

Post Construction Report

Astoria Station Project

Docket EL17-042

Submitted to:

Public Utilities Commission of the
State of South Dakota

Submitted by:

Otter Tail Power Company



April 1, 2021

**OTTER TAIL POWER COMPANY
ASTORIA STATION
EL17-042**

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Acronyms and Abbreviations

345 kV gen-tie line	345 Kilovolt Generation-Tie Line
Commission	South Dakota Public Utilities Commission
Construction SWPPP	Construction Storm Water Pollution Prevention Plan
MISO	Midcontinent Independent System Operator
Otter Tail	Otter Tail Power Company
SD DOT	South Dakota Department of Transportation
SD PUC	South Dakota Public Utilities Commission
Stipulation Agreement	Order Granting Joint Motion for Approval of Settlement Stipulation; Order Granting Permit to Construct Energy Conversion Facility; Notice of Entry for Otter Tail Power Company's Astoria Station Dated August 3, 2018.
USACE	United States Army Corps of Engineers

Post Construction Report

Introduction

On August 3, 2018, the South Dakota Public Utilities Commission (SD PUC or Commission) entered an Order Granting Joint Motion for Approval of Settlement Stipulation; Order Granting Permit to Construct Energy Conversion Facility; Notice of Entry for Otter Tail Power Company's (Otter Tail) Astoria Station (Stipulation Agreement). The Stipulation Agreement approved by the SD PUC included several conditions that require information to be submitted by Otter Tail following construction of the project. This report addresses those conditions.

Note that although Astoria Station is still working through final combustion tuning and has not yet achieved commercial operation, the Project has achieved several key milestones, including:

- January 25, 2021: Combustion turbine first fire;
- February 2, 2021: Initial synchronization to grid;
- February 13, 2021: Astoria Station achieved full load for over five hours and reached accreditation for the MISO planning year.

Condition 12: Road Protection

Condition 12 provides:

“Applicant shall comply with the following conditions regarding road protection:

- a. Applicant shall acquire all necessary permits authorizing the crossing of federal, state, county, and township roads.
- b. Applicant shall coordinate road closures with federal, state, and local governments and emergency responders.
- c. Applicant shall implement a regular program of road maintenance and repair through the active construction period to keep paved and gravel roads in an acceptable condition for residents and the public.
- d. After construction Applicant shall repair and restore deteriorated roads resulting from construction traffic, or compensate governmental entities for their repair and restoration of deteriorated roads, such that the roads are returned to their preconstruction condition.
- e. Privately owned areas used as temporary roads during construction will be restored to their preconstruction condition, except as otherwise requested or agreed to by the landowner.
- f. Should Applicant need to widen any existing roadways during construction of the Project, the Applicant shall return the roadways back to original width after completion of the Project, unless agreed upon otherwise with the federal, state, county, or township entities, or the landowner.
- g. Applicant shall use appropriate preventative measures to prevent damage to paved roads and to remove excess soil or mud from such roadways.

Before commencing construction, the Applicant shall furnish an indemnity bond in the amount of \$250,000 to comply with the requirements of SDCL 49-41B-38. Such bond shall be issued in favor of, and for the benefit of, Scandinavia Township and Deuel County. The bond shall remain in effect until released by the Commission, which release shall not be unreasonably denied following completion of the construction and repair period. Applicant shall give notice of the existence and amount of this bond to Scandinavia Township and Deuel County.”

The shipment of the combustion turbine and generator from the rail yard in Arlington, SD to the Astoria site occurred in March and April of 2020. All necessary permits were acquired and the haul plan was developed with the South Dakota Highway Patrol.

Otter Tail performed regular maintenance and repair as needed throughout the active construction period including, dust control, rut repair, and grading along the parts of Township Roads utilized by construction traffic. Otter Tail consulted with both the Township and County to ensure the roadways are being left in acceptable condition by the Project. No privately owned areas outside of Otter Tail’s control were used as roads. The roadway along 482nd Avenue was widened in accordance with a Memorandum of Understanding between Scandinavia Township and Otter Tail.

Otter Tail furnished an indemnity bond in the amount of \$250,000 to comply with the requirements of SDCL 49-41B-38. As part of executing road haul agreements, Otter Tail provided notice of the existence and the amount to Scandinavia Township and Deuel County. The original bond was provided to the Commission on February 14, 2019. Otter Tail is not aware of any outstanding issues relating to repair or restoration of deteriorated roads; however, following commercial operation Otter Tail will submit documentation and request release of the indemnity bond from the SD PUC.

Condition 17: Construction & Operation SWPPP

Condition 17 provides:

“Applicant shall provide the Stormwater Pollution Prevention Plan (SWPPP), for both Project construction and operation, to the Commission when Applicant has a final design for the Project. The SWPPP will outline the water and soil conservation practices that will be used during construction to prevent or minimize erosion and sedimentation. The SWPPP will be completed before submittal of an application for a National Pollutant Discharge Elimination System (NPDES) general permit for construction activities. All contractors will be given a copy of the SWPPP and requirements will be reviewed with them prior to the start of construction.”

On April 1, 2019, Otter Tail provided the Commission with a Construction SWPPP for the Project and will maintain this Construction SWPPP until final site stabilization occurs. On

February 1, 2021, Otter Tail made an informational filing to the Commission that Astoria Station is not required to obtain Industrial Stormwater permit coverage, and therefore would not maintain a SWPPP for operations.

Condition 18: Restoration of Disturbed Areas

Condition 18 provides:

“Applicant will repair and restore areas disturbed by construction or maintenance of the Project. Except as otherwise agreed to by the landowner, restoration will 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 practical. In order to facilitate compliance with this Condition, the Applicant shall: a. Strip topsoil to the actual depth of the topsoil, or as otherwise agreed to by the landowner in writing, in all areas disturbed by the Project; b. Store topsoil separate from subsoil in order to prevent mixing of the soil types; c. Remove all excess soils generated during project construction from the site, unless the landowner requests, and/or agrees, otherwise; d. When revegetating non-cultivated grasslands not owned by the Applicant, the Applicant shall use a seed mix that is recommended by the Natural Resource 7 Conservation Service (NRCS), or other land management agency, and agreed upon by the landowner in writing; and e. Work closely with impacted landowners or land management agencies, such as the NRCS, to determine a plan to control noxious weeds.”

Except for the 345 kV generation-tie structures, project construction took place entirely on Otter Tail-owned property. A minor amount of repair and re-seeding was needed around one of the generation-tie structures. The landowner approval and the South Dakota DOT Type seed mix that was used for this work is included as Appendix A.

Condition 21: 345 kV Gen-Tie Line Location

Condition 21 provides:

“In order to mitigate interference with agricultural operations during and after construction, Applicant shall locate all structures in the 345 kV generation-tie electric transmission line right of way, to the extent feasible and prudent, to minimize adverse impacts and interferences with agricultural operations, shelterbelts and other land uses or activities. Applicant shall take appropriate precautions to protect livestock and crops during construction. Applicant shall repair all fences and gates removed or damaged during construction or maintenance unless otherwise agreed with the landowner or designee. Applicant

shall be responsible for the repair of private roads damaged when moving equipment or when obtaining access to the right-of-way.”

The 345 kV generation-tie line (gen-tie line) was constructed on an easement right of way from an adjacent landowner. In consultation with the landowner, the gen-tie line structures were located so as not to interfere with the landowner’s property use. Once the construction of the gen-tie line was complete, Otter Tail reclaimed the disturbed areas to the satisfaction of the landowner, as noted in Otter Tail’s response to Condition 18. As-built drawings of the gen-tie line are included in Appendix B.

Condition 22: Repair or Replace Damaged Property

Condition 22 provides:

“Applicant shall repair or replace all property removed or damaged during all phases of construction, including but not limited to, all fences, gates and utility, water supply, irrigation or drainage systems. Applicant shall fully compensate the owners for damages or losses that cannot be fully remedied by repair or replacement, such as lost productivity and crop and livestock losses. All repair, replacement and/or compensation described above shall be in accordance with the terms and conditions of written agreements between Applicant and affected landowners where such agreements exist.”

Most construction activity for the Astoria Station Project took place entirely on Otter Tail-owned property, except for the 345 kV gen-tie as discussed previously in Otter Tail’s response to Condition 18 and Condition 21. Otter Tail did repair and replace fencing along the right-of-way of 482nd Avenue in accordance with the Memorandum of Understanding between Scandinavia Township and Otter Tail. The fencing was removed and replaced as part of Scandinavia Township’s upgrade of 482nd Avenue, and there were no other written agreements between Otter Tail and affected landowners related to the 482nd Avenue improvements.

Condition 24: Material Deviations

Condition 24 provides:

“Applicant shall notify the Commission prior to making any material deviations to the Project and afford the Commission the opportunity to review and approve such modifications. For purposes of this paragraph, the term "material deviations" shall mean any action or activity outside the reasonable parameters of this Permit (such as, for example, if the Project is constructed differently than described in the Application).”

There were no material deviations to the Project. Otter Tail provided the Commission with the pre-construction design as part of an April 1, 2019 submittal. The difference

between the April 1, 2019 pre-construction filing and information previously submitted to the Commission was the final diameter of the natural gas pipeline necessary to connect to the Northern Border Pipeline. In the site permit application, the pipeline was identified as “approximately 10-inch diameter”, yet the final design and construction was 8-inch diameter. Otter Tail did not interpret this to be a material deviation.

Otter Tail is providing as-built drawings and figures of the facility as part of the update to Condition 28 (below).

Condition 28: Project Completion Information

Condition 28 provides:

“Within 90 days of the Project's completion, Applicant shall submit a report to the Commission that provides the following information:

- a. As-built location of the energy conversion facility and related Project components;
- b. The status of remedial activities for road damage, landowner property damage, crop damage, environmental damage, or any other damage resulted from construction activities; and
- c. A summary of known landowner complaints and Applicant's plan for resolving those complaints.”

Regarding the as-built location drawings, attached in Appendix C is an aerial view of the power block and a General Arrangement drawing for the overall site. Attached in Appendix D are the as-built specification of the onsite well and water pipeline, and attached in Appendix E are the as-built specifications for the Natural Gas service line.

Otter Tail is not aware of any outstanding construction damage that would require remedial activities.

Regarding a summary of known landowner complaints, during the commissioning process Otter Tail received three complaints regarding noise from facility operation. None of these were from adjoining landowners to the site. Two complaints involved operations over February 27-28, 2021, and a third complaint was received on March 20, 2021. Otter Tail followed-up with all three complainants within 24 hours, describing the schedule of commissioning and the tuning process to minimize sound after project completion.

As of the date of this filing, no additional complaints have been received. Upon completion of tuning, Clean Air Engineering will conduct the noise assessment required by Conditions 29 and 30 of the Stipulation Agreement.

Conditions 29 & 30: Noise Assessment

Condition 29 provides:

“The noise levels exclusively associated with the Project shall not exceed the following standards at the nearest occupied, existing residences (determined on the date the permit is issued) not owned by the Applicant: a. a day-night average (Ldn) sound level of 55 dB(A), which includes a nighttime penalty of 10 decibels; and b. a maximum (Lmax) C-weighted sound level of 65 dB(C) applicable at all times.”

Condition 30 provides:

“A post-construction operational noise assessment shall be completed based on measurements by an independent third-party noise consultant, approved by Staff, to show compliance with the noise standards. The noise assessment shall be performed in accordance with American National Standards Institute (ANSI) B133.8 – Gas Turbine Installation Sound Emissions.”

On October 9, 2020, Otter Tail made an informational filing of Commission Staff’s approval of Clean Air Engineering as the independent third-party consultant to conduct the Astoria Station Project noise assessment, along with the proposed test plan and qualifications. Upon completion of tuning, the post-construction noise assessment will be completed and filed with the Commission.

Condition 31: Emergency Response Plan

Condition 31 provides:

“Applicant shall seek local input to properly and effectively coordinate an emergency response plan consistent with local resources and response abilities. Upon completion of construction, the initial draft of the Project’s emergency response plan shall be filed with the Commission for public availability.”

Attached in Appendix F is the Emergency Responder Presentation provided to the local area governments and first responders on October 31, 2020, along with the attendance sheet. Also attached in Appendix G is the initial draft of the Project’s Emergency Response Action Plan.

Condition 33: 482nd Road Upgrade

Condition 33 provides:

“The Applicant shall work with Scandinavia Township to improve approximately ½ mile of 482nd Avenue from SD Highway 28 north to the Astoria Station plant entrances for construction and plant access.”

In the fall of 2018, Otter Tail began assisting Scandinavia Township in its effort to improve 482nd Avenue. Pursuant to a memorandum of understanding, the Township was responsible for permitting the improvements for this roadway. In turn, Otter Tail was responsible for funding the improvements. Because the road improvements resulted in impacts to wetlands, Scandinavia Township obtained a water quality certification from the South Dakota Department of Environment & Natural Resources and a Clean Water Act Section 404 permit from the United States Army Corps of Engineers (USACE). The USACE permit was used to improve a half mile stretch of 482nd Avenue north from SD Highway 28 to the project site entrance. Road improvement work began in May 2019. By mid-summer of 2020, the road improvements were completed and the USACE was notified that the permit obligations were satisfied. Otter Tail plans on laying down a final surface of gravel on 482nd avenue after the 2021 spring thaw.