The Local Review Committee includes representatives from the Brown County Commission, City of Aberdeen, Aberdeen Public School District 06-1, Warner School District 06-5 and NorthWestern.

The Designation of Affected Area was established as a 5-mile radius around the Project Site.

As of the time of this Application, there has not been any other activity under Docket EL25-038.

3 STAKEHOLDER ENGAGEMENT

NorthWestern has consulted with various agencies, entities and tribes regarding the Project, and held a public open house in Aberdeen, South Dakota in July 2026. Stakeholder engagement materials as of the time of the Application are included in Appendix B – Stakeholder and Agency Consultations. NorthWestern anticipates ongoing consultation with agencies, entities and tribes as required to advance Project development and permitting activities. Additionally, NorthWestern intends to hold another public open house in Aberdeen, South Dakota before the end of 2026.

As Brown County has zoning ordinances (Reference 4) and a comprehensive plan (Reference 6), mailed notices to adjacent landowners are not required prior to submission of the Application pursuant to SDCL § 49-41B-5.

NorthWestern has posted signs at the Project Site pursuant to SDCL § 49-41B-5.1.

NorthWestern will also provide notifications at required time intervals pursuant to SDCL § 49-41B-5.2.

4 APPLICATION STRUCTURE AND OVERVIEW

This Application follows the organization of ARSD Ch. 20:10:22, with each Section of the Application corresponding to the same numbered Section of ARSD Ch. 20:10:22. NorthWestern has endeavored to address each Section of ARSD Ch. 20:10:22 regardless of the applicability of the Section to the Project. The Application is supported by Tables, Figures, Exhibits, Appendices and References to address the requirements of ARSD Ch. 20:10:22 and to establish NorthWestern’s burden of proof pursuant to SDCL § 49-41B-22. See Appendix C – ARSD-SDCL Cross Reference for a completeness checklist and information index for the Application.

The information contained herein is based on the best available information for the Project at the time of the Application. Given the uniqueness of (i) the timing required by SPP’s ERAS Procedures, (ii) current, long-lead market conditions associated with major equipment (CTs, GSU transformers, etc.), and (iii) limited availability of construction contractors in the current marketplace, certain information requested in ARSD Ch. 20:10:22 has not been fully defined as of the time of this Application. Accordingly, NorthWestern has addressed the requirements of

ARSD Ch. 20:10:22 to the best of its ability herein, will continue to advance activities associated with such and will provide updates to this docket as this information becomes available.

5 PROJECT DEVELOPMENT

This Section provides an overview of the development of the Project. The information contained herein serves as the basis for providing the information requested by ARSD Ch. 20:10:22.

5.1 CONCEPTUAL DESIGN

The Project is in the advanced stages of development, with conceptual design activities progressing to support permitting and procurement activities. The Project is proposed as an indoor simple cycle facility, with the CTs and the majority of balance-of-plant (“BOP”) equipment and systems located in buildings. Some of the ancillary equipment, such as the lubricating oil coolers and CT exhaust emission control systems, are located outdoors. The Project conceptual design is supported by documented technical requirements and specifications, which serve as the basis for procurement activities (discussed in the following Section). The Project Site contains the simple cycle facility, the interface to the natural gas lateral and the Project electrical substation. The Project Site general arrangement is shown in Appendix A.1 – General Arrangement Drawing and the overall site configuration is shown in Appendix A.2 – Site Layout Drawing. Additionally, conceptual photographic simulations are provided in Appendix A.3 – Photo Simulations.

5.2 MAJOR PROCUREMENTS

5.2.1 Combustion Turbines

In order to meet the Project in-service date requirements established by the SPP ERAS Procedures (on-line no later than October 2, 2030), NorthWestern initiated a competitive prime mover request for proposals (“RFP”) process in the Fall of 2025 and subsequently executed an equipment procurement contract with Solar Turbines, Inc. (“Solar Turbines”) for the supply of three (3) Titan 350 CT and generator sets, associated auxiliary systems and equipment and the CT exhaust emissions control systems. The CTs and associated auxiliary systems and equipment will be delivered by Solar Turbines to the Project Site by Q2 2029.

5.2.2 Engineer, Procure, Construct (“EPC”) Contractor

NorthWestern issued an EPC RFP in April 2026 and is in the process of reviewing and evaluating proposals submitted in response. The EPC RFP package included commercial and technical requirements, detailed technical specifications, a form of commercial agreement and various bid forms to be populated by participating bidders. NorthWestern anticipates selecting an EPC contractor by the end of 2026 and initiating initial design activities in 2027 to meet the in-service date required by the SPP ERAS Procedures. The EPC contractor would be responsible for the complete design and engineering of the Project, including incorporating the equipment furnished by NorthWestern, procuring the BOP equipment required for a complete installation and installing, commissioning, starting-up and testing the Project.

5.2.3 Other Procurements

NorthWestern has executed an agreement for the supply of three (3) GSU transformers for the Project, with anticipated deliveries in early 2029. Additionally, NorthWestern has or is in the process of procuring various other services to support overall Project development activities (e.g. geotechnical investigation services for the Project Site).

5.3 ELECTRICAL INTERCONNECTION

The Project will interconnect to the electric grid at 115 kV via the existing Siebrecht substation located at the adjacent AGS site, facilitated by a new breaker-and-a-half (“BAAH”) substation at the Project Site. The Transmission Owner (“TO”) at the electric grid Point of Interconnection (“POI”) is NorthWestern’s Transmission function, with the 115 kV lines under SPP jurisdiction. In South Dakota, the Western Area Power Administration (“WAPA”) serves as the Transmission Operator (“TOP”) and operates and maintains NorthWestern’s electric transmission facilities.

To facilitate electric grid interconnection, the output of the CT generators will be “stepped-up” from 13.8 kV to 115 kV via unit-dedicated GSU transformers and will be routed to the new BAAH Project substation located on the Project Site. Finally, an overhead, double-circuit 115 kV line will connect the BAAH Project substation to the existing Siebrecht substation on the adjacent AGS site. The new BAAH substation and associated line configuration was identified through the interconnection process, as discussed further below. The Project electrical configuration is shown schematically in Appendix A.4 – Preliminary Single Line Diagram and in Appendix D – Generator Interconnection Agreement. The electrical interconnection physical configuration is depicted in Exhibit 02.1 – Facilities Map.

NorthWestern submitted an Interconnection Request to SPP under the ERAS Procedures on October 2, 2025. Following the completion of a System Impact Study and Facilities Study, NorthWestern has executed a Generator Interconnection Agreement (“GIA”) for the Project with an effective date of September 9, 2026². The GIA is included in Appendix D – Generator Interconnection Agreement. Interconnection of the Project did not trigger off-site SPP Network Upgrades, which substantially benefits both Project costs and schedule. The Project requires new on-site interconnection facilities and is subject to the Joint Transmission Interconnection Queue (“JTIQ”) between SPP and the Midcontinent Independent System Operator, Inc. (“MISO”). With the GIA being executed less than 12 months after an Interconnection Request was submitted, and with minimal upgrades required to facilitate electric grid interconnection, the Project is extremely well-positioned in terms of electrical interconnection.

5.4 NATURAL GAS

The Project CTs will utilize only natural gas fuel. BOP equipment fuel consumption as well as specific CT natural gas fuel characteristics are discussed further in Application Sections 28 and 29. Natural gas supply and distribution for the Project are discussed further in Application Sections 37 and 38.

² In the GIA, the Interconnection Customer (“IC”) is NorthWestern’s Energy Supply function and the TO is NorthWestern’s Transmission function.

5.4.1 Supply

Natural gas supply for the Project will be from NBPL, which also provides pipeline natural gas to the existing AGS site. The NBPL is a 1,412-mile line that connects Canada with the Midwest United States and is jointly owned by TC Energy and ONEOK. The routing of the NBPL is shown in Exhibit 04 – NBPL Map.

5.4.2 Transportation

NorthWestern will utilize firm natural gas supply to serve the Project, with a peak Project demand of approximately 30,000 dekatherms per day (“Dkt/day”). NorthWestern’s utilization of firm natural gas transportation for the Project will enable dispatch as-needed to support electric grid requirements, improving system reliability and NorthWestern’s capacity position.

5.4.3 Project Lateral

The Project will be fed from a new natural gas lateral from the NBPL line to the Project Site, with NorthWestern exploring multiple route options ranging from a lateral length of approximately three (3) miles to approximately six (6) miles. The Project gas lateral is expected to be an 8-inch or 10-inch pipe depending on final route. NorthWestern has initiated desktop studies and initial field surveys of potential lateral routes and, in determining the final lateral route, will work with affected landowners, the Brown County Commission and applicable state and federal agencies. An existing 6-inch, approximately 6-mile lateral extends from the NBPL Warner tap (Stations #21 and #41) to the AGS site. For the Project, the existing Warner tap site could be expanded or a new tap site could be developed, with NorthWestern balancing community impacts, permitting requirements, costs and schedule in determining the overall configuration.

The NBPL main line and the existing AGS gas lateral are shown in Exhibit 02.2 – Facilities Map (5-mile). Additionally, the Project gas supply is depicted schematically Appendix A.5 – Natural Gas Facilities Diagram.

5.5 WATER SUPPLY AND PROCESS WATER DISCHARGE

The Project simple cycle CT configuration inherently is not water intensive. Both water consumption and process water discharge are minimal, with the Project proposing to connect to the municipal water system for supply and to the municipal sewer system for sanitary and process water discharge. An existing water supply line runs along 135th Street SW to the south of the Project Site, and the Aberdeen Water Reclamation Facility (“WRF”) is less than a mile to the east of the Project Site on 135th Street SW. Based on initial discussions with the City of Aberdeen Public Works department, NorthWestern understands that the capacity of the Aberdeen WRF is in process of being upgraded/expanded and is expected to be capable of handling the additional flow from the Project. The anticipated water supply and water discharge connection locations are depicted in Exhibit 02.1 – Facilities Map, subject to ongoing discussion with the City of Aberdeen.

5.6 LAND RIGHTS

NorthWestern owns the approximate 176-acre Project Site and is in the process of identifying and securing easements/rights-of-way for the natural gas lateral based upon the ongoing exploration of potential lateral routes.

The Project Site consists of three (3) Lots as shown in Exhibit 01.1 – Site Location Map and Appendix A.6 – Project Site Plats. Additionally, with the land acquisition, the Project Site was re-zoned to accommodate the Project, with Lot 1 and Lot 3 being re-zoned from Agricultural Preservation District (AG-P) to Heavy Industrial District (H-1). Lot 2 was also re-zoned to Agricultural Preservation District (AG-P) but is not planned for permanent Project use. Project Site zoning information is included in Appendix E – Zoning.

5.7 PERMITTING AND POTENTIAL IMPACTS

NorthWestern has advanced permitting efforts across local, state and federal jurisdictions, including desktop and field surveys, application development and agency consultation. NorthWestern will comply with all applicable local, state and federal permitting requirements. Pursuant to ARSD Ch. 20:10:22:05, a list of all permits anticipated to be required for the Project is included in Appendix F – Permit List. The following provides a brief overview of permitting and additional activities, with additional information included throughout this Application:

- Socioeconomic – NorthWestern completed a socioeconomic impact study to characterize the Project pursuant to ARSD Ch. 20:10:22:23. See Appendix G – Socioeconomic Impact Study. As noted in the study, the Project is expected to have no significant impact to the local community after the necessary permits are obtained. Limited or no impacts are identified for the remaining factors identified in ARSD Ch. 20:10:22:23.
- Air Quality – NorthWestern has consulted with the South Dakota Department of Agriculture and Natural Resources (“SD DANR”), performed air dispersion modeling and is in the final stages of developing the air quality construction permit application for the Project. The Project will be considered a synthetic minor source and will result in air emissions below the National Ambient Air Quality Standards (“NAAQS”). The permit application is anticipated to be submitted to the SD DANR at approximately the same time as the submission of this Application to the Commission. This Application will subsequently be updated to include the air quality construction permit application.
- Wetlands and Waterways – For the Project Site, NorthWestern has completed desktop studies, a field delineation and consulted with the SD DANR and United States Army Corps of Engineers (“USACE”). Impacts to delineated wetlands on the Project Site are not anticipated based upon the configuration of the Project structures and equipment. See Appendix H – Wetland Delineation Report. Initial desktop reviews and field reviews have been completed for potential natural gas lateral routes, and associated impacts to wetlands and waterways will be avoided to the extent practicable.
- Habitat – For the Project Site, NorthWestern has completed a desktop review and a field survey and has also consulted with the SD DANR, the South Dakota Game, Fish, & Parks (“SD GFP”) and the United States Fish and Wildlife Service (“USFWS”). Impacts to sensitive habitat and threatened and endangered (“T&E”) species are not anticipated at the Project Site. See Appendix I – Habitat Assessment. Initial desktop reviews and field reviews have been completed for potential natural gas lateral routes, and associated impacts to sensitive habitat and T&E species will be avoided to the extent practicable.
- Cultural Resources – For the Project Site, NorthWestern has completed a desktop review of the entire site and a Level III intensive field survey for the main power block area and has consulted with the South Dakota State Historic Preservation Office (“SD SHPO”). Based upon the review and analysis completed at the time of this Application, impacts to

cultural resources are not anticipated at the Project Site. See Appendix J – Cultural Resources Report. Initial desktop reviews and field reviews have been completed for potential natural gas lateral routes. Given the heavily developed agricultural land encompassing potential natural gas lateral routes, significant impacts to cultural and archeological resources as a result of the natural gas lateral are not anticipated. However, if any impacts are identified prior to or during construction, they will be avoided to the extent practicable.

- Traffic – A Project traffic study has been completed characterizing existing traffic conditions surrounding the Project Site, potential impacts associated with the Project and potential mitigation measures. See Appendix K – Traffic Study. The traffic study did not identify any major concerns associated with the construction and operation of the Project.
- Airspace – NorthWestern reviewed the potential impacts to airspace of temporary construction structures as well as permanent Project structures in May 2026 utilizing the Federal Aviation Administration (“FAA”) Pre-Screening Tool. NorthWestern also provided an overview of the Project to FAA, with FAA directing NorthWestern to the FAA Pre-Screening Tool to see if any additional evaluation of the Project would be required. Based on feedback from the FAA Pre-Screening Tool, impacts to airspace are not anticipated as a result of the Project and no further FAA filings are required. See Appendix B – Stakeholder and Agency Consultations and Appendix L – FAA Pre-Screening Tool.
- Local – NorthWestern intends to submit applications for a Conditional Use Permit (“CUP”) and building permit to the Brown County Commission. The majority of the Project Site is zoned Heavy Industrial District (H-1) – re-zoning is not required for the Project. Pursuant to the Brown County Ordinances (Reference 4), NorthWestern has characterized existing noise levels surrounding the Project Site, performed predictive modeling to estimate the noise levels associated with the Project and evaluated mitigation measures to reduce noise levels. See Appendix M – Noise Study.

6 NAMES OF PARTICIPANTS REQUIRED (ARSD CH. 20:10:22:06)

NorthWestern, as the Applicant, is the sole participant in the Application.

NorthWestern is an investor-owned utility that provides electricity and natural gas to approximately 850,000 customers across Montana, South Dakota, Nebraska and Yellowstone National Park with electric service to over 340 communities. NorthWestern’s corporate headquarters is located in Sioux Falls, South Dakota. NorthWestern will wholly own, operate and manage the Project.

NorthWestern’s contact information for this Application is as follows:

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(605) 978-2900
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Please address correspondence related to this Application to the following personnel:

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7 NAME OF OWNER AND MANAGER (ARSD CH. 20:10:22:07)

The Project is being developed and will be owned, operated and maintained by NorthWestern.
The Project manager is:

Josh Follman
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NorthWestern Energy
11 East Park Street
Butte, MT
(406) 498-3617
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8 PURPOSE OF FACILITY (ARSD CH. 20:10:22:08)

The purpose of the Project is to improve NorthWestern's capacity position for its South Dakota system which, in turn, improves local and regional electric grid reliability.

The Project is being developed consistent with the identified needs of NorthWestern's IRP process, which continuously reviews, evaluates and forecasts NorthWestern's system needs, and is formalized in a detailed plan. NorthWestern's most recent IRP was filed with the Commission in December 2024 (Reference 1). NorthWestern's current anticipated system needs and the demand for the Project are discussed further in Section 10 of the Application.

Additionally, the need for and development of the Project is supported by the SPP ERAS Procedures incorporated as Attachment AW to the SPP Tariff (Reference 2), establishing a one-time, fast-tracked resource grid interconnection process resulting from identified system capacity shortfalls. NorthWestern is an SPP member and, with the capacity need identified through its IRP process and the urgent need identified by SPP, NorthWestern submitted an Interconnection Request to SPP pursuant to the ERAS Procedures for the Project in October 2025 and has since executed the Project GIA. Please see Exhibit D – Generator Interconnection Agreement. Additionally, NorthWestern has included the Project in its 10-Year Plan, most recently submitted to the Commission on July 1, 2026 (Reference 5).

9 ESTIMATED COST OF FACILITY (ARSD CH. 20:10:22:09)

The current estimated cost of construction for the Project is [REDACTED] million. This estimated cost includes:

- Engineering, procurement and construction of the generating facility;
- The NBPL tap site and natural gas lateral from the NBPL tap site to the Project Site;
- The Project BAAH substation, the 115 kV double circuit generation-tie line from the Project BAAH substation to the Siebrecht substation on the AGS site and required modifications to the Siebrecht substation to facilitate electrical grid interconnection;
- Water supply and wastewater discharge interconnections; and
- Owner's costs (excluding any allowance for funds used during construction/interest during construction).

The estimated Project construction costs are based on current executed major equipment contracts, the executed GIA, preliminary/conceptual engineering, initial EPC contractor proposals and estimated escalation. Project construction costs are subject to change based on the final Project design.

10 DEMAND FOR FACILITY (ARSD CH. 20:10:22:10)

10.1 FACILITY DEMAND

NorthWestern identified a capacity deficit in 2030 of 71 MW in the summer and 38 MW in the winter in its 2024 IRP considering a 36% planning reserve margin (Reference 1). Subsequently, as part of the implementation of the ERAS Procedures (Reference 2), SPP issued an accreditation

workbook to SPP participating members, which resulted in an approximate 80 MW winter capacity deficit for NorthWestern's South Dakota system. Based on the capacity accreditation methodology employed by SPP at the time of the implementation of the ERAS Procedures and the forecasted need identified in the 2024 IRP and ongoing resource planning activities, NorthWestern initiated development and procurement activities associated with the Project.

In its 2024 IRP, NorthWestern identified firm, dispatchable resources as potentially attractive resources to satisfy its capacity deficit. Subsequently, and following the implementation of the ERAS Procedures, NorthWestern initiated competitive procurements for approximately 50 to 100 MW of capacity resources and identified the Project as an attractive development. The 50 to 100 MW capacity resource procurement need was established based on the approximate 80 MW need identified via the SPP accreditation workbook and the SPP ERAS Procedures noted above. However, NorthWestern evaluated a range of capacity resource sizing given that not all resources are customizable to a specific output rating. As a result of the identified capacity need and a competitive bid process, NorthWestern secured three (3) Solar Turbines Titan 350 CTs, with such serving as the basis for future development of the Project.

NorthWestern initiated development of the Project, including CT procurement, an Interconnection Request pursuant to the SPP ERAS Procedures and conceptual design activities based upon the system accreditation methodology established by SPP at the time of the implementation of the ERAS Procedures. As noted, the IRP process is iterative, and NorthWestern's system needs are continually reviewed considering SPP accreditation methodology and planning futures. Recently, SPP issued a revised capacity accreditation methodology and NorthWestern has identified a potential reduction in peak capacity need forecasts, mainly resulting from milder than expected winters in the 2024 to 2026 timeframe as well as the revised accreditation methodology.

While this represents a potential change to NorthWestern's capacity needs based on current modeling assumptions, it reflects the fact that future load growth and resource adequacy needs remain inherently uncertain and the dynamic nature of resource adequacy planning must consider these uncertainties rather than a single definitive forecast. Regardless, NorthWestern initiated development of the Project based on the identified capacity need at the time of the implementation of the ERAS Procedures as required to satisfy system capacity needs, maintain system reliability and to pursue actions necessary to satisfy the in-service date requirements of the ERAS Procedures. Additional information related to NorthWestern's capacity position is included in its 2024 IRP and Appendix N – Capacity Accreditation.

10.2 SPP PARTICIPATION

NorthWestern is a network customer and member of SPP since October 2015. SPP is a Regional Transmission Organization ("RTO") that serves as the Balancing Authority ("BA") for participating customers/interconnected utilities spanning 17 states.

The entirety of the Project would contribute to NorthWestern's capacity position in SPP.

10.3 CONSEQUENCES OF DELAY/TERMINATION

Should the Project be delayed or terminated, this would expose NorthWestern's customers to increased risk of decreased system reliability and would significantly extend the achievable in-

service date of any future-required new generation due to significant current demand and long-lead times for generation and high voltage equipment. It would also nullify the expedited nature of the ERAS Procedures and place any new interconnection request(s) at a significant schedule, and potentially cost, disadvantage. A delay or termination of the Project would be expected to increase the cost of the Project or any future development due to expected escalating equipment, construction and labor costs. Further, given that NorthWestern has completed significant development activities, executed the Project GIA and executed equipment supply agreements for the CTs and GSU transformers in order to meet the in-service date required by the ERAS Procedures, costs/penalties would also be incurred should the Project be delayed or terminated.

11 GENERAL SITE DESCRIPTION (ARSD CH. 20:10:22:11)

The Project Site is located just outside the city limits of Aberdeen in Aberdeen Township, South Dakota in Brown County. The Project Site is in the southwest ¼ of Section 25, T123N, R64W and is approximately three (3) miles south of the City of Aberdeen’s city center on the northeast corner of County Road 14W (135th Street) and County Road 10 (South 5th Street). The Project Site is comprised of three adjacent parcels or “lots” forming a rectangular area around the Project. The total area of all three parcels is approximately 176 acres with 166 acres zoned as Heavy Industrial (H-1) which will be utilized for siting of the Project (see Appendix E – Zoning). Parcel information within the Project Site is summarized in Table 11-1 below and shown in Exhibit 01.1 – Site Location Map and Appendix A.6 – Project Site Plats.

Table 11-1. Land Parcel Information

Parcel Identification Number (PIN)	Municipality	Landowner	Size (Acres)
32640 (Lot 1)	Aberdeen Township / Brown County	NorthWestern Energy Public Service Co.	63.06
32641 (Lot 2)	Aberdeen Township / Brown County	NorthWestern Energy Public Service Co.	10.21
32642 (Lot 3)	Aberdeen Township / Brown County	NorthWestern Energy Public Service Co.	103.01
Total Project Site			~176.28

The Project Site sits across the street from NorthWestern’s existing AGS site, which has been operating since 1978, and consists of similar generation and associated power plant equipment to that of the Project.

Please refer to Exhibit 01.1 – Site Location Map, Exhibit 01.2 – Site Location Map (5-mile), Exhibit 02.1 – Facilities Map, Exhibit 03.1 – Surrounding Features Map, Appendix A.1 – General Arrangement Drawing and Appendix A.2 – Site Layout Drawing for the approximate Project Site boundary, Project location and prominent Project features.

The Project Site is owned by NorthWestern and currently consists of tilled farmland which also serves, intermittently, as a parking lot for construction equipment and services personnel performing maintenance and modifications to the existing AGS site. The Project Site has an adjacent drainage channel, railroad track, electrical line easement and a dense row of trees that runs along the west side of the Project Site along South 5th Street. Site access is anticipated to be off of 135th Street SW.

The CTs will be enclosed in a turbine building, with other systems, equipment and buildings arranged to optimize Project costs and operations and maintenance considerations. An access road will circle the Project facilities as depicted in Appendix A.1 – General Arrangement Drawing. Water and wastewater interconnections are anticipated to be in the southeast corner of Lot 1 or on the south side of 135th Street SW in this general area (to the southeast of the facility), electrical grid interconnection is anticipated to be in the southern portion of Lot 1 with a generation tie-line connecting to the existing Siebrecht substation and the natural gas interconnection is anticipated to be on the east side of Lot 1. Please see the Exhibit 02.1 – Facilities Map.

Regarding the natural gas lateral required for the Project, NorthWestern is evaluating various routes from the NBPL main line to the Project Site, including looping the existing gas lateral that serves the AGS site or building a new lateral from a new NBPL tap site. The NBPL main line is in close proximity to the Project Site, with the new natural gas lateral expected to be three (3) to six (6) miles in length depending on the final route. For an overview of the general area of the natural gas lateral, please refer to Exhibit 02.2 – Facilities Map (5-mile), and for additional discussion see Application Sections 37 and 38.

12 ALTERNATIVE SITES (ARSD CH. 20:10:22:12)

NorthWestern reviewed potential siting areas within its service territory and selected the Project Site based upon its ability to satisfy the following general criteria:

- Proximity to existing transmission system interconnection infrastructure: Being adjacent to the existing Siebrecht substation greatly facilitates the interconnection to the 115 kV electrical system.
- Availability of transmission network capacity / minimization of required network upgrades: The local transmission system requires minimal upgrades to facilitate delivery of energy from the Project Site (just interconnection facilities).
- Proximity to existing natural gas supply infrastructure: The Project will require either the rebuild of the existing tap to the NBPL main line with looping of the lateral to the Project Site or a new tap and lateral to the Project Site. Each of these options are viable given the existing lateral and right of way to the AGS site and the distance from the Project Site to the NBPL main line of approximately three (3) to six (6) miles.
- Suitable site area and zoning opportunity: The generation site area of 166 acres provides sufficient area for the Project as well as for laydown areas during construction and the potential for future expansion of generating equipment at the Project Site. Portions of the Project Site used for siting of the Project were re-zoned as of April 29, 2025 to Heavy Industrial (H-1) and a Conditional Use Permit (“CUP”) application was submitted on October 2, 2025.³

³ The CUP application was put on hold following the initial submission and NorthWestern intends to re-engage the Brown County Planning & Zoning Commission regarding the CUP for the Project before the end of 2026.

- Availability of water supply and water discharge infrastructure: The source of water and water disposal is anticipated to be the nearby City of Aberdeen municipal system, consistent with the existing AGS site.

Other alternative sites within NorthWestern's territory were not viewed to be as beneficial for siting the Project given the extent of beneficial characteristics that serve to minimize Project implementation costs and provide the least-cost siting alternative, facilitate the Project schedule and minimize impacts to NorthWestern's customers and adjacent landowners. While there is some mention of a potential replacement generation project at NorthWestern's Yankton facility in NorthWestern's South Dakota 2024 IRP (Reference 1), the Aberdeen Project Site was viewed to be more beneficial for the Project given its known electric grid export capability in regard to the need identified by SPP under the ERAS Procedures. Further, previous NorthWestern IRPs included detailed qualitative and quantitative siting analyses, where the Aberdeen area evaluated favorably.

Given the electrical interconnection and anticipated water interfaces located at the Project Site, the close proximity of the NBPL to the Project Site as well as the existing natural gas lateral right of way to the AGS site and NorthWestern's ownership of the Project Site, NorthWestern does not anticipate a need to rely on eminent domain for the Project.

13 ENVIRONMENTAL INFORMATION (ARSD CH. 20:10:22:13)

The Project Site is an agricultural field, with the southern portion of Lot 1 currently being utilized as a laydown yard for construction equipment and materials for a project on the existing AGS site. As of April 29, 2025, Lots 1 and 3 of the Project Site were rezoned to Heavy Industrial (H-1) while Lot 2 of the Project Site is within the Agricultural Preservation (AG-P) zone. The Project Site is bordered to the south by a Heavy Industrial (H-1) zone.

Sections 14 through 22 of this Application provide further details regarding the existing Project Site environment at the time of the submission of this Application, the potential changes to the existing environment from construction and operation of the Project, identification of irreversible changes anticipated to remain beyond the operating lifetime of the Project as well as impact mitigation measures anticipated to be taken by NorthWestern as a result of the Project.

The Project will be located in close proximity to the existing Siebrecht 115 kV electrical substation as well as the existing AGS site, which is in the process of being upgraded. The cumulative advantages of siting the Project near these other facilities are discussed herein.

As the specific natural gas lateral route has not been identified yet, the following Sections focus primarily on the Project Site where the simple cycle facility is proposed to be located. However, much of the discussion also applies to the natural gas lateral, regardless of the route, given the proximity of the Project Site to the NBPL main line.

14 EFFECT ON PHYSICAL ENVIRONMENT (ARSD CH. 20:10:22:14)

The siting of the Project at the Project Site is not expected to cause environmental effects that would be hazardous to the health and welfare of human, plant or animal communities, even when

the cumulative and synergistic consequences of siting the Project are considered in combination with the environmental effects of the adjacent AGS site.

In addition, NorthWestern is not aware of any other major industrial facilities under regulation which may have an adverse effect on the environment as a result of their construction or operation in the general siting area of the Project.

14.1 EXISTING ENVIRONMENT

14.1.1 Description of Land Forms

Most of the region is now farmland; but in its native state, the landscape was characterized by trembling aspen, oak groves, mixed tall shrubs and intermittent fescue grasslands. Bur oak and grassland communities occupied drier sites.

Many areas had transitional grassland containing tallgrass and shortgrass prairie, including big and little bluestem, green needlegrass, blue grama, western wheatgrass and switchgrass.

There is a low density of streams and rivers across the area. High concentrations of temporary and seasonal wetlands create favorable conditions for waterfowl nesting and migration.

The region features flat to gently rolling plains composed of glacial moraine. There are areas of lacustrine and hummocky to ridged fluvioglacial deposits; the typical bedrock is composed of Tertiary and Cretaceous sandstones and shales. Soils are very fertile; Mollisols are common, with mostly frigid soil temperature regimes and udic and aquic soil moisture regimes.

The climate is a severe, mid-latitude, humid continental climate, bordering in places on a dry mid-latitude steppe climate. It is marked by short, warm summers and long, cold winters, with nearly continuous snow cover to the north. The mean annual temperature varies from approximately 34.7°F (1.5°C) in the north to 46.4°F (8°C) in the south. The mean summer temperature ranges from 59°F (15°C) in the north to 66.2°F (19°C) in the south, and mean winter temperatures are 9.5°F (-12.5°C) in the north and 24.8°F (-4°C) in the south. The mean annual precipitation ranges from 15.75 to 24.02 inches (400 to 610 mm). The frost-free period ranges from 90 to 150 days.

There are major habitats in the region for waterfowl. It provides a major breeding habitat for waterfowl and includes habitat for white-tailed deer, coyote, snowshoe hare, cottontail, red fox, northern pocket gopher, Franklin's ground squirrel and bird species like sharp-tailed grouse and black-billed magpie.

This region represents some of the most productive agricultural lands in the Prairies. It produces a wide diversity of crops, including spring wheat, flax, rye, barley, oats, corn, soybeans and sunflowers, as well as forages and several specialty crops. However, agricultural success is subject to annual climatic fluctuations. Additionally, the United States Department of Agriculture ("USDA") has indicated that the Project will not impact any Prime Farmland (see Appendix B – Stakeholder and Agency Consultations). Large cities and communities include Calgary, Edmonton, Brandon, Minot, Jamestown, Aberdeen, Watertown, Brookings, Huron and Yankton.

14.1.2 Geological Features

According to the South Dakota Geological Survey ("SDGS") Interactive Data Map the surficial geology of the Project Site consists of Upper Wisconsin outwash, delta (Qlod). This geologic map

group is characterized by heterogeneous sand and gravel of glaciofluvial origin and typically forms level terrain at the mouths of meltwater streams that once flowed into Glacial Lake Dakota. The thickness of this layer ranges up to 30 ft (9 m) bgs. The Project Site is bordered to the west by Upper Wisconsin outwash, terrace (Qlot), and to the east by alluvium (Qal). Refer to Exhibit 05.1 – Geology (Surficial) Map and Exhibit 05.2 – Geology (Surficial) Map (5-mile).

The underlying bedrock across the Project Site is called the Niobrara Formation. This bedrock formation developed from a late Cretaceous marine bedrock unit deposited about 87 to 82 million years ago when the region was covered by the Western Interior Seaway. It lies in the subsurface below glacial drift and other unconsolidated sediments typical of eastern South Dakota. Niobrara consists mainly of chalk, marl and calcareous shale, with minor siltstone. The formation is also characterized by high porosity but low permeability chalk and shale beds, often acting as a semi-confining unit in groundwater systems. Its thickness typically ranges from 100 to 200 feet regionally. Refer to Exhibit 06.1 – Geology (Bedrock) Map and Exhibit 06.2 – Geology (Bedrock) Map (5-mile).

The USDA Natural Resources Conservation Service (“NRCS”) web soil survey indicates the majority of the Project Site is underlain by Harmony, which is a silty clay loam with slow infiltration (Class C) rates and is moderately well drained. The depth to the water table for this soil group is approximately 130 inches. See Exhibit 09 – Site Surface Water Drainage Map for a Topographic Map of the area.

14.1.3 Economic Deposits

There are no known mineral resources or economic deposits within the Project Site.

14.1.4 Soil Types

The surficial geology of the Project Site is discussed in Application Section 14.1.2. Refer to Exhibit 05.1 – Geology (Surficial) Map and Exhibit 05.2 – Geology (Surficial) Map (5-mile).

The USDA NRCS Web Soil Survey indicated two predominantly hydric soils and seven predominantly nonhydric soils with hydric inclusions, as summarized in the table below. Refer to Exhibit 07 – Soils Map.

Table 14-1. Summary of Soils

Map Unit Name	Map Unit Symbol	Percent Hydric	Acres	Percent of Study Area
Tonka silt loam, silty substratum, 0 to 1 percent slopes	G007A	94	7.7	4.4
Renshaw-Fordville loams, 0 to 2 percent slopes	G274A	2	0.5	0.3
Bearden silt loam, 0 to 2 percent slopes	G431A	11	5.2	2.9
Aberdeen-Nahon silty clay loams, 0 to 2 percent slopes	G472A	2	77.2	43.8
Aberdeen-Urban land complex, 0 to 2 percent slopes	G649A	3	1.3	0.7
Nahon-Aberdeen-Exline silt loams, 0 to 2 percent slopes	G851A	2	29.2	16.5

Harmony-Aberdeen silty clay loams, 0 to 2 percent slopes	G866A	2	55.3	31.4
Total			176.4	100

14.1.5 Erosion Analysis

Surface disturbance caused by construction of the Project may result in the soil surface becoming more prone to erosion or compaction, which can result from use of heavy equipment. Clearing, grading, trench excavation and backfilling will occur during construction within the designated construction workspaces, which may result in impacts on soil resources in these areas. Clearing includes the removal of cover, which exposes soil to the effects of wind and precipitation. This may increase the potential for soil erosion and movement of sediments into sensitive environmental areas. Heavy equipment and repeated traffic may compact soil, reducing porosity and percolation rates, which could result in increased runoff potential.

To reduce potential impacts on and from soils, NorthWestern will develop and utilize Best Management Practices (“BMPs”) during construction to protect topsoil and adjacent wetland resources and minimize soil erosion. Measures to reduce impacts on soils during construction may include the use of erosion and sediment control BMPs during construction and restoration, noxious weed control, segregating topsoil from subsurface materials, reseeding disturbed areas based on agency recommendations or landowner requests, the use of construction equipment appropriately sized to the scope and scale of the Project, verifying access road grades fit closely with the natural terrain, proper on-site disposal of soil cuttings from foundation construction and maintaining proper drainage. As required, NorthWestern will repair and restore areas temporarily disturbed by construction or maintenance of the Project. Restoration could include replacement of original pre-construction topsoil or equivalent quality topsoil to its original elevation, contour and compaction and re-establishment of original vegetation as close thereto as reasonably practicable.

14.1.6 Seismic Risks

There are several small magnitude 3 earthquakes that were recorded in eastern South Dakota in the past century; however, the U.S. Geological Survey (“USGS”) rates this region as having a less than one percent chance of damage due to seismicity. Therefore, due to the relatively flat topography of the area and the low probability of seismic activity, subsidence and slope instability is not expected to be a risk at the Project Site.

14.1.7 Geologic Constraints

There are no known constraints imposed by the Project on the geologic characteristics of the Project Site.

14.2 POTENTIAL IMPACTS

The Project is likely to have an adverse impact on soils in the area due to compaction, excavation and alteration from construction equipment. During construction, there is an elevated risk of erosion of disturbed soils from wind and water. Sensitive soils such as hydric soils are more susceptible to impacts during construction. There is a potential for the spread of invasive species on construction equipment. Equipment containing large amounts of oil has the potential for spills and subsequent contamination of soil and water resources in the area. The placement of structure foundations in the ground will have a minor impact on the underlying geologic conditions. There

are no other known constraints imposed by geological characteristics on the design, construction or operation of the Project.

14.3 MITIGATION

Impacts on soils will be minimized or mitigated by soil protection measures identified in a Storm Water Pollution Prevention Plan (“SWPPP”) required for construction activities under the National Pollutant Discharge Elimination System (“NPDES”) program. The SWPPP will include appropriate BMPs to obtain and implement to reduce impacts of erosion and sedimentation on soils in the Project Site.

These measures may include procedures for segregating and replacing topsoil, relieving areas compacted by heavy equipment and implementing water and wind erosion control practices. Please see Application Section 14.1.5 for additional potential mitigation measures associated with erosion impacts. A Spill Prevention, Control, and Countermeasure (“SPCC”) Plan will be developed for the Project Site in accordance with the federal oil pollution prevention rule, 40 Code of Federal Regulations (“CFR”) Part 112, to prescribe spill prevention and response procedures.

After the completion of construction, a SWPPP for the operational phase will be developed and implemented. The SWPPP will include site specific BMPs to minimize exposure of stormwater to industrial activities. All stormwater coming into contact with plant operations will flow to a stormwater retention pond.

15 HYDROLOGY (ARSD CH. 20:10:22:15)

15.1 EXISTING ENVIRONMENT

There is a low density of streams and rivers across the area. High concentrations of temporary and seasonal wetlands create favorable conditions for waterfowl nesting and migration. Hydrology maps for the Project Site and surrounding area can be found in Exhibit 08.1 – Site Hydrology Map and Exhibit 08.2 – Site Hydrology Map (5-mile).

15.1.1 Surface Waters

The nearest body of surface water is the Moccasin Creek located approximately 4,100 feet east of the Project Site. Surface water hydrology at the Project Site included seven palustrine emergent wetlands within the study area according to the National Wetland Inventory (“NWI”). Project Site surface water drainage generally flows away from Lot 2, as shown in Exhibit 09 – Site Surface Water Drainage Map.

15.1.2 Groundwater and Aquifers

Groundwater flow direction is directed by surface topography, hydrology, hydrogeology and characteristics of the soil and nearby wells. The depth to groundwater historically ranges from 4.8 to 14.5 ft bgs based on well data near the Project Site. Groundwater flow direction within the unconsolidated material and shale bedrock is unknown but is assumed to follow the direction of Foot Creek and Moccasin Creek towards the southeast, based on topography. It is possible that the flow direction is localized or fluctuates based on seasonality. No surface water or groundwater within the Project Site is planned to be used as a water source. Currently, NorthWestern does not anticipate any discharges of water to the surface water or groundwater.

15.2 POTENTIAL IMPACTS

15.2.1 Surface Waters

Permanent loss of surface waters may occur if fill placement in wetlands result from construction of the Project; however, the general arrangement of the Project will be designed to minimize and avoid impacts on wetland resources to the extent feasible. Based on preliminary engineering and the location of the delineated wetlands, NorthWestern does not expect any impacts to wetlands on the Project Site. The Project will not impact the existing surface water drainage patterns near the Project Site. However, drainage within the Project Site will be altered to ensure that stormwater coming into contact with Project operations will be directed to an on-site stormwater detention pond. Surface waters are not planned to be used as a water supply for the Project and there is no planned discharge of heated water to natural drainage systems.

15.2.2 Impacts on Groundwater and Aquifers

No impacts to groundwater aquifers are anticipated as a result of the Project as water will be provided by the City of Aberdeen. The Project is not expected to affect planned water uses by any nearby communities, agriculture, fish or wildlife. Additionally, deep well injection is not planned to be used for effluent disposal.

15.3 MITIGATION

Based on preliminary design, no permanent impacts to wetlands or other surface or groundwater sources are expected at the Project Site. As such, changes to the hydrological features shown in Exhibit 08.1 – Site Hydrology Map and Exhibit 08.2 – Site Hydrology Map (5-mile) are not anticipated as a result of the Project. Regardless, potential impacts to surface or groundwater sources will be minimized to the extent possible for the generating facility and the natural gas lateral.

16 EFFECT ON TERRESTRIAL ECOSYSTEMS (ARSD CH. 20:10:22:16)

In order to characterize potential effects on terrestrial ecosystems for the Project Site, desktop analyses were completed and a field survey was conducted on April 9, 2026 to evaluate and map the extent of any potentially suitable habitat for federal or state listed species with the Project Site. See Appendix I – Habitat Assessment.

The following sections summarize potential effects on terrestrial ecosystems at the Project Site. As NorthWestern is evaluating multiple routes for the natural gas lateral, potential effects on terrestrial ecosystems associated with such are yet to be determined. Once the final natural gas lateral route is determined, NorthWestern will file a supplement to this docket in compliance with ARSD 20:10:22:16.

16.1 EXISTING ENVIRONMENT

The following sections summarize the existing environment for the Project Site.

16.1.1 Flora

According to the USGS National Land Cover Dataset (“NLCD”), the Project Site is comprised primarily of Cultivated Crop (76%), followed by pasture/hayland (21%), and Developed land

cover classes (3%; Table 16-1). All other land cover types represent less than one percent of the Project Site.

Table 16-1. NLCD Land Cover Types within the Project Site

Land Cover Type	Acres	Percentage of Project Area
Cultivated Crops	133.85	76
Pasture/Hay	36.32	21
Developed	5.38	3
Emergent Herbaceous Wetland	0.45	<1%
Total	176.00	100.0%

A field habitat assessment and aquatic resource delineation of the Project Site was completed on April 9, 2026 and May 7, 2026. See Appendix I – Habitat Assessment and Appendix H – Wetland Delineation Report, respectively. During the field visit, observations of plant communities within the Project Site were recorded (Table 16-2). The Project Site is approximately 176 acres and comprised primarily of cultivated cropland. Previous growing season crops observed were corn and wheat. There are small areas of disturbed grassland located primarily along roadside ditches and field edges. There are no unbroken or native grasslands within the Project Site.

Table 16-2. Common plant species observed within the Project Site

Common Name	Scientific Name
Grasses and Forbs	
Smooth Brome	
Kentucky Bluegrass	
Reed Canary Grass	
Canada Thistle	
Yellow Sweet Clover	
Corn	
Wheat	
Trees and Shrubs	
Eastern Cottonwood	
Green Ash	
Siberian Elm	
Peach-leaf Willow	

The field aquatic resource delineation (Appendix H – Wetland Delineation Report) resulted in six wetlands accounting for approximately 30.23 acres. These depressional wetlands serve as habitat for migrating and nesting waterfowl and other migratory bird species, as well as other wildlife in the vicinity of the Project Site.

16.1.2 Fauna

The USFWS Information for Planning and Consultation (“IPaC”) tool was used to identify species which are federally listed as threatened or endangered under the Endangered Species Act (“ESA”) with potential to occur within the Project Site. IPaC identified seven federally listed species with potential to occur within the Project Site (Table 16-3). No designated critical habitat is present within the Project Site.

Table 16-3. Federally Listed Species with Potential to Occur within the Project Site

Common Name	Scientific Name	Status
Northern long-eared bat	<i>Myotis septentrionalis</i>	Endangered
Rufa red knot	<i>Calidris canutus rufa</i>	Threatened
Whooping crane	<i>Grus americana</i>	Endangered

Dakota skipper	<i>Hesperia dacotae</i>	Threatened
Monarch butterfly	<i>Danaus plexippus</i>	Proposed Threatened
Suckley's cuckoo bumble bee	<i>Bombus suckleyi</i>	Proposed Endangered
Western regal fritillary	<i>Argynnis idalia occidentalis</i>	Proposed Threatened

The SD GFP Environmental Tool was used to provide Project information to and request a formal review from the SD GFP. The Environmental Review Tool flagged the Project for additional review prior to gaining clearance by the SD GFP. Following receipt of the Environmental Review Tool results, NorthWestern requested additional consultation from the SD GFP and SD GFP initiated Environmental Review efforts for the Project. The results of the SD GFP Environmental Review are pending as of the time of this Application and NorthWestern will provide the results of such upon receipt. See the SD GFP Environmental Review Tool results and associated correspondence between NorthWestern and the SD GFP in Appendix B – Stakeholder and Agency Consultations.

A field survey was completed on April 9, 2026 to evaluate and map the extent of any potentially suitable habitat for federally listed species within the Project Site. Additionally, field biologists observed potentially suitable nesting habitat within the vicinity of the Project Site for large stick nests prior to tree leaf out. No large stick nests, or potential eagle nests, were observed within the vicinity of the Project Site during the field visit. See Appendix I – Habitat Assessment for detailed results of the habitat field survey and summary of findings in the table below.

Table 16-4. Federally Listed Species with Potential to Occur within the Project Site

Species	Suitable Habitat Present?	Proposed Determination	Proposed Determination Rationale
Northern long-eared bat	Yes	No Effect	Potential habitat within the Project Site is a small, highly fragmented shelterbelt.
Rufa red knot	No	No Effect	No inland saline lakes are present within the Project Site.
Whooping crane	Yes	No Effect	Agricultural fields may be utilized during migration. However, proximity to urban areas likely prevents use by migrating whooping cranes.
Dakota skipper	No	No Effect	The Project Site does not include suitable native prairie, or preferred nectar plant species.
Monarch butterfly	Yes	No Jeopardy	Common milkweed is a generalist plant species and persists within Project Site.
Suckley's cuckoo bumble bee	No	No Jeopardy	Species has not been recorded in South Dakota in more than 50 years.
Western regal fritillary	No	No Jeopardy	The Project Site does not include native prairie, or preferred nectar plant species.

16.2 POTENTIAL IMPACTS

The Project is anticipated to have “*No Effect*” on all federally listed threatened or endangered species that may occur within the Project Site. The monarch butterfly, Suckley's cuckoo bumble

bee and western regal fritillary are species listed as candidate, or proposed, at this time and it is anticipated that the Project poses “*No Jeopardy to the continued existence of the species*”.

As of the time of this Application, the results of the SD GFP Environmental Review are pending. The findings of the SD GFP Environmental Review and potential impacts to State-listed species will be incorporated herein, once available.

Noise and construction activities created by equipment used to grade and construct the facilities are likely to displace species when construction activities take place. The clearing of brush and grassland to accommodate the Project will remove potential nesting and foraging habitat that could be used by avian, mammal and invertebrate species.

Vegetation removal will affect primarily non-native, pioneering or invasive species because most of the Project Site was converted from native plant communities when the land was converted to a farmstead, crops and pasture. The Project is not expected to have any impact on any endangered species or rare native fauna.

16.3 MITIGATION

Construction activities will be temporary and once the Project is in operation, displacement due to noise and construction activities will be minimal. The only trees on the Project Site are within a small shelter belt along the southwest edge of Lot 1, providing a suitable but highly fragmented habitat for the Northern long-eared bat. Due to limited suitable habitat and seasonal restrictions on tree removal, impacts to the Northern long-eared bat are not anticipated. Additionally, no large stick nests, or potential eagle nests were observed within the vicinity of the Project Site during the field survey and impacts to eagles and other avian species due to construction activities are not anticipated.

As of the time of this Application, the results of the SD GFP Environmental Review are pending. The findings of the SD GFP Environmental Review will be incorporated herein, once available.

17 EFFECT ON AQUATIC ECOSYSTEMS (ARSD CH. 20:10:22:17)

17.1 EXISTING ENVIRONMENT

Six (6) wetlands totaling 30.23 acres were delineated within the Project Site. See Appendix H – Wetland Delineation Report for the detailed assessment and Exhibit 10 – Wetland Delineation Map for the location of the delineated wetlands on the Project Site. There is no apparent continuous surface connection from any of the delineated wetlands within the Project Site to Moccasin Creek or other waters of the United States per the clarification on the definition of “continuous surface connection” provided in the memorandum released by the United States Environmental Protection Agency (“USEPA”) on March 12, 2025.

If the wetlands are determined non-jurisdictional at the federal level, they remain waters of the State as defined in SDCL § 34A-2-2(12) and discharge of any pollutant, including fill that would impair the wetland, is subject to regulatory requirements at the state level under ARSD Ch. 74:51:01:11. Compliance with ARSD Ch. 74:51:01:11 can be achieved through coordination with SD DANR and satisfaction of SD DANR requirements in place at the time of the work.

17.1.1 Fisheries

Fisheries habitats are not present on the Project Site.

17.1.2 Sensitive Aquatic Species

State listed aquatic species that could potentially occur in Brown County include the Topeka shiner (*Notropis topeka*). USFWS listed the Topeka shiner as federally endangered in December 1998. There were no aquatic species identified through the SD GFP Environmental Review Tool, and NorthWestern is currently in the process of securing Project Site clearance from the SD GFP. See Appendix B – Stakeholder and Agency Consultations for the SD GFP Environmental Review Tool results.

The Topeka shiner generally occupies small, prairie streams with groundwater inputs, high water quality and sand or gravel substrates. Topeka shiner habitats in South Dakota include streams with silt substrates, off-channel backwater areas, borrow pits and sloughs connected to occupied streams. Topeka shiners have been collected in varying abundance from streams with incised channels, high bank erosion and intensive grazing pressure along the riparian zone. No Topeka shiner critical habitat is designated in South Dakota and suitable habitat does not occur at the Project Site for this species.

17.2 POTENTIAL IMPACTS

Loss of wetlands is not expected from construction of the Project. However, because the Project is still in the preliminary design phase, NorthWestern requested a jurisdictional determination (“JD”) from USACE. At the time of the Application, USACE has not issued a JD for the Project. See Appendix B – Stakeholder and Agency Consultations for correspondence between NorthWestern and USACE.

Ground disturbance during construction may result in short-term or long-term effects on aquatic ecosystems from erosion of exposed sediments disturbed by excavation, grading and construction traffic or accidental hazardous spills from construction equipment. No other impacts of the Project are expected on any aquatic ecosystems.

17.3 MITIGATION

No mitigation is anticipated due to no expected loss of wetlands. Permanent impacts on wetland areas, if they were to occur, will be mitigated as directed by the USACE under Section 404 of the Clean Water Act (“CWA”).

In the event construction activities could cause disturbance to aquatic ecosystems, BMPs will be adopted so that, in the event construction activities have the potential to impact surface waters, steps will be in place to minimize these effects. Temporary erosion and sediment control methods will be properly placed, monitored and maintained adjacent to water resources. These erosion control methods will remain in place until work areas become re-vegetated or are stable. BMPs may include vegetative buffers, silt fencing, mulching, seeding and straw wattles. Where appropriate, revegetation of disturbed areas to as close to preconstruction conditions as possible will occur.

To reduce the potential for a hazardous materials release during the construction phase, work will be planned and performed in accordance with Occupational Safety and Health Administration (“OSHA”) standards and protocols addressing the use of potentially hazardous materials and

applicable federal and state environmental regulations. If a release occurs, cleanup, management and disposal of contaminated soils will be conducted according to USEPA and SD DANR standards, including following contingency planning as established in the SPCC Plan for the Project and site-specific emergency response procedures.

18 LAND USE (ARSD CH. 20:10:22:18)

This Section describes the existing environment, potential impacts and mitigation measures to land use features within the Project Site, including discussion of land use, displacement, noise and aesthetics.

18.1 CURRENT LAND USE

18.1.1 Existing Environment

Land use within the Project Site is mostly classified as grasslands/herbaceous with a small portion of developed open space. See Exhibit 11.1 – Land Use Map and Exhibit 11.2 – Land Use Map (5-mile). The current location of the existing utility easement (Lot 2) is classified as mostly cultivated crops with some grasslands/herbaceous land. Other land uses surrounding the Project Site include emergent herbaceous wetlands, hay/pasture and mixed forest.

18.1.2 Potential Impacts

The Project will include both temporary and permanent impacts on existing features of the landscape at the Project Site. Based on preliminary design, permanent facilities are expected to cover approximately 20 acres, while the rest of the Project Site is anticipated to be undisturbed by the Project or returned to crop land or seeded with native vegetation after the completion of construction. Temporary impacts will be associated with construction of the Project, including site access, laydown areas, construction equipment and facility construction that will be visible in the area.

18.1.3 Mitigation

To mitigate these impacts, construction BMPs will be observed to reduce the temporary impacts of construction on the Project Site. Additionally, permanent impacts will be mitigated by minimizing the overall footprint of the Project and following all setback and size requirements for the Project as described in the applicable Brown County Ordinances (Reference 4). Areas of the Project Site that experience temporary construction impacts will be seeded or potentially used as crop land.

18.2 DISPLACEMENT

Displacement of residents from the construction or operation of the Project is not anticipated as a result of the Project.

18.2.1 Existing Environment

There are no existing residences within the Project Site.

18.2.2 Potential Impacts

No permanent impacts causing displacement are anticipated as a result of the Project.

18.2.3 Mitigation

No permanent displacement is anticipated and, therefore, no mitigation is proposed.

18.3 NOISE

The Project is located in unincorporated Brown County, South Dakota outside of Aberdeen city limits and is subject to Brown County Ordinances, Title 4 – Zoning (Reference 4). Specifically, Chapter 4.31 of the Brown County Ordinances includes performance standards for properties zoned Heavy Industrial (H-1) District, including for noise.

A Project noise study was completed including the performance of a baseline noise survey, development of predicted sound levels resulting from the Project and nearby sources, an assessment of applicable regulations and identification of potential mitigation measures. See Appendix M – Noise Study for detailed information for the Project as well as information related the existing AGS site. The following Sections provide a summary of the study findings.

18.3.1 Existing Environment

Baseline noise levels were measured on March 19 and 20, 2026. Long-term (overnight) noise measurements were taken concurrently at three locations, and short-term (10-minute) noise measurements consecutively at two locations in the vicinity of the Project Site. All locations were outside the Project Site (offsite). These offsite measurements were conducted on public property or private property where NorthWestern had obtained permission to access the properties from the property owners.

Table 18-1 provides a description of each noise measurement location (“M_L”) and Exhibit 12 – Noise Location Map shows the locations relative to the Project Site. The offsite M_Ls were chosen to be representative of nearby noise-sensitive receptors. The locations of six (6) nearby residences are also shown in Exhibit 12 – Noise Location Map.

Table 18-1. Measurement Location Descriptions (March 19, 2026 – March 20, 2026)

Measurement Location	Measurement Type	Location Description	Approximate Distance and Direction from Project Turbine Building
M_{L1}	Long-term	Lawn of residence at 3306 387 th Avenue.	920 ft SW
M_{L2}	Long-term	Between 2820 and 2904 S 5 th Street.	520 ft W
M_{L3}	Long-term	Edge of residential parcel at 2400 Bunker Drive.	2,680 ft NE
M_{L4}	Short-term	Field just south of residences at Eisenhower Circle.	3,130 ft NNE
M_{L5}	Short-term	Across street from 3524 387 th Avenue.	3,930 ft S

The baseline noise level measurements include normal background noise, traffic noise and noise from train pass-by events as well as contributions from AGS Unit 2 both when it is operating and when it is offline. Based on this baseline noise data collected, traffic noise appears to have a more significant impact on the nearby residences/receivers as compared to when AGS Unit 2 is operating. Additionally, train pass-by events represent significant, short-term increases in observed noise levels above the levels associated with traffic and AGS Unit 2 operation. The baseline noise levels are further characterized in Appendix M – Noise Study.

18.3.2 Potential Impacts

Predicted noise levels were modeled for the Project as well as for AGS Units 3 & 4. AGS Units 3 & 4 are currently under construction. The predicted noise levels for the Project consider the current conceptual design of the simple cycle facility, noting that the EPC contractor has not yet been selected and detailed engineering and design have not yet taken place. However, NorthWestern has proactively included noise mitigation measures in the Project to date, including noise mitigation features in the Solar Turbines CT scope of supply and the EPC contractor's scope of supply. Accordingly, the predicted base, or unmitigated, noise levels from the Project account for the current, known and specified scope of the Project (e.g. account for CT stack and inlet silencers). Predicted A-weighted and C-weighted noise levels for the Project, for AGS Units 3 & 4 and for the Project and AGS Units 3 & 4 combined are tabulated in Appendix M – Noise Study. Additionally, associated predicted noise contour maps are included in Appendix M – Noise Study.

In general, the predicted noise levels are considered to be conservative (high) given that Project detailed engineering and design have not yet taken place and, therefore, conservative source sound power levels have been modeled. However, initial modeling would suggest that the predicted noise levels are commensurate with similar electric generating facilities. It is also important to note that the predicted noise levels imply that the Project as well as AGS Units 3 & 4 operate continuously when in reality these “peaking” units are not anticipated to operate 24 hours a day, 7 days a week but rather be called on as needed based on market conditions (e.g. for both the Project and AGS, the units may start and run for four (4) hours and shut down for the remainder of the day, run for an entire day straight, or potentially not run at all for a day).

18.3.3 Mitigation

Based on an initial review and interpretation of the noise performance standards included in the Brown County Ordinances and the predicted noise levels for the Project, NorthWestern anticipates being able to comply with the Brown County Ordinances with minor modifications to the current, base scope of supply, with the primary mitigation measure being enhanced wall paneling for the turbine building. However, further discussion with the Brown County Commission is required to determine specific noise levels required to be achieved by the Brown County Ordinances and, therefore, the resultant mitigation measures that may be pursued.

Regardless, NorthWestern has proactively included various noise mitigation measures in the base scope of supply including CT inlet silencing, multi-pollutant catalyst housing acoustic treatment, stack silencers and other measures. In general, NorthWestern will consider various means and methods to mitigate noise emissions from the Project.

Subsequent to this initial analysis, the conceptual and detailed design of the Project will advance and predicted unmitigated and mitigated noise levels will be able to be estimated with a greater degree of certainty. The Project is anticipated to meet the noise levels required by the Brown County Ordinances without significant issue, and NorthWestern is committed to minimizing noise impacts on surrounding residences and communities to the extent practicable.

19 LOCAL LAND USE CONTROLS (ARSD CH. 20:10:22:19)

County zoning and land use information was obtained from the Brown County Planning and Zoning Department. Brown County has adopted a zoning ordinance (Reference 4) and comprehensive land use plan (Reference 6).

The Project will be constructed on land that was re-zoned in April 2025 as Heavy Industrial (H-1) District. Please see Appendix E – Zoning.⁴ All surrounding land is zoned as Agricultural Preservation (AG-P) or Heavy Industrial (H-1) District. The Project is compatible with existing land uses in the area, with the Project Site adjacent to an existing electric generating facility (AGS), and in close proximity to the DemKota Ranch beef plant and the Aberdeen WRF.

The purpose of the Brown County Comprehensive Plan is to establish environmentally sensitive, economically sound and fiscally responsible future land use and growth patterns. The development of the Project is consistent with the goals established by the Brown County Comprehensive Plan in that the Project will not impact Prime Farmland as determined by the USDA NRCS (refer to Appendix B – Stakeholder and Agency Consultations), is located in close proximity to other industrial applications, avoids, to the extent possible, impacts to natural resources and includes a buffer/mitigation for any impacts to nearby residential communities.

There are no known local ordinances in place that would restrict development of an energy conversion facility, and the Project Site is zoned appropriately for the development, construction and operation of such. All appropriate planning and construction permits will be obtained and all appropriate codes and regulations will be followed.

20 WATER QUALITY (ARSD CH. 20:10:22:20)

20.1 EXISTING ENVIRONMENT

There are currently no impaired water bodies, as defined by Section 303(d) of the CWA, on the Project Site. The closest receiving water body to the Project Site that is included in the South Dakota Integrated Report for Surface Water Quality Assessment as required by Section 305(b) of the CWA is Moccasin Creek. Moccasin Creek is located approximately one mile east of the Project Site.

20.2 POTENTIAL IMPACTS

Ground disturbance during construction may result in short-term effects on surface water quality from erosion of exposed sediments disturbed by excavation, grading and construction traffic or accidental hazardous spills from construction equipment.

20.3 MITIGATION

BMPs will be identified in the construction SWPPP and implemented to minimize Project effects on surface waters. Temporary erosion and sediment control methods will be properly placed, monitored and maintained adjacent to water resources. These erosion control methods will remain

⁴ The official zoning map on the Brown County website is not updated on a regular basis and does not currently reflect the re-zoned Lots of the Project Site.

in place until work areas become re-vegetated or are stable. BMPs may include vegetative buffers, silt fencing, mulching, seeding and straw wattles. Where appropriate, the Project will re-vegetate disturbed areas to as close to preconstruction conditions as possible in accordance with appropriate permit requirements. Stormwater runoff will be collected and routed to a stormwater detention pond, and the Project will adhere to the requirements of the stormwater discharge permit that will be obtained from the SD DANR.

To reduce the potential for a hazardous materials release during the construction phase, work will be planned and performed in accordance with OSHA standards and protocols addressing the use of potentially hazardous materials, including Hazardous Waste Operations and Emergency Response (29 CFR 1910.120 / 1926.65) and Process Safety Management (29 CFR 1910.119), as applicable. Additionally, work will be planned and performed in accordance with applicable federal and state environmental regulations. If a release occurs, cleanup, management and disposal of contaminated soils will be conducted according to USEPA and South Dakota standards, including following contingency planning as established in the Project SPCC Plan and site-specific emergency response procedures.

These mitigation measures, in combination with the minimal process water produced from operations, enable the Project to comply with all federal and state water quality standards and regulations.

21 AIR QUALITY (ARSD CH. 20:10:22:21)

The entire State of South Dakota is reported as being in attainment for all USEPA NAAQS for criteria pollutants including particulate matter, ozone, sulfur dioxide (“SO₂”), nitrogen oxides (“NO_x”), carbon monoxide (“CO”) and lead. The nearest ambient air quality monitoring site is located in Aberdeen which monitors for particulate matter smaller than 10 microns (“PM₁₀”) and particulate matter smaller than 2.5 microns (“PM_{2.5}”) with the next closest air monitoring site being in Watertown, South Dakota, approximately 75 miles away.

The primary emissions sources that exist in the vicinity of the Project include agricultural-related equipment and vehicles as well as service-oriented businesses and light industry including the existing AGS.

The operation of the Project will result in air emissions of NO_x, CO, SO₂, volatile organic compounds (“VOC”), PM₁₀ and PM_{2.5}, greenhouse gases and hazardous air pollutants (“HAPS”). Equipment that will produce air emissions includes the three simple-cycle CTs, a dew point heater for incoming natural gas, small capacity building unit heaters and emergency equipment (diesel fueled fire pump and emergency diesel generator, which will be fueled with ultra-low sulfur diesel (“ULSD”) fuel). An air quality construction permit application is currently being prepared and will be submitted to the SD DANR at approximately the same time as the submission of this Application to the Commission. The Project will comply with all applicable air quality standards and USEPA and SD DANR regulations through the use of clean pipeline quality natural gas combined with dry low NO_x combustion systems and post combustion emissions control equipment applied to the CTs including a multi-pollutant catalyst system. The Project is expected to result in air emissions below the NAAQS and is not expected to negatively impact the attainment status of Brown County.

During the construction of the Project, fugitive dust emissions will be increased temporarily because of construction activities and increased equipment and vehicle traffic. Construction vehicles and equipment will also generate emissions in the vicinity of the Project. Construction emissions will be short term in nature. BMPs will be implemented to reduce fugitive dust emissions throughout construction which may include watering roadways and loose gravel areas, limiting on-site traffic speeds, staging construction activities and other necessary measures.

22 TIME SCHEDULE (ARSD CH. 20:10:22:22)

A preliminary permitting, procurement and construction milestone schedule for the Project is summarized below. Dates in this schedule may be adjusted as a function of further Project development activities.

Table 22-1. Estimated Permitting and Construction Schedule Milestones

Milestone	Estimated Start Date	Estimated Date of Completion
Commission Notice of Intent Submittal		Completed (October 2025)
Energy Conversion Facility Construction Permit	Q4 2026	Q3 2027
Land Acquisition		Completed (2023)
CT Contract Execution		Completed (Q1 2026)
EPC Contract Execution		Q4 2026
SD DANR Air Construction Permit	Q4 2026	Q3 2027
Other Permitting (CUP, SD GFP review, SD SHPO reviews, etc.)	Q4 2025	Q3 2027
GIA	Q4 2025	Q3 2026
Natural Gas Supply Agreement and Associated Facility Construction	Q3 2026	Q2 2029
Plant Engineering and Design	Q3/Q4 2026	Q3/Q4 2027
Plant Construction	Q4 2027 / Q1 2028	Q2 2030
Combustion Turbine Delivery to Site		Q1/Q2 2029
Project In-Service		Q2 2030
SPP ERAS Required In-Service Date		October 2, 2030

23 COMMUNITY IMPACT (ARSD CH. 20:10:22:23)

NorthWestern completed a socioeconomic impact study to evaluate the potential social and economic impacts to the local community, the results of which are described in in this Section and are further detailed in the full report included in Appendix G – Socioeconomic Impact Study. As documented in the Socioeconomic Impact Study, the Project is expected to have no significant impact to the local community.

23.1 FORECASTED IMPACTS

23.1.1 Commercial and Industrial

As discussed elsewhere herein, the Project Site is surrounded by a mix of parcels zoned as industrial (H-I, Heavy Industrial and L-I, Light Industrial) and agricultural (AG-P, Agricultural Preservation and AG-P2, Water). The Project Site was rezoned in April 2025. Lots 1 and 3 are now zoned Heavy Industrial (H-1), and Lot 2 is zoned Agricultural Preservation (AG-P). See Appendix E – Zoning.

During construction there could be some traffic-related disruptions to NorthWestern's existing generation plant and the DemKota Ranch Beef processing plant due to the movement of materials and equipment to and from the Project Site. In the long-run, however, the Project is expected to have no appreciable negative impacts on nearby commercial/industrial sites.

23.1.2 Housing Supplies

Given the expected temporary construction workforce of up to approximately 200 workers during peak on-site construction⁵ and approximately 10 permanent employees expected during operation, combined with the availability of existing single-family homes and rental units, the Project is not anticipated to substantially affect housing availability or require additional residential development.

According to the 2020–2024 American Community Survey ("ACS") 5-year estimates, Brown County contained approximately 1,805 vacant housing units of a total 18,090 housing units existing in 2024, with 1,195 of those vacant housing units available within Aberdeen which contains an approximate total of 13,664 housing units.

Furthermore, as of June 2026, Realtor.com reported approximately 139 homes for sale within Aberdeen. Together, the available rental housing identified by the ACS and the current homes and rental listings available on the market indicate that the Aberdeen area has sufficient housing capacity to accommodate potential new residents during and after construction.

Through NorthWestern's plans to encourage the use of local contractors, where possible, housing accessible through rental housing, hotels, campgrounds and commuting is expected to be more than sufficient for temporary construction employment without the need for new, long-term residential development. Additionally, permanent employees will represent a small percentage of those homes and rental properties currently identified as available within Brown County.

23.1.3 Educational Facilities

The Project is located within the Aberdeen School District 06-1 which serves the City of Aberdeen and surrounding Brown County. The enrollment trend for the Aberdeen School District has been declining over the past 6 years with total enrollment from pre-kindergarten through grade 12 dropping from 4,483 to 4,237 students. While two grade sections at one school are currently at enrollment capacity, there is available capacity within other nearby District schools to accommodate additional students, if necessary.

Warner School District 06-5 serves the community of Warner and the surrounding portions of Brown County. Although the Project is located within the Aberdeen School District, Warner School District is also considered due to its close proximity. Enrollment has remained largely unchanged, ranging from 311 to 315 students over the past 7 school years. Enrollment totaled 312 students in 2019-20 and 311 in 2025-26, indicating no significant increase or decrease over the period. Based on feedback from the Warner School District superintendent, the Warner School District would be able to accommodate a small increase in enrollment across its classrooms. The superintendent also noted that housing availability within Warner School District is limited, which is expected to constrain the number of Project-related families that could relocate within Warner School District boundaries.

⁵ Based on the expected range of 150 to 250 workers anticipated during peak on-site construction for the Project.

It is not anticipated that any significant growth in enrollment would be realized from the presence of temporary construction workers as most construction workers do not move their families to temporary project sites.

Based upon the historical enrollment trends, input from the Aberdeen School District and the Warner School District, expected minor contribution of students associated with temporary construction workers and the expectation of up to 10 permanent employees, the Project is not anticipated to have a significant impact on school enrollment or educational services.

23.1.4 Waste Disposal and Water Usage

Solid waste generated during construction and operational activities will be disposed of at a properly permitted waste site in accordance with the laws of South Dakota. The Brown County landfill, which is approximately 5 miles from the Project, is a permitted regional municipal solid waste landfill, which, under South Dakota regulations, is authorized to accept municipal solid waste, industrial and commercial waste, and construction and demolition waste materials. The Project is not anticipated to adversely affect existing solid waste management capacity within Brown County.

Water supply to the Project is anticipated to be provided by the City of Aberdeen's municipal water system which has a design capacity of 12 million gallons per day ("MGD"), an average water demand of 3.6 MGD, and a peak daily demand of 9.0 MGD. The municipal water system is supplied from both surface water and groundwater sources. During normal operation, the Project is expected to require approximately 10 gpm (0.01 MGD if operated for a full 24-hour period). During hot day operation with the combustion turbine evaporative coolers in-service, the Project may consume up to 90 gpm (0.13 MGD if operated for a full 24-hour period). Given the free capacity within the existing system, the Project is not expected to have an adverse impact on the area's water system.

Wastewater generated from the Project is anticipated to be collected through the municipal sanitary sewer system and conveyed to the Aberdeen WRF. The treatment plant has a design capacity of approximately 6.0 MGD and currently treats an average of approximately 2.5 MGD. The City has recently invested in improvements to the wastewater treatment system to maintain compliance with state and federal regulations and accommodate future demand. Based on the available treatment capacity and recent infrastructure improvements, wastewater generated by the Project is not anticipated to significantly affect the City's wastewater collection or treatment system.

23.1.5 Law Enforcement

Law enforcement services are provided by the Brown County Sheriff's Office for the unincorporated areas of Brown County, including the Project Site and the Aberdeen Police Department within the City of Aberdeen. While the Project is located outside the city limits, the Aberdeen Police Department may assist the Project via mutual aid agreements with Brown County.

Both the Sheriff's Office and the Police Department indicated that they may expect an increase in the number of calls for service during construction of the Project as a result of the increase in local workforce but neither anticipates a need for additional law enforcement resources or significant impacts to public safety services. Therefore, the Project is not anticipated to result in significant impacts to local law enforcement or public safety services.

23.1.6 Fire Protection

Aberdeen Fire & Rescue will provide fire protection and emergency response services, including fire suppression, emergency medical services, hazardous materials response, technical rescue, fire prevention and other emergency response services for the Project. Neighboring fire departments will be relied upon, when needed, to provide additional emergency response resources.

Aberdeen Fire & Rescue indicated that the Project may result in a modest increase in EMS calls and the potential for hazardous materials and technical rescue responses during the construction phase, but there was no indicated impact or need for additional personnel, equipment or specialized training associated with the Project.

23.1.7 Health

Aberdeen and the surrounding region is served by Avera St. Luke's Hospital as the primary hospital and acute care facility. It is the region's only Level III Trauma Center. The facility provides inpatient and outpatient care, surgical services, diagnostic imaging and specialty medical care and hosts Avera Acute Care which is a walk-in medical clinic within the same campus.

Based on the relatively small permanent workforce associated with the Project and the capabilities of the local medical facilities, significant impacts to the local hospital or medical service facilities are not anticipated.

23.1.8 Recreation

The City of Aberdeen hosts and maintains a variety of public parks, athletic facilities and recreation amenities. The Aberdeen Parks, Recreation and Forestry Department has indicated that it does not anticipate significant impacts to these facilities either during construction or operation of the Project. The only notable concern was the potential for temporary effects from construction-related noise, dust or truck traffic if construction activities coincided with a concert series held at the Kuhnert Arboretum on Tuesday nights during the months of June and July. As construction activities will generally be expected to occur during normal daytime hours, any effects would be expected to be limited.

Wylie Park Campground, with approximately 106 RV campsites, 67 full-hookup sites, 23 camping cabins and tent camping areas, is located 4 to 5 miles to the northwest of the Project Site. This campground could provide temporary lodging opportunities for construction personnel and is not expected to be significantly impacted by the Project.

Given the above and based on existing recreation resources, the Project is not anticipated to result in significant impacts to public parks, athletic facilities or campground operations.

23.1.9 Government Facilities and Services

The Project is located in Brown County adjacent to the existing AGS. Local government services affecting the Project area are provided by Brown County and the City of Aberdeen. Brown County is responsible for county government functions including planning and zoning, county roads and emergency management, while the City of Aberdeen provides municipal utilities and other public services supporting development within the area.

The Project will utilize existing public infrastructure and government services currently available within the Project area. Additional discussion of specific public services, including transportation, law enforcement, fire protection, water, wastewater and schools, is provided in the respective sections of this Application.

23.1.10 Workforce

The construction phase of the Project is expected to employ approximately 200 workers during peak construction, depending on Project schedule and EPC contractor sequencing and plan. The existing NorthWestern AGS facility currently employs approximately 6 permanent workers, and the Project is expected to add up to 10 new permanent positions.

Because the permanent operational workforce is relatively small, the Project is expected to utilize personnel from the existing regional labor force. However, for Brown County, the utilities sector employs approximately 137 workers, with the overall unemployment rate for utility industry personnel at or near 0 percent, suggesting that employers seeking experienced utility workers, such as NorthWestern for the Project, may need to recruit from the local workforce as well as surrounding labor markets. During construction, the workforce is expected to be supplemented by workers commuting from surrounding communities.

23.1.11 Energy

Based on the existing natural gas generating facilities already located near the Project Site, the existing transmission and pipeline infrastructure serving the area and the Project-specific utility improvements proposed by NorthWestern, the Project is not anticipated to have significant long-term impacts on community energy infrastructure or the availability and reliability of utility services within Brown County.

23.2 TAX IMPACTS

The specific property tax implications for the Project are difficult to quantify because NorthWestern's property tax obligations are centrally assessed. The value of the platted property at the Project Site will increase significantly though once the site is developed. As an indication, for the first year of operation, the Project could potentially remit in the range of \$1.6 million to \$2.0 million in property taxes based upon historical millage rates, historical accounting and based on property taxes on 100% of the cost of the Project, all factors that could be different when the Project goes in to service. During construction, property taxes will be assessed based on 100% of the construction work-in-progress amount.

The Project is expected to provide positive federal, state and local tax impacts once fully-operational, potentially more than \$1.8 million on an annual basis.

23.3 AGRICULTURAL IMPACTS

The Project will temporarily disturb approximately 25 to 30 acres of agricultural land during construction. Additionally, during construction, temporary adverse effects on farmland such as soil compaction and crop damage may occur given crop production in recent years.

Approximately 20 acres will be permanently disturbed due to the footprint of the constructed Project.

The exact acreage temporarily and permanently disturbed will vary based on final design. Regardless, the Project Site does not contain any Prime Farmland based on feedback from the USDA NRCS. See Appendix B – Stakeholder and Agency Consultations.

Adverse effects on vegetation by construction operations will be minimized to the extent practicable. The following mitigation practices will be implemented:

- To minimize the spread of invasive species, suppliers will ensure that gravel and fill imported to the Project come from weed-free sources.
- Upon completion of the Project, disturbed areas will be graded and re-vegetated with a natural seed mix to retain the natural character of the Project Site. These practices will provide proper drainage and prevent erosion.
- After construction, tillable agricultural land will be deeply tilled to alleviate compaction.

23.4 COMMUNITY IMPACTS

23.4.1 Population

During construction, the community will experience a temporary increase in population associated with the approximate 200 person peak workforce, which is anticipated to include a mix of local and non-local personnel. As it is unknown how much of the construction workforce will remain in the local area following construction, permanent community population impacts because of the construction of the Project are difficult to quantify.

Given the relatively small permanent workforce associated with the Project during operations, community population impacts are expected to be minimal but positive. As noted elsewhere in this Section 23, the local and surrounding communities are expected to be able to accommodate the incremental permanent labor force associated with the operation of the Project.

23.4.2 Income

Given that labor during construction may utilize a mix of local and non-local personnel, local income impacts associated with the construction phase of the Project are difficult to quantify.

As noted in the following Section, during operation of the Project, employees are anticipated to be classified as part of the electric power distribution industry, which generally carries higher incomes as compared to the broader utilities industry and the workforce in general. As such, the operation of the Project is expected to have a positive impact on community income levels.

23.4.3 Occupational Distribution

Job classifications involved with the development and construction of the Project include managers, engineers, construction staff (mechanical, electrical, civil, piping, etc.), quality control, project controls, safety and startup and commissioning.

During operation, the Project is expected to employ individuals in the electric power distribution industry (NAICS 221122), which is the same classification as the staff for the existing NorthWestern AGS facility.

Refer to additional discussion in Application Section 24.

23.4.4 Integration and Cohesion of Communities

As noted in Application Section 19, the development of the Project is consistent with the Brown County Comprehensive Plan (Reference 6) which, in part, establishes long-term community integration goals.

23.5 IMPACT ON TRANSPORTATION FACILITIES

A study was completed to assess potential traffic and transportation impacts associated with the Project. The traffic study considered the area bounded by U.S. Highway 281 on the west, 391st Avenue on the east, U.S. Highway 12 on the north and 139th Street on the south as shown in Exhibit 13 – Traffic Study Boundary Map.

The study characterizes the average daily traffic (“ADT”) levels and functional classifications for roadways and bridges within the study area. Construction traffic will generally occur on these surface streets and bridges and, subject to validation by the major equipment suppliers and EPC contractor later in the Project lifecycle, such are anticipated to be able to accommodate Project construction traffic without major issues. Up to approximately 200 deliveries are expected during Project construction, and daily construction crews and deliveries will cause some short-term traffic increases to the routes within the study area. However, existing roadways and facilities within the study area are anticipated to be able to accommodate the increased construction traffic without major issues. Heavy-haul deliveries associated with the Project are identified, with the planning and physical delivery the responsibility of either the major equipment suppliers or the EPC contractor, as applicable. Given the relatively small permanent labor force associated with Project operations, and the similar nature of operations with the existing AGS and surrounding industrial facilities, traffic impacts are not anticipated during Project operation.

As noted, the traffic study did not identify any major concerns associated with the Project but, regardless, does include some potential mitigation measures to consider to reduce potential impacts. These include potential mitigation measures for signage, heavy haul routes and other measures, such as road avoidance considerations and review of SD DOT planned construction schedules, to be considered by NorthWestern, the major equipment suppliers and the EPC contractor.

See Appendix K – Traffic Study for additional details.

23.6 IMPACT ON CULTURAL RESOURCES

This Section summarizes the results of the cultural resources records search and Level III Archaeological survey for the Project, which are further detailed in Appendix J – Cultural Resources Report. NorthWestern has been and will continue coordinating with the SD SHPO regarding cultural and historic resources. See Appendix B – Stakeholder and Agency Consultations.

23.6.1 Existing Environment

The background research revealed that the primary construction area of the Project Site has not been previously surveyed and that no previously recorded archaeological sites are located within 1 mi (1.6 km) of the Project Site. A total of 11 properties are listed by the National Register of Historic Places (“NRHP”) as historic properties with 9 additional NRHP-eligible properties located outside of but within 1 mile of the Project Site. The entire Project Site falls within agriculture fields and undeveloped areas, where culturally sterile parent material is typically found at depths greater than a meter. A map of cultural surveys near the Project Site can be found in Appendix 14 – Cultural Survey Map.

The Project Site falls within the Upper James Archaeological Region of South Dakota. According to the South Dakota State Plan for Archaeological Resources, this region is characterized as a

broad river valley and relatively flat to gently rolling hills. The region is largely flat grassland prairie with mid to tall grasses and few trees and shrubs. Previous archaeological investigations within the region have largely focused on areas surrounding the James River, with more recent investigations occurring as a result of small-scale projects. Paleoindian and Archaic period sites are minimal within this region. A majority of the precontact sites in the Upper James region are dated to the Woodland period and include both burial mound sites and artifact scatters. Plains Village and late Prehistoric sites are also low in number. Protohistoric and Historic resources in the region include post-contact Dakota villages and fur-trade posts.

23.6.2 Potential Impacts

With construction activities likely to reach beyond the existing ground disturbance (plow zone), this Project has the potential to impact cultural resources. A Level III Intensive Survey of the approximate 20-acre permanent impact Area of Potential Effects (“APE”) was completed for the Project⁶. The APE is located entirely in agricultural fields. The Level III Intensive Survey was performed for the Project in areas that could have the potential for disturbance of historic properties as defined by the National Historic Preservation Act and its implementing regulations. All work was conducted according to 36 CFR Parts 60 and 61. Currently, the Project is not a federal undertaking subject to Section 106 review of the National Historic Preservation Act.

Regardless, all tasks associated with the survey of the Project APE were conducted by qualified personnel, as defined by federal standards, and in compliance with Section 106 of the National Historic Preservation Act. All work complied with South Dakota Guidelines for Compliance with the National Historic Preservation Act and SDCL § 1-19A-11.1; [RF3.1] the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation, and 36 CFR Part 66, “Recovery of Scientific, Prehistoric, Historic, and Archaeological Data.” All cultural resources staff that participated in the work meet or exceed the Secretary of Interior’s Professional Qualifications Standards.

The Level III Intensive Survey included a pedestrian survey and photo-documentation. The pedestrian survey consisted of visual inspections of the ground surface across the Project APE in parallel 15-meter interval transects. The photo-documentation portion consisted of photographs of the general conditions within the Project APE, including potential pre-contact features or historical architectural resources and cultural material, along with existing topographic landforms, erosion and disturbances. Boundaries of the Project APE included the NorthWestern transmission line to the east (on Lot 2 of the Project Site), 135th Street bounded the APE to the south, the edge of the agricultural field bounded the APE to the west and the northern boundary extends approximately 502 meters north of 135th Street. The Project APE was composed of a recently planted soybean field with evidence of past corn cultivation. Disturbance of the APE included a gravel equipment laydown area for the ongoing upgrade project at AGS located across 135th street to the south. This laydown area required the topsoil to be machine excavated and moved to the southeastern corner of the Project APE, creating a spoil pile. The ground surface visibility of the entire Project APE was between 90-100%. Transects were walked to observe cultural material on the ground surface. The portion of the Project APE with the equipment lay down area was not surveyed due to presence of gravel on the ground surface, its past ground surface disturbance and

⁶ NorthWestern may conduct additional field surveys to account for potential temporary impacts following review and consultation of the Project with SD SHPO. As applicable, this Application will be updated accordingly.

standing water present at the time of the survey. All materials identified during this survey were recorded by an EOS Arrow GPS unit connected to the Fieldmaps application. The field conditions were excellent, and the weather was partly cloudy with temperatures around 80 degrees Fahrenheit.

One multicomponent site, 39BN0174, was identified. Please refer to Appendix J – Cultural Resources Report for the location of the identified site. All cultural materials were identified on the ground surface during pedestrian survey. This site is an artifact scatter which has been affected by agricultural and topsoil moving activities. Materials identified on the ground surface include; 5 aluminum or tin can fragments, 1 pull tab, 3 aqua bottle glass fragments, 7 colorless bottle glass fragments, 7 brown bottle glass including 1 embossed fragment, 1 brick fragment, 1 ceramic irrigation pipe fragment, 2 solarized amethyst bottle glass fragments, 1 cement fragment, 1 coal slag and 1 chert possible biface fragment.

A second artifact scatter was identified near site 39BN0174.. The material identified included ceramic irrigation pipe fragments, bottle glass and an unidentified fragment. This concentration of artifacts was determined to be out of context due to the soil moving activity at the lay down area and not included in Site 39BN0174.

While the Level III Intensive Survey for the Project APE identified one multicomponent site, 39BN0174, this site lacks research potential based on the information gathered during the pedestrian survey. The site lacks permanent above ground features and the materials identified could not be placed temporally. Modern trash, including soda cans and plastic, was also identified but not recorded. Additionally, based on the review of historic maps and aerial photography, the Project APE did not have structures on the property in the past, apart from the railroad which has since been removed. Disturbances to the site and Project APE include agricultural practices and machine excavation of the topsoil for the creation of an equipment lay down area for activity at the adjacent AGS facility. The Project therefore proposes that the site 39BN0174 is not eligible for listing on the NRHP based on Criteria A through D, it does not fall under any of the National Register Consideration Criteria, nor according to the South Dakota State Plan for Archaeology.

Due to the agricultural and machine excavating disturbance, including a lack of diagnostic artifacts, it is recommended that site 39BN0174 is not eligible for listing on the NRHP and the Project poses No Adverse Effect.

23.6.3 Mitigation

In the event of an unexpected discovery during Project construction, work will cease and a cultural resource specialist and the SD SHPO will be consulted to determine further action. If human remains are discovered during Project construction, work will cease and the appropriate authorities will be contacted in accordance with state law.

The Project will manage any risk of contaminants during construction through BMPs. The Project does not expect any impacts on landmarks or cultural resources of historic, religious, archaeological, scenic, natural or other cultural significance resulting from the accidental release of contaminants.

23.7 MITIGATION OF COMMUNITY IMPACTS

Mitigation of community impacts as a result of the Project are discussed throughout this Section 23 and in the applicable supporting Appendices. In general, NorthWestern will endeavor to

minimize impacts to the surrounding community, and the Project will comply with all local, state and federal requirements.

24 EMPLOYMENT ESTIMATES (ARSD CH. 20:10:22:24)

During construction, labor/employment is anticipated to peak in the 150 to 250 person range, depending on the EPC contractor's execution plan, sequencing and schedule. Primary construction activities are anticipated to occur in 2028 and 2029, and the on-site EPC contractor labor force will vary depending on phase of construction. Job classifications involved with the development and construction of the Project include managers, engineers, construction staff (mechanical, electrical, civil, piping, etc.), quality control, project controls, safety and startup and commissioning. Given that the Project is in the development phase and the EPC contractor has not been selected/contracted with, annual employment estimates are difficult to quantify. As an indication, NorthWestern anticipates that the EPC contractor engineering and labor could account for approximately 20% to 30% of the total estimated Project cost.

When the Project is operational, NorthWestern anticipates that the Project will have between 6 and 10 operations and maintenance staff including a plant manager, supervisors, technicians and maintenance staff. Annual expenditures for the Project operations and maintenance staff could be in the range of \$750,000 to \$1,500,000 depending on final staff count and personnel. Permanent Project operations and maintenance staff quantities and payroll are not anticipated to vary significantly for the first 10 years of operations. Depending on Project operations/dispatch, a temporary increase in workforce could be observed to account for CT maintenance activities/overhauls.

NorthWestern will encourage the EPC contractor to utilize local South Dakota labor to the extent practicable, recognizing that the craft labor market is currently constrained and that unique skillsets are required for the construction, commissioning, startup, testing and operations of the Project. Based on the EPC contractor not yet having been selected and the dynamic construction market, it is difficult to quantify/estimate how much of the construction labor force could remain in Brown County following construction completion. Project operations and maintenance staff are anticipated to reside in Brown County and/or surrounding communities.

Construction labor as well as the increase in permanent labor force associated with operating the Project are generally viewed to be economically beneficial to the City of Aberdeen and Brown County, with increased lodging, entertainment, restaurant and retail revenues.

See Appendix G – Socioeconomic Impact Study for additional detail related to Project employment estimates.

25 FUTURE ADDITIONS AND MODIFICATIONS (ARSD CH. 20:10:22:25)

NorthWestern is not requesting approval for future modification or expansion of the Project in this Application. However, the Project Site has been arranged to allow for the future additional CT units in addition to the initially planned 3 units. For the avoidance of doubt, the BOP systems and equipment for the Project have not been sized to accommodate the addition of any future units.

26 NATURE OF PROPOSED ENERGY CONVERSION FACILITY (ARSD CH. 20:10:22:26)

26.1 DESIGN LIFE AND EXPECTED CAPACITY FACTOR

The Project will include 3 CTs operating in a simple-cycle configuration with a total Project capacity of approximately 131 MW (gross). Operating net generation capability from the Project is expected to vary from approximately 125 MW in the winter to 90 MW in the summer. The Project is planned to be placed into service in the second quarter of 2030 and is designed for 30 years of operation with additional years anticipated based upon historical operations of CT projects. The Project is expected to operate with an annual capacity factor ranging from 15% to 25% as a function of market conditions and demand on NorthWestern's system.

26.2 GENERAL DESCRIPTION

The CTs will utilize natural gas as the primary fuel source and will employ low-NO_x combustor technology. No alternate fuel source is included. The CTs are industrial gas turbines which have characteristics of both traditional aeroderivative and frame-type CTs. These industrial turbines are designed for power plant operation, will provide flexible operating characteristics including fast start and ramping and as is typical for CTs, the output will vary slightly depending on ambient conditions. An inlet air evaporative cooling system will be installed for each unit to cool the inlet air on hot days to increase hot day Project capability.

Major components of the CTs include the inlet air system (with inlet air filter, evaporative cooler and silencing), the compressor section, the dry low-NO_x combustion system, a power turbine section, the exhaust gas transition duct and an air-cooled generator. Ambient air enters through the inlet air system where it is compressed to a higher pressure in the compressor section. The compressed air then enters the combustion section, where natural gas is admitted and combusted using lean air-fuel mixtures and dry low-NO_x combustion technologies to minimize NO_x formation in the combustion process. The resulting hot exhaust gas passes through the power turbine, where a portion of the power is used to drive the air compressor section and the remaining power drives the generator. The generator produces electricity at a voltage of 13.8 kV.

The CTs exhaust to emission control modules that house a multi-pollutant catalyst, reducing NO_x, CO and VOC emissions from the Project prior to the exhaust gases exiting the exhaust stacks.

The CTs are planned to be located indoors in a generation building with the Project Site also including an electrical building, administration/control building, water treatment building and a warehouse. A switchyard and substation will also be located on the Project Site. See Appendix A.1 – General Arrangement Drawing for an overview diagram of the Project configuration. Additionally, see annotated maps in Exhibit 02.1 – Facilities Map and Exhibit 02.2 Facilities Map (5-mile).

Other major equipment for the Project includes three (3) GSU transformers, auxiliary transformers and four (4) high-voltage circuit breakers. Each CT is connected to a dedicated GSU transformer that steps up the generator voltage from 13.8 kV to 115 kV. Each GSU transformer connects to the switchyard through a high voltage circuit breaker that allows for isolation of each GSU transformer/generating unit from the transmission system. Energy from all three (3) GSU transformers then passes through a common high voltage circuit breaker that allows for isolation

of the entire Project from the transmission system, if needed due to a fault on the transmission system or for maintenance activities. The auxiliary transformers step down voltage from the GSU transformers to supply power to the plant auxiliary systems. The GSU transformers and auxiliary transformers will also be able to receive and step down power to the plant auxiliary systems from the grid when the CT units are not operating. Remaining BOP equipment includes air compressors, fire protection systems, water treatment systems, fin fan coolers for lubricating oil and auxiliary system cooling and the overall plant control system.

26.3 FACILITY INPUTS

Materials flowing into the Project include natural gas, water, ULSD fuel and aqueous ammonia. Limited water treatment chemicals used in the demineralized water treatment system will also be consumed. Municipal water is anticipated to be supplied from the City of Aberdeen for potable water and for plant service water supply. The interface to the City's water supply will be on the south side of 135th Street just to the south of the Project Site.

Maximum, full load natural gas consumption rates are expected to vary from 22 to 30 million standard cubic feet per day accounting for variations in performance over the ambient temperature range at the Project Site. Due to expected variations in Project dispatch and loads, average daily natural gas consumption can be expected to be lower than these values. Aqueous ammonia at an ammonia concentration of 19% will be utilized in the multi-pollutant emissions control catalyst for NO_x emissions control. When the Project is operating, full load consumption of 19% aqueous ammonia can be expected to range from 200 to 250 lb/hr as a function of Project operating conditions.

Typical city water consumption can be expected to be less than 10 gallons per minute ("gpm") when the inlet evaporative cooler systems are out of service (typically below 59°F ambient temperature) with a peak water consumption expected to be approximately 90 gpm on a summer day with the evaporative coolers in service. Some water treatment chemicals will be consumed on-site for generation of demineralized water from the city water supply for use in the evaporative coolers and/or for maintenance and water washing of the CT compressors.

ULSD fuel will only be used during emergency or test conditions to power the Project emergency diesel generator or the diesel-powered fire pump. ULSD fuel will be delivered to the site via tanker trucks and will be stored in fuel tanks mounted on the emergency equipment. Annual fuel consumption is expected to be minimal as this equipment is expected to only be run for testing periodically throughout the year.

26.4 FACILITY OUTPUTS

The Project will provide electricity at 115 kV to the grid based on system needs and market conditions.

Materials that will be flowing out of the Project include plant sanitary waste, stormwater discharge and process water discharge. Sanitary waste and plant wastewater discharge are planned to be delivered to the City of Aberdeen WRF. Plant wastewater will primarily consist of wastewater resulting from the periodic regeneration and backwash of the Project demineralized water treatment equipment, expected to be approximately 40 gpm during regeneration, as well as blowdown from the evaporative coolers, expected to be a maximum of approximately 25 gpm

(only during operation of the evaporative coolers). It is anticipated that an oil/water separator will be utilized to remove oil from the plant wastewater prior to discharging to the municipal sewer system. Sanitary waste will be the result of the quantity of staff on-site but is expected to average less than 3 gpm.

For collection of site stormwater, the Project design includes a stormwater pond to collect stormwater and snowmelt prior to discharging in accordance with a Stormwater Discharge Permit that will be obtained prior to construction of the pond.

Applicable wastewater permits will be obtained from the SD DANR prior to the start of construction of the Project.

26.5 IMPACT MITIGATION

The Project will comply with all local, state and federal requirements. Additionally, the procedures proposed to avoid or ameliorate the possibility that the discharges, emissions or solid wastes would negatively impact surrounding communities are outlined throughout this Application.

27 PRODUCTS TO BE PRODUCED (ARSD CH. 20:10:22:27)

The Project will produce electricity which will be exported to the electric grid at 115 kV to serve NorthWestern's customers in South Dakota and the regional SPP system. The Project will also be capable of providing ancillary services in support of frequency response, energy imbalance and system control as well as spinning and non-spinning reserves. The electrical output and dispatch/utilization of the Project will vary as a function of electric system needs, market conditions, ambient conditions and other factors. See Section 32 of the Application for estimated full-load facility performance. Based on current resource planning forecasts, the Project is expected to operate with a capacity factor in the range of 15% to 25%, depending on market conditions and system needs.

As noted elsewhere in this Application, byproducts produced by the Project include natural gas combustion byproducts, nominal amounts of process wastewater, minimal solid waste and sanitary waste commensurate with the associated staffing levels. Byproducts produced by the Project will be handled, treated and/or disposed of in accordance with applicable local, state and federal requirements.

28 FUEL TYPE USED (ARSD CH. 20:10:22:28)

28.1 PRIMARY FUEL

The CTs will utilize pipeline natural gas as the primary fuel for electricity production. There is no backup/alternate fuel for the CTs. Project ancillary/BOP equipment and systems will use nominal amounts of natural gas or ULSD fuel.

28.2 NATURAL GAS HEATING VALUE

The Project will utilize natural gas from the NBPL system, requiring between 22,000 Dkt/day and 30,000 Dkt/day of natural gas at full Project output depending on ambient conditions. Natural gas will be delivered to the Project Site via a new natural gas lateral from the NBPL main line. Natural gas delivery pressure to the Project Site is anticipated at between nominally 650 and 750 psig once the gas pressure is reduced from the NBPL main line operating pressure (reduction anticipated to occur at the Project Site).

Based on the NBPL tariff (Reference 7), the minimum natural gas heating value is 967 Btu/scf on a higher heating value (“HHV”) basis. However, natural gas heating values in the 1,100 Btu/scf range on an HHV basis are expected for average/typical conditions.

28.3 APPROXIMATE NATURAL GAS QUALITY

The approximate average natural gas quality utilized for the basis of design of the Project is summarized below. The Project will be capable of operating over a wide range of fuel gas qualities based upon historical variations and the NBPL tariff information as properties are expected to vary daily and over the life of the Project.

Table 28-1: Average NBPL Gas Quality

Fuel Gas Constituent	Vol %
Methane (CH ₄)	83.5
Ethane (C ₂ H ₆)	12.63
Propane (C ₃ H ₈)	0.64
I-Butane (C ₄ H ₁₀)	0.01
N-Butane (C ₄ H ₁₀)	0.02
I-Pentane (C ₅ H ₁₂)	0.0007
N-Pentane (C ₅ H ₁₂)	0.0004
Hexane (C ₆ H ₁₄)	0.0001
Carbon Dioxide (CO ₂)	0.94
Hydrogen (H ₂)	0.21
Helium (He)	0.02
Nitrogen (N ₂)	2.03
Total Sulfur	<0.5 gr/100 scf
Average LHV (Btu/scf)	982.7
Average HHV (Btu/scf)	1089.8
Specific Gravity	0.6381

29 PROPOSED PRIMARY AND SECONDARY FUEL SOURCES AND TRANSPORTATION (ARSD CH. 20:10:22:29)

The primary fuel for the Project, natural gas, will be supplied from the nearby NBPL system. See Exhibit 03.2 – Surrounding Features Map (5-mile) and Exhibit 04 – NBPL Map for proximity of the NBPL main line to the Project Site and for NBPL main line characteristics, respectively. No secondary fuel is proposed for the Project for electricity generation. NorthWestern will utilize firm transportation rights on the NBPL system for the Project, minimizing the risk of natural gas curtailments during periods of high gas demand. A new natural gas lateral will connect the NBPL system to the Project Site, as further discussed in Application Sections 37 and 38.

30 ALTERNATE ENERGY SOURCES (ARSD CH. 20:10:22:30)

NorthWestern, through its ongoing resource planning efforts, and as documented in its South Dakota 2024 IRP (Reference 1), evaluates several different energy resource types, including thermal generation, renewable generation, nuclear generation and battery resources. Additionally, NorthWestern, in August 2025, issued both an all-source Capacity Resource RFP and a Gas Generation Technology Equipment and Services RFP for nominally 50 to 100 MW of capacity for its South Dakota utility. The responses to these RFPs allowed NorthWestern to perform an assessment and evaluation of current solar, battery energy storage, hybrid solar and storage and varying natural gas-fueled generation technologies. As a result of these IRP and RFP efforts, CT technology with characteristics as proposed for the Project was evaluated as the lowest cost option to provide dispatchable generation, increased grid reliability and timeliness of service to NorthWestern's electric customers/the ability to meet the in-service dates required by the SPP ERAS Procedures (Reference 2).

31 SOLID OR RADIOACTIVE WASTE (ARSD CH. 20:10:22:31)

The EPC contractor will be responsible, under the direction of NorthWestern, for disposal of solid waste generated during construction of the Project. Waste generated during both construction and operation of the Project will be disposed of in accordance with state law and local ordinances at a properly permitted and licensed waste disposal facility. The natural gas simple cycle CT power cycle process inherently does not produce solid waste, nor does the emission control equipment. Any operational waste that is produced by the Project will be managed by NorthWestern and will be disposed of using a third-party waste collection and disposal company.

The closest municipal solid waste landfill that can be utilized for solid waste disposal is the Brown County Landfill located to the northwest, within approximately 5 miles of the Project Site.

No radioactive waste will be produced from the construction or operation of the Project.

32 ESTIMATE OF EXPECTED EFFICIENCY (ARSD CH. 20:10:22:32)

The efficiency of the Project will primarily be a function of the energy conversion facility CT equipment provided by Solar Turbines. Secondly, the efficiency will be a function of the plant operating load, ambient conditions, fuel properties and operating auxiliary loads.

Project efficiency is a measure of the electrical power generation delivered from the Project as compared to the chemical energy in the natural gas fuel consumed in the CTs. The table below provides a summary of the expected net Project efficiency for average annual, full load plant conditions on both an HHV basis and lower heating value (“LHV”) basis assuming an auxiliary power consumption rate equivalent to 1.5% of the CT gross output. As can be noted, the net plant efficiency is anticipated to be nominally 39% LHV and 35% HHV.

Table 32-1. Estimated Plant Performance Summary

Parameter	LHV Basis		HHV Basis	
	Value	Units	Value	Units
CT Fuel (3 Units)	955	mmBtu/hr, LHV	1,057	mmBtu/hr, HHV
Total Plant Fuel	955	mmBtu/hr, LHV	1,057	mmBtu/hr, HHV
Plant Gross Output	110,751	kW	110,751	kW
Auxiliary Loads	1.50%		1.50%	
Auxiliary Loads	1,661	kW	1,661	kW
Plant Net Output	109,090	kW	109,090	kW
Plant Net Heat Rate	8,754	Btu/kWh, LHV	9,689	Btu/kWh, HHV
Plant Net Efficiency	39.0	% LHV	35.2	% HHV

33 DECOMMISSIONING (ARSD CH. 20:10:22:33)

The design life of the Project will be 30 years, but additional equipment life can be expected and certain aspects of the Project, such as the electrical substation and electrical and gas interconnections, could have value after 30 years. Reuse of existing infrastructure will therefore be considered, as appropriate, in the future. If reuse of Project infrastructure is not economically feasible or beneficial, then the Project will be decommissioned. Decommissioning activities will be based on local, state and federal requirements at the time of decommissioning but are expected to include removal of equipment and buildings to below grade with concrete foundations and structures also removed to a level below grade. Fuel pipelines are expected to be capped below grade and underground electrical commodities terminated below grade and left in place. A site environmental assessment will be completed to determine if any further actions are required according to applicable regulations, codes and standards in place at the time of decommissioning. All materials will be repurposed, recycled, destroyed or disposed of in accordance with applicable local, state and federal regulations at the time of decommissioning and the site will be returned to its original condition, to the extent practicable. The Project is expected to impact up to approximately 20 acres of the Project Site (main power block and BAAH substation areas). The cost of decommissioning the Project is estimated to be in the range of \$4 million to \$6 million in 2026 dollars, excluding any scrap value.

34 TRANSMISSION FACILITY LAYOUT AND CONSTRUCTION (ARSD CH. 20:10:22:34)

The Project does not have any electric Transmission Facilities as defined by SDCL § 49-41B-2.1. The Project 115 kV BAAH substation, located on the Project Site, will tie into the existing AGS Siebrecht substation via a short (less than 0.25 mile), double-circuit 115 kV overhead line across 135th Street SW. See Exhibit 02.1 – Facilities Map. NorthWestern’s design and construction of the electric facilities required to interconnect the Project to the electric grid will comply with all local, state and federal requirements, including the requirements of the Brown County Highway Department to facilitate the crossing of 135th Street SW with the double-circuit 115 kV line.

35 INFORMATION CONCERNING TRANSMISSION FACILITIES (ARSD CH. 20:10:22:35)

The Project does not have any electric Transmission Facilities as defined by SDCL § 49-41B-2.1. Please refer to Section 34 of the Application for additional information regarding the Project electric facilities to facilitate Project grid interconnection.

36 ADDITIONAL INFORMATION IN APPLICATION (ARSD CH. 20:10:22:36)

The Project is a direct result of NorthWestern’s integrated resource planning for South Dakota, which has continuously identified the need for additional flexible and efficient capacity resources, and the electric grid reliability needs established by SPP’s ERAS Procedures. NorthWestern has leveraged existing infrastructure, competitive solicitations and rigorous due diligence to advance Project development in the best interest of its South Dakota customers, communities we serve and Project Site neighbors. The Project improves system reliability, is consistent with the existing developments in the area and positions NorthWestern and its customers for the future. In addition, the following Sections discuss additional information NorthWestern believes is necessary for the local review committee to assess the effects of the Project pursuant SDCL § 49-41B-7 and additional information to meet the burden of proof as set forth in SDCL § 49-41B-22.

36.1 INFORMATION FOR LOCAL REVIEW COMMITTEE’S ASSESSMENT (SDCL § 49-41B-7)

NorthWestern has reviewed, studied and characterized the twelve (12) areas identified in SDCL § 49-41B-7 in addition to other Project attributes in order to provide the Commission and the Local Review Committee the information required to fully assess the Project, as evidenced by the information contained in Section 23 of the Application, Appendix G – Socioeconomic Impact Study and elsewhere in the Application. NorthWestern has engaged with the public via an open house, provided updates to the Local Review Committee and engaged applicable local, state and federal agencies in order to understand concerns and potential impacts as well as the means to mitigate such. Project effects are anticipated to be mostly temporary during the construction phase, with the surrounding community anticipated to be able to absorb and, from an economic perspective benefit from, the Project effects. NorthWestern proposes to site the Project adjacent to an existing power generation facility, near other industrial operations and at a location that utilizes existing electric and natural gas infrastructure to the greatest extent possible. The Project

simple cycle configuration inherently consumes minimal water, and produces minimal sanitary, process and solid wastes, all of which result in minimal impacts on the surrounding communities.

36.2 APPLICANT'S BURDEN OF PROOF (SDCL § 49-41B-22)

In addition to the information contained elsewhere in this Application, the following sections further demonstrate NorthWestern's burden of proof as required by SDCL § 49-41B-22.

36.2.1 Project will Comply with Applicable Laws and Rules

NorthWestern has applied, is in the process of applying or will apply for all local, state and federal permits applicable to the Project. As part of the Project, NorthWestern contractually requires all equipment suppliers, contractors and any of their subcontractors to comply with all laws and rules applicable to a utility-grade power generation project. NorthWestern has and will maintain compliance with SDCL § 49-41B, ARSD Ch. 20:10:22 and all other South Dakota requirements.

36.2.2 Environmental Compliance and Socioeconomic Benefits to Surrounding Communities

NorthWestern has completed various reviews and due diligence activities to facilitate compliance with applicable local, state and federal environmental requirements including desktop and field surveys associated with air quality, wetlands and waterways, threatened and endangered species and cultural resources.

- Air Quality – The Project air emissions are anticipated to be below the NAAQS, be a Prevention of Significant Deterioration minor source and comply with all applicable air quality standards. NorthWestern anticipates applying for a construction permit application with the SD DANR at approximately the same time as the submission of this Application to the Commission. Please see Application Section 21 for additional information.
- Wetlands and Waterways – NorthWestern has sited the Project to avoid impacts to wetlands and waterways as much as possible. NorthWestern has consulted with the USACE regarding nearby wetlands. Please see Application Sections 15 and 17 and Appendix H – Wetland Delineation Report for additional information.
- Threatened and Endangered Species – NorthWestern will follow all recommendations from the USFWS and SD GFP regarding sensitive habitat. Based on desktop and field threatened and endangered species reviews, Project effects on threatened and endangered species are expected to be minimal. Please see Section 16 and Appendix I – Habitat Assessment for additional information.
- Cultural Resources – NorthWestern has completed desktop reviews, field surveys and consulted with the SD SHPO. Given that the Project Site and surrounding environs are largely disturbed, Project effects to cultural resources are expected to be minimal. Please see Application Section 23.6 and Appendix J – Cultural Resources Report for additional information.

As shown in Section 23 of the Application and Appendix G – Socioeconomic Impact Study, the development, construction and operation of the Project will benefit the surrounding community with increased economic activity and increased tax base. NorthWestern commissioned the Dakota

Institute to complete the socioeconomic impact study to facilitate the Local Review Committee's assessment of the Project.

36.2.3 Safety and Reliability are Primary Project Goals

The Project has been developed and will be designed and operated first and foremost with the safety of the public and operating staff in mind. The Project will not substantially impair the health, safety or welfare of the surrounding inhabitants and communities as the Project will (i) meet or exceed all local, state and federal permit requirements, (ii) incorporate NorthWestern's robust safety philosophy and programs into the design and operations and (iii) improve NorthWestern's fleet and overall electric grid reliability. NorthWestern has completed rigorous desktop analyses and field surveys to mitigate impacts on the surrounding inhabitants and environs insofar as possible. While the Project is located adjacent and near multiple industrial facilities, NorthWestern has made it a priority to reduce byproducts associated with industrial activity, such as increased noise levels. Regarding noise, NorthWestern has incorporated various noise mitigation measures into the Project including equipment silencing and building paneling with noise dampening materials. NorthWestern has also taken steps to reduce impacts associated with other important topics including visual, environmental and traffic effects.

36.2.4 Project is Consistent with Surrounding Environs

Project development is consistent with surrounding land uses and will support the local economy. The Project is proposed to be sited adjacent to and north of an existing NorthWestern power generation facility. The DemKota Ranch beef plant and the Aberdeen WRF are in close proximity to the Project Site. Additionally, the Project Site is in close proximity to numerous sites with South Dakota construction aggregate licenses as shown in Exhibit 15 – Construction Aggregate Map (5-mile).

37 STATEMENT REQUIRED DESCRIBING GAS OR LIQUID TRANSMISSION LINE STANDARDS OF CONSTRUCTION (ARSD CH. 20:10:22:37)

The NBPL tap, including NBPL and NorthWestern regulation, metering and filtering, and the Project natural gas lateral will comply with applicable codes and standards including B31.8 – Gas Transmission and Distribution Piping and B31.1 – Power Piping. NBPL tap site facilities and the natural gas lateral will be sited, designed and installed by NorthWestern Gas Transmission & Storage ("GTS") in coordination with NBPL. The natural gas facilities associated with the Project will be sited, designed and installed in accordance with all local, state and federal requirements. Additionally, the design, construction, operation and materials of the facilities will be in accordance with Department of Transportation/Pipeline and Hazardous Materials Safety Administration ("PHMSA") Title 49 CFR part 192 and 195.

38 GAS OR LIQUID TRANSMISSION LINE DESCRIPTION (ARSD CH. 20:10:22:38)

The Project will utilize pipeline natural gas for the CTs and miscellaneous BOP equipment (dew point heater, building heating, etc.), with the following section characterizing natural gas line attributes. Small amounts of ULSD fuel will be utilized by the Project emergency diesel generator and emergency diesel fire pump. There are no ULSD transmission lines. As such, ULSD fuel is

only discussed in Section 38.5. Additional NBPL tap site and natural gas lateral route information is included in Section 38.6.

38.1 FLOW DIAGRAM

NorthWestern anticipates between 22,000 Dkt/day and 30,000 Dkt/day of natural gas required for full load operation of the Project, dependent upon ambient conditions. NorthWestern is planning to expand the existing NBPL Warner tap site or interconnect to the NBPL main line via a new tap site near the Project Site. Regardless, the tap site will include both NBPL and NorthWestern metering, regulation and filtering equipment prior to the natural gas lateral to the Project Site. Additional pressure regulation is anticipated at the Project Site. See Appendix A.5 – Natural Gas Facilities Diagram.

38.2 IMPACTS TO NBPL FACILITIES

NorthWestern will utilize firm natural gas transportation on the existing NBPL system, with any potential changes to NBPL transmission facilities associated with the Project accounted for in associated agreements. Regardless, potential changes in flow on the NBPL system as a result of the Project are difficult to characterize, especially given the natural gas demand of the Project and the significantly larger NBPL system size.

38.3 NATURAL GAS LATERAL SPECIFICATIONS

The Project natural gas lateral is anticipated to be between 3 and 6 miles in length, depending on the final location of the NBPL tap site and lateral route. The lateral is anticipated to be an 8-inch or 10-inch X52 pipeline with a certified maximum allowable operating pressure (“MAOP”) of 1,440 psig, matching the MAOP of the NBPL main line. The natural gas lateral will be buried underground at a minimum of 42 inches below the surface to be below the frost line and will include all required metering, cathodic protection and appurtenances required for a natural gas Transmission Facility in South Dakota. The natural gas lateral will be sited, designed and installed in accordance with all local, state and federal requirements as well as based on NorthWestern’s GTS standards.

38.4 NEW COMPRESSOR STATIONS

No new compressor stations are anticipated as a result of the Project.

38.5 STORAGE FACILITIES

No natural gas storage facilities are planned for the Project.

For the ULSD fuel utilized for the Project emergency diesel generator and emergency fire pump, fuel will be stored in “belly” tanks integrated with the equipment. Integrated equipment storage quantities are anticipated to be no more than approximately 2,000 gallons for the diesel generator and 500 gallons for the fire pump.

38.6 ADDITIONAL NBPL TAP SITE AND LATERAL INFORMATION

The NBPL tap site layout and natural gas lateral route for the natural gas Transmission Facilities for the Project are in development, with multiple feasible sites and routes available. The NBPL

tap site location will be coordinated with NBPL and NorthWestern GTS, and NorthWestern GTS will site, design and install the natural gas lateral to the Project Site in accordance with their standard practices and with local, state and federal requirements, including coordination with the Brown County Commission. Regardless of the location of the NBPL tap site and the lateral route, NorthWestern will work to minimize impacts to nearby inhabitants, minimize impacts to sensitive environmental features and utilize existing infrastructure and rights-of-way as much as possible. Once operational, the tap site and the natural gas lateral will be owned and maintained by NorthWestern GTS, with operations and maintenance of the facilities consistent with the operation and maintenance of the other NorthWestern GTS facilities in South Dakota.

38.6.1 Natural Gas Tap Site and Lateral Route

NorthWestern's existing AGS is fed natural gas from the Warner tap (NBPL Stations #21 and #41), approximately 4.5 miles southeast of the AGS site/Project Site, via an approximate 6-mile, 6-inch natural gas line. The existing Warner tap location and AGS lateral are shown in Exhibit 02.2 – Facilities Map (5-mile). NorthWestern is evaluating various natural gas lateral routes to serve the Project, including “looping” the existing AGS lateral route. Other options consider routes that are shorter in length based on utilizing an alternate tap location along the NBPL main line. If a new tap is pursued, the tap location is anticipated to be located between the existing Warner tap site and 387th Ave (SR 10) on the NBPL line.

In conjunction with desktop and field studies, NorthWestern will work with local landowners and the Brown County Commission to minimize potential impacts associated with the natural gas lateral to the extent possible.

Depending on the final natural gas lateral route, horizontal directional drilling (“HDD”) may be required for the crossing of one or both of Foot Creek and Moccasin Creek, both of which are associated with mapped floodplains. However, based on initial desktop review, no levees have been identified in the area and floodplain permitting is not expected to present significant challenges.

38.6.2 Reliability and Safety

The NBPL tap site and natural gas lateral will be designed and installed in accordance with all local, state and federal requirements as well as the NorthWestern GTS Safety and Operator Qualification Program for pipeline construction, operations and maintenance throughout South Dakota.

38.6.3 Right-of-Way

The right-of-way for the natural gas lateral will be cleared of vegetation, as required. Right-of-way width is expected to be 100 feet for temporary construction activities and 40 feet for permanent operations. NorthWestern will secure additional workspace and means of ingress/egress along the route to facilitate any required HDD as well as the land required for the NBPL tap site. NorthWestern is in the process of determining the NBPL tap site location and the natural gas lateral route and has begun initial land rights acquisition activities.

38.6.4 Clearing Activities

NorthWestern anticipates minimal clearing activities at the NBPL tap site, with the tap site being located in the existing NBPL mainline right-of-way. Some vegetation clearing may be required for the natural gas lateral route. However, given the heavy agriculture activity in the area, clearing activities are not expected to be significant.

39 TESTIMONY AND EXHIBITS (ARSD CH. 20:10:22:39)

NorthWestern is not submitting testimony with this Application.

This Application is supported by Exhibits, Appendices and References as noted in the Table of Contents and throughout the Application. The Exhibits include GIS maps and figures. The Appendices include drawings, reports and other documentation that facilitate a full understanding of the Project in accordance with ARSD Ch. 20:10:22. The References include publicly available information pertinent to NorthWestern and this Application.

40 APPLICATION FOR PARTY STATUS (ARSD CH. 20:10:22:40)

NorthWestern understands that additional information related to ARSD Ch. 20:10:22:40 is not required for the Application.

41 SHAPEFILES TO BE PROVIDED FOR TRANSMISSION LINE ROUTE (ARSD CH. 20:10:22:41)

The Project electrical generation tie line is a 115 kV line and is less than 2,640 feet in length and, therefore, is not considered an electric Transmission Energy Conversion Facility based upon SDCL § 49-41B-2.1. Therefore, shapefiles are not provided for the Project electrical generation tie line.

NorthWestern is evaluating multiple routes for the Project natural gas lateral from the NBPL mainline to the Project Site. One of the route options follows the existing gas lateral that feeds AGS, and GIS shapefiles for this route are included in Appendix O – Transmission Line Shapefiles. GIS shapefiles for the final natural gas lateral route will be provided once the route is determined.