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April 23, 2026

Emily Johnson
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

Via E-Filing

Re: *Iron Range – St. Louis County – Arrowhead 345 kV Transmission Line Project*
Comments of Minnesota Power and American Transmission Company LLC
Docket Nos. E015/CN-25-111 and E015/TL-25-112

Dear Ms. Johnson:

Minnesota Power and American Transmission Company LLC by and through its corporate manager ATC Management Inc. (“ATC”) (collectively, the “Applicants”) submit these comments for consideration by the Minnesota Public Utilities Commission (“Commission”) – Energy Infrastructure Permitting (“PUC-EIP”) staff as it considers the scope of an environmental assessment addendum (“EA Addendum”) for the Iron Range – St. Louis County – Arrowhead 345 kilovolt (“kV”) Transmission Line Project (“Project” or “ISA Project”). The Applicants submit these comments to provide information on: (1) vegetation management of existing lines in the area in and around Hermantown; (2) the development of an environmental report to satisfy the requirements under Minn. R. 7849.1500; (3) cumulative impacts for purposes of environmental review and how the Commission has previously considered cumulative impacts; (4) noise related to existing transmission equipment in the area of the St. Louis County 345 kV/230 kV Substation, Minnesota Power’s 230 kV/115 kV Arrowhead Substation, and ATC’s 345 kV/230 kV Arrowhead Substation; (5) the facilities construction agreement (“FCA”) for the data center proposed by Google to be located in Hermantown (the “Google data center”); and (6) a proposed schedule for the remainder of the procedural schedule that maintains the timelines contemplated under relevant statute and rule.

Vegetation Management

During the public meetings, a couple of individuals spoke about concerns related to vegetation management on existing transmission lines in the area around Hermantown that are owned by Minnesota Power or ATC.¹ The Applicants take criticism of vegetation

¹ See Hermantown 6:00 p.m. Tr. at 67:3-68:24 (Apr. 7, 2026) (Richtman); Hermantown 6:00 p.m. Tr. at 69:12-70:6 (Apr. 7, 2026) (Ralph).

management of their facilities located by easement on property seriously and appreciate the willingness of these individuals to speak at the public meetings.

As to the comments related to clearing of transmission line rights-of-way by helicopter, the Applicants believe that these comments relate to activities by ATC to maintain portions of the Arrowhead – Weston 345 kV transmission line in 2025. ATC uses aerial saw helicopter trimming as one of several vegetation management methods to help keep transmission lines safe and reliable. This approach is used to maintain clearance between the electric transmission line and trees along the edges of utility corridors, particularly in rural, wooded, or hard-to-access areas and aligns with industry standards for managing vegetation in such areas. By trimming trees back to the utility corridor edge, aerial saw work helps prevent vegetation from growing into power lines, which can cause outages or safety concerns. The method allows work to be completed efficiently while minimizing ground disturbance, reducing the need for large crews and equipment, and limiting environmental impacts.

As to comments related to the application of herbicides in the proximity of and perhaps along an existing garden, Minnesota Power believes that this occurred along its 22 Line or 131 Line. While the majority of Minnesota Power’s vegetation management is performed by a contractor on behalf of Minnesota Power, the Company understands that the actions of those working on behalf of Minnesota Power will reflect on Minnesota Power and takes these complaints seriously. Minnesota Power is in the process of reviewing its records for work previously performed in this area. Minnesota Power will review the transcript from the Hermantown public meeting with vegetation management teams and impress upon them that they must follow directions given in advance of herbicide application by landowners on whose property these, and any other Minnesota Power, easements are located.

As the PUC-EIP staff develops the draft route permit for the Project, the existing standard route permit conditions combined with the details included in the Draft Vegetation Management Plan (Appendix M to the Combined Certificate of Need and Route Permit Application (“Application”)) appropriately address these types of concerns.² Specifically, Section 5.3.11 provides that prior to applying any pesticides, the Permittees “shall contact the landowner at least 14 days prior to pesticide application on their property.”³ Further continuing that the Permittees “may not apply any pesticide if the landowner requests that there be no application of pesticides within the landowner’s property.”⁴ The condition also requires that the Permittees keep records on pesticide communication and application for the Project and must provide them at the request of Commission staff. The Draft Vegetation Management Plan, at Section 9, sets forth that “[l]andowners within the Project

² See SAMPLE ROUTE PERMIT (Jan. 27, 2026) (eDocket No. [20261-227463-01](#)); COMBINED CERTIFICATE OF NEED AND ROUTE PERMIT APPLICATION FOR THE IRON RANGE – ST. LOUIS COUNTY – ARROWHEAD 345 KV TRANSMISSION LINE PROJECT at Appendix M (Jan. 5, 2026) (eDocket No. [20261-226460-06](#)) (“Application”).

³ See SAMPLE ROUTE PERMIT at 7-8 (Jan. 27, 2026) (eDocket No. [20261-227463-01](#)).

⁴ *Id.*

right-of-way, operators of organic farms on adjacent parcels, and bee apiary operators within three miles, if known, will be notified 14 days in advance if herbicides will be used on the right-of-way.”⁵ Landowners will also have the ability to specify that no herbicides are to be used on their property.⁶

Finally, Section 8 of the draft route permit provides a standard complaint procedure in the event ATC or Minnesota Power do not comply with these provisions of the route permit, if issued.⁷ The Commission’s practice has set forth that any permittee must report, on a monthly basis during construction, to the Commission on “a person expressing dissatisfaction or concern regarding site or route preparation, cleanup or restoration, or other permit conditions.”⁸ The complaint report must also include personal-identifying information of the person making the complaint along with any resolution undertaken by the permittee(s), so that the Commission can follow up with the person making the complaint and ensure that the issues have been adequately addressed or resolved.⁹

Environmental Report Development

The Applicants respectfully acknowledge that Minn. R. 7849.1900, Subp. 1 already contemplates that, where an environmental assessment or environmental impact statement is prepared in a joint certificate of need and route permit proceeding, a separate environmental report under Minn. R. 7849.1200 is not required so long as the environmental assessment or environmental impact statement includes the information required under Minn. R. 7849.1500.¹⁰ In the ISA Project proceedings, the environmental assessment filed with the Application as Appendix E¹¹ along with Chapter 4 of the Application addresses the requirements for an environmental report specified in Minn. R. 7849.1500,¹² thereby satisfying the substantive environmental review requirements applicable to the certificate of need without the need for a stand-alone environmental report. However, should the Commission conclude that additional information is

⁵ COMBINED CERTIFICATE OF NEED AND ROUTE PERMIT APPLICATION FOR THE IRON RANGE – ST. LOUIS COUNTY – ARROWHEAD 345 kV TRANSMISSION LINE PROJECT at Appendix M (Jan. 5, 2026) (eDocket No. [20261-226460-06](#)).

⁶ See SAMPLE ROUTE PERMIT at 8 (Jan. 27, 2026) (eDocket No. [20261-227463-01](#)).

⁷ *Id.* at Attch.1 (the Sample Permit does not include the attachments, but indicates that the Complaint Procedures will be attached).

⁸ See *In the Matter of the Application of Minnesota Power and Great River Energy for a Route Permit for the Northland Reliability Project 345 kV Transmission Line*, Docket No. E015,ET2/TL-22-415, ORDER GRANTING CERTIFICATE OF NEED AND ISSUING ROUTE PERMIT at Route Permit at Attach. 1 (Feb. 28, 2026) (eDocket No. [20252-215918-01](#)).

⁹ *Id.*

¹⁰ Minn. R. 7849.1900, Subp. 1.

¹¹ For purposes of these comments, references to the environmental assessment prepared by the Applicants also includes the supplemental information filed on February 3, 2026. SUPPLEMENTAL FILING (Feb. 3, 2026) (eDocket No. [20262-227804-01](#)).

¹² See COMBINED CERTIFICATE OF NEED AND ROUTE PERMIT APPLICATION FOR THE IRON RANGE – ST. LOUIS COUNTY – ARROWHEAD 345 kV TRANSMISSION LINE PROJECT at Ch. 4, Appendix E (Jan. 5, 2026) (eDocket Nos. [20261-226460-03](#) (Combined Application and Appendices A – D), [20261-226460-04](#) (Appendix E Part 1), [20261-226460-05](#) (Appendix E Part 2)).

necessary to satisfy the environmental report content requirements under Minn. R. 7849.1500, such material should be addressed in an EA Addendum and not in a separate stand-alone environmental report.¹³ Requiring a separate environmental report in addition to an environmental assessment that already incorporates the Minn. R. 7849.1500 content would be duplicative, would not materially enhance the Commission's record, and would impose unnecessary procedural burden on the parties and the PUC-EIP staff.

To avoid confusion and to align the rules with the current statutory framework, the Applicants suggest that the Commission consider granting a variance to Minn. R. 7849.1200 to allow existing cross-references to Minn. R. 7850 to, instead, refer to Minn. Stat. 216I, which now governs route permit environmental review for high-voltage transmission lines. The Commission applies a three-part test when deciding whether to grant a variance from its rules. To obtain a variance, an applicant must show that: (1) enforcement of the rule would impose an excessive burden upon the applicant or others affected by the rule; (2) granting the variance would not adversely affect the public interest; and (3) granting the variance would not conflict with the standards imposed by law.¹⁴ The requested variance complies with this three-part test.

This targeted variance will clarify that, in a joint certificate of need and route permit proceeding conducted under Minn. R. 7849.1900, the environmental review for the route permit is provided under Minn. Stat. 216I, while the environmental assessment (and any addendum) prepared in that process also serves as the environmental report for certificate of need purposes so long as it includes the Minn. R. 7849.1500 content. It would be reasonable for the Commission to vary the rule to direct the PUC-EIP staff to evaluate the environmental assessment and Application in light of the environmental report content requirements and prepare an EA Addendum only to the extent that any content requirements under Minn. R. 7849.1500 are not already satisfied. Enforcement of Minn. R. 7849.1200 would require additional and duplicative work that has already been completed in the environmental assessment filed with the Application. Varying the rule would not negatively affect the public interest as scoping meetings and a scoping comment period were already implemented and the Commission is still able to consider requiring an EA Addendum. Finally, such a variance would not conflict with any applicable statute or other law, as Minn. Stat. § 216I.07, subd. 3 specifically acknowledges that an EA Addendum is appropriate to evaluate "potential impacts" that were not otherwise addressed in the environmental assessment included with the Application.¹⁵

This approach preserves the integrated, non-duplicative environmental review model already reflected in Minn. R. 7849.1900, Subp. 1, provides a single, cohesive environmental record for Commission decision-making and public evaluation, and

¹³ See Minn. Stat. § 216I.07, subd. 3(b) ("If after the public meeting the commission identifies other sites or routes or potential impacts for review, the commission *must prepare an addendum to the environmental assessment*") (emphasis added).

¹⁴ Minn. R. 7829.3200, Subp. 1.

¹⁵ Minn. Stat. § 216I.07, subd. 3(b).

maintains administrative efficiency while fully meeting the substantive environmental review requirements for the ISA Project.

Cumulative Impacts

The Applicants respectfully submit these comments to assist the Commission and the PUC-EIP staff in defining the scope of any “cumulative impacts” analysis to be included in any EA Addendum, if necessary, in connection with the Project. Specifically, the Applicants request that any scoping order make clear that the cumulative impacts analysis to be included in any EA Addendum is appropriately defined and bounded in accordance with the applicable statute, Commission rules, and prior Commission orders. Commenters have expressed a desire to expand the scope of cumulative impacts analysis beyond what the Commission’s governing statutes and precedent contemplate for transmission routing and siting proceedings.

For proceedings subject to Minnesota Chapter 216I review, Minn. Stat. § 216I.05, subd. 11(a) specifies that Commission site and route permit determinations must be guided by the goals to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and — where applicable — consider impacts to environmental justice communities as defined in Minn. Stat. § 116.065.¹⁶ The environmental justice and cumulative impacts provisions cross-referenced in Minn. Stat. § 216I.05, subd. 11(a) are expressly keyed to the definition of “cumulative impacts” as set forth in Minn. Stat. § 116.065, which is the Minnesota Pollution Control Agency’s (“MPCA”) air permitting cumulative impacts statute and applies to specific facility types in designated environmental justice areas within the Twin Cities metro area, Duluth, and Rochester.¹⁷ Route permit proceedings under Chapter 216E or 216I are not air permit proceedings, and MPCA’s separate regulatory cumulative impacts regime does not govern or expand the scope of a potential EA Addendum in a Commission routing proceeding.¹⁸

Minn. R. 4410.0200, Subp. 11a, defines “cumulative potential effects” as “the effect on the environment that results from the incremental effects of a project in addition to other

¹⁶ Minn. Stat. § 216I.05, subd. 11(a).

¹⁷ See Minn. Stat. § 116.065, subd. 1(c).

¹⁸ See Minn. Stat. § 216I.07, subd. 3(a)-(b) (“The environmental assessment is the only state environmental review document that must be prepared for the proposed project. . . . When making the commission’s final decision, the commission must consider the environmental assessment, the environmental assessment addendum, if any, and the entirety of the record related to human and environmental impacts”); Minn. Stat. § 216I.18, subd. 1 (“To assure the paramount and controlling effect of the provisions herein over other state agencies, regional, county, and local governments, and special purpose government districts, the issuance of a site permit or route permit and subsequent purchase and use of the site or route locations for large energy infrastructure facility purposes is the sole site or route approval required to be obtained by the permittee”); *c.f.* Minn. Stat. § 116.065, subd. 1(h), subs. 2–5 (showing that the MPCA cumulative-impacts regime is its own permitting program: “permit” under the Ch. 116 means a major-source or state air permit, and the MPCA commissioner decides whether a cumulative-impacts analysis is required and whether to issue or deny the permit.)

projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid.”¹⁹ This definition, applicable to the Minnesota Environmental Review Program generally, establishes that cumulative effects analysis is project-specific and geographically focused — it does not contemplate a regionwide or sector-wide analysis of unrelated projects or broader societal stressors, nor does it encompass speculative future development.

In prior transmission line routing proceedings, the Commission — acting through its review of the Department of Commerce, Energy Environmental Review and Analysis (“EERA”)²⁰ scoping recommendations — has confirmed that cumulative impacts analysis in the environmental review context focuses on project-specific impacts and proximate, reasonably foreseeable future actions, not on broad sector-wide or regional analyses that extend beyond the geographic study area of the project. This approach has been consistently applied across major transmission projects including the CapX2020 projects and the Great Northern Transmission Line Project. For the Great Northern Transmission Line Project, for example, the cumulative impacts analysis was structured in two parts: (1) identification of other reasonably foreseeable projects in the environmentally relevant area; and (2) evaluation of the incremental effects of the proposed project on shared environmental resources within that defined geographic scope.²¹

In routing proceedings related to other transmission facilities, the Commission’s scoping framework similarly directed EERA (the PUC-EIP staff’s predecessor agency responsible for environmental review for routing proceedings) to evaluate cumulative environmental impacts with respect to other identified transmission and infrastructure projects that could reasonably be expected to affect the same environmental resources within the project corridor and adjacent study areas.²² This approach did not extend the cumulative impacts analysis to unrelated regional development, upstream or downstream resource use, or emissions from third-party facilities outside the project study area.²³ Further, in the Mankato to Mississippi River Transmission Line Project, the Commission concurred with EERA’s scoping recommendations and did not expand the scope of cumulative impacts analysis beyond that which was linked to the project’s direct study area and reasonably

¹⁹ Minn. R. 4410.0200, Subp. 11a.

²⁰ As of July 1, 2025, EERA staff moved to the PUC-EIP unit organized within the Commission. See generally Minn. Stat. § 216I.

²¹ See *In the Matter of the HVTL Route Permit Application by Minnesota Power for the Great Northern Transmission Line Project and Associated Facilities in Roseau, Lake of the Woods, Beltrami, Koochiching and Itasca Counties, Minnesota*, Docket No. E015/TL-14-21, FINAL ENVIRONMENTAL IMPACT STATEMENT at Volume 1 – Part 14 of 14 (Oct. 30, 2015) (eDocket No. [201510-115232-04](#)).

²² See e.g. *In the Matter of the Application for a Route Permit for the Alexandria to Big Oaks 345-kV Transmission Project in Central Minnesota*, Docket No. E002,ET2,ET10,E015,E017/TL-23-159, ENVIRONMENTAL ASSESSMENT at 144-150 (May 29, 2024) (eDocket No. [20245-207199-02](#)).

²³ *Id.* at 146 (“Cumulative effects are discussed here for projects that are foreseeable in the next five years in the project area. . . EERA staff analyzed what projects are ‘reasonably likely to occur’”) (citing Minn. R. 4410.0200, Subp. 11a.)

foreseeable future projects.²⁴ This is consistent with the Commission’s established practice of maintaining a manageable and legally supported scope for environmental review.

As the Minnesota Court of Appeals confirmed in *Minnesota Center for Environmental Advocacy v. Minnesota Public Utilities Commission*,²⁵ the Commission is not required to evaluate greenhouse gas (“GHG”) emissions from activities that are legally and physically distinct from the project under review²⁶ — such as the refining of petroleum products transported via a pipeline, or, by analogy, the emissions of commercial and industrial customers who may ultimately receive power transmitted through a new line. The Court affirmed summary judgment in favor of the Commission, holding that state regulations governing pipeline and utility facility review did not require the Commission to account for emissions from upstream or downstream third-party operations.²⁷ This principle is equally applicable here: the environmental review for a transmission line route permit should assess the direct, indirect, and reasonably proximate cumulative impacts of the line’s construction and operation — not the emissions profiles of future customers or speculative end-use facilities.

The environmental assessment included at Appendix E for the ISA Project is structured to implement these statutory boundaries. It defines resource-specific regions of influence (“ROIs”) limited to the Project right-of-way, project area, and Itasca and St. Louis Counties, and applies those ROIs consistently across topics such as human settlement, land use, public health and safety, land-based economies, and the natural environment.²⁸ The environmental assessment expressly defines “cumulative potential effects” as “the effect on the environment that results from the incremental effects of a project in addition to other projects in the environmentally relevant area that might reasonably be expected to affect the same environmental resources, including future projects actually planned or for which a basis of expectation has been laid, regardless of what person undertakes the other projects or what jurisdictions have authority over the projects.”²⁹

The environmental assessment explains that PUC-EIP documents have previously defined the “environmentally relevant area” to mean locations where the potential effects of the Project coincide with the potential effects of other projects to impact the elements

²⁴ See *In the Matter of the Application of Xcel Energy for a Certificate of Need and Route Permit for the Mankato to Mississippi River 345 kV Transmission Line Project in Southeast Minnesota*, ORDER ADDING ALTERNATIVE TO SCOPE OF ENVIRONMENTAL STATEMENT (Oct. 9, 2024) (eDocket No. [202410-210832-02](#)); DOC-EERA SCOPING SUMMARY AND RECOMMENDATIONS (Sept. 19, 2024) (eDockets No. [20249-210328-01](#)).

²⁵ No. A10-812, 2010 WL 5071389 (Minn. Ct. App. Dec. 14, 2010).

²⁶ *Id.* at *6.

²⁷ *Id.*

²⁸ See COMBINED CERTIFICATE OF NEED AND ROUTE PERMIT APPLICATION FOR THE IRON RANGE – ST. LOUIS COUNTY – ARROWHEAD 345 kV TRANSMISSION LINE PROJECT at Appendix E (Jan. 5, 2026) (eDocket Nos. [20261-226460-04](#) (Appendix E Part 1), [20261-226460-05](#) (Appendix E Part 2)).

²⁹ *Id.* at 121.

studied in the environmental assessment, generally aligning with the ROIs established for each resource.³⁰ Applying this framework, the environmental assessment identifies specific reasonably foreseeable projects in the environmentally relevant area — including Great River Energy and Minnesota Power’s Northland Reliability Project, Minnesota Power’s HVDC Modernization Project, and a potential data center in Hermantown documented in regional media — and evaluates cumulative potential effects on land-based economies, the natural environment, and human health and safety. The environmental assessment, therefore, already provides a cumulative impacts analysis tailored to this Project and to the specific reasonably foreseeable projects in the environmentally relevant area, using ROIs and analytical methods aligned with Commission practice. And, as such, any EA Addendum, if developed, need not evaluate cumulative impacts again.

Noise from Existing Transmission Infrastructure

During the Hermantown public meeting, landowners commented about noise from the existing substations in the area.³¹ The existing substations referred to in these comments are the Minnesota Power 230 kV/115 kV Arrowhead Substation and the ATC 345 kV/230 kV Arrowhead Substation. As part of the HVDC Modernization Project (Docket No. E015/CN-22-607 and E015/TL-22-611), Minnesota Power completed a baseline noise assessment of the existing substation equipment in the area and an analysis of future sources proposed as part of the HVDC Modernization Project.³² This study was required under Section 6.3 of the HVDC Modernization Project route permit. A copy of this assessment is included as **Attachment A**. As demonstrated by this assessment, the noise levels at the border of Minnesota Power’s property, under current and future conditions, remain below the state-established noise standards in Minn. R. 7030.0010 to 7030.0080, which require that L₁₀ levels not exceed 55 dBA and L₅₀ levels not exceed 50 dBA.

The environmental assessment included with the Application discusses noise and Project impacts.³³ The draft route permit for the ISA Project includes a requirement that the Permittees comply with these noise standards and limit construction and maintenance activities to daytime working hours to the extent practicable.³⁴ Further, while the Company has declined to perform a “sound study” specifically for Mr. Bradford, it did previously provide him with a copy of the sound study attached to these comments as **Attachment A** that includes the noise-emitting transmission-related sources located near Mr.

³⁰ *Id.*

³¹ See Hermantown 6:00 p.m. Private Comments Tr. at 3:4-22 (Apr. 7, 2026) (Thorstensen); Hermantown 6:00 p.m. Tr. at 49:3-50:2 (Apr. 7, 2026) (Bradford).

³² See *In the Matter of the Application of Minnesota Power for a Route Permit for the HVDC Modernization Project*, Docket No. E015/TL-22-611, HVDC Converter Station Noise Study (Jan. 29, 2025) (eDocket No. [20251-214580-01](#)).

³³ See COMBINED CERTIFICATE OF NEED AND ROUTE PERMIT APPLICATION FOR THE IRON RANGE – ST. LOUIS COUNTY – ARROWHEAD 345 kV TRANSMISSION LINE PROJECT at Appendix E (Jan. 5, 2026) (eDocket Nos. [20261-226460-04](#) (Appendix E Part 1), [20261-226460-05](#) (Appendix E Part 2)).

³⁴ See Sample Route Permit at 5 (Jan. 27, 2026) (eDocket No. [20261-227463-01](#)).

Bradford's property. Minnesota Power has again reached out to Mr. Bradford to confirm he received this documentation.

Customer-Specific Transmission Infrastructure in Hermantown

Based on comments from the public meetings and filed in the docket, there remains some confusion about the scope of the ISA Project versus transmission infrastructure that would be necessary for the proposed Google data center. The Applicants provide these comments to ensure that the record is clear on the scope and purpose of existing, planned, and proposed transmission infrastructure in the Hermantown area as it relates to the ISA Project, and to ensure that the PUC-EIP staff and the Commission have the information necessary to determine what, if any, further information is necessary related to these topics for the EA Addendum.

During the Hermantown public information and scoping meeting, the following comment was made: "when I look at this [Facilities Construction Agreement for the proposed Google data center ("Google FCA")] I see these transmission line projects scattered all throughout this agreement."³⁵ Further, WOLF filed comments on April 8, 2026, stating, "Both the St. Louis County and/or Arrowhead substation ([Minnesota Power] and/or ATC) are to be connected to the data center" and criticizing the comments filed by the Applicants on April 2, 2026, in which the Applicants explained two transmission projects under construction in the Hermantown area (the Duluth Loop Reliability Project and the HVDC Modernization Project), as "diversionary, because the Electric Service Agreement for the Google data center does not utilize either of these substations."³⁶

The substations in question – the Minnesota Power Arrowhead 230 kV/115 kV Substation, the ATC Arrowhead 345 kV/230 kV Substation, and the Minnesota Power St. Louis County 345/230 kV Substation – are all existing³⁷ substations that predate both the ISA Project Application and the proposed Google data center.

- The Minnesota Power Arrowhead 230 kV/115 kV Substation has been an important regional hub for many decades, going back at least to the mid-1970s when the HVDC System was first commissioned to deliver energy from North Dakota to Minnesota Power's customers. In the intervening decades, Minnesota Power's backbone 230 kV transmission network in northeastern Minnesota has developed around this important 230 kV hub.
- The ATC Arrowhead 345 kV/230 kV Substation was permitted in the early 2000s and subsequently constructed to establish a new 345 kV transmission connection between northeastern Minnesota and central Wisconsin to support regional reliability.

³⁵ Hermantown 6:00 p.m. Tr. at 57:2-4 (Apr. 7, 2026) (Mason).

³⁶ Comment by WOLF (Apr. 8, 2026) (eDocket No. [20264-230188-01](#)).

³⁷ Note that the St. Louis County 345 kV/230 kV Substation was approved for construction as part of the HVDC Modernization Project (Docket Nos. E015/CN-22-607 and E015/TL-22-611) in late 2024 and is currently under construction.

- The Minnesota Power St. Louis County 345 kV/230 kV Substation is the newest of the three substations, having been approved by the Commission in 2024 and currently under construction to support the modernization of Minnesota Power's HVDC converter station with modern technology and a configuration designed to meet Minnesota Power's customers' energy needs and support grid reliability for another five decades or more.

To say that the further utilization of these existing transmission facilities for the Duluth Loop Reliability Project, the HVDC Modernization Project, and the ISA Project as presented to the Commission and, separately, for the transmission facilities identified in the Google FCA that would be necessary to interconnect the proposed data center, somehow establishes a causal relationship between the projects, or between the projects and the proposed data center, is incorrect. Each transmission project was developed (and the Duluth Loop Reliability Project and the HVDC Modernization Project have been permitted and are under construction) to meet an independently justifiable need, each project will be constructed³⁸ separately on a timeline to meet that need, and – importantly – the specific costs of each project will be borne by the beneficiaries of each project, as described further below.

In 2023, the Commission approved the construction of the Duluth Loop Reliability Project,³⁹ which is owned and operated by Minnesota Power and is currently under construction. The Duluth Loop Reliability Project is needed to replace the system support once provided by coal-fired baseload generators located along Minnesota's North Shore by addressing severe voltage stability concerns, relieving transmission line overloads, and enhancing the reliability of Duluth-area transmission sources.⁴⁰ The Duluth Loop Reliability Project includes the following new or modified transmission facilities:

- About 14 miles of new 115 kV transmission line between the Ridgeview, Haines Road, and Hilltop Substations;
- A new approximately one-mile extension connecting an existing 230 kV transmission line to **Minnesota Power's 230 kV/115 kV Arrowhead Substation**;
- Upgrades to Minnesota Power's existing Ridgeview, Hilltop, Haines Road, and **Arrowhead substations**; and
- Reconfiguration, rebuild, and upgrade to existing transmission lines and communications infrastructure in the area.⁴¹

³⁸ While the Duluth Loop Reliability Project and the HVDC Modernization Project have already been approved by the Commission, the construction of the ISA Project and any of the transmission facilities identified in the FCA for the proposed Google data center are contingent upon Minnesota Power receiving the necessary regulatory approvals. Google must separately receive necessary regulatory approvals for its proposed data center.

³⁹ See *In the Matter of the Application of Minnesota Power for a Certificate of Need and Route Permit for the Duluth Loop Reliability Project in St. Louis County, Minnesota*, Docket Nos. E015/CN-21-140 and E015/TL-21-141, ORDER GRANTING CERTIFICATE OF NEED AND ISSUING ROUTE PERMIT (Apr. 23, 2023) (eDocket No. [20234-194456-02](#)).

⁴⁰ *Id.* at 1.

⁴¹ *Id.* ROUTE PERMIT at 1 (emphasis added).

As a local reliability project, the cost of the Duluth Loop Reliability Project will be borne by Minnesota Power's customers.

In 2024, the Commission approved the construction of the HVDC Modernization Project.⁴² The HVDC Modernization Project is needed to modernize the aging converter stations, increase the capacity of the HVDC transmission line to allow additional regional transfers, and increase the reliability and flexibility of the HVDC transmission line. The HVDC Modernization Project, which is owned and operated by Minnesota Power and is currently under construction, includes the following in Hermantown:

- A new HVDC converter station;
- A new 345 kV/230 kV St. Louis County Substation;
- A new less than one-mile 345 kV transmission line to connect the new converter station to the **new St. Louis County Substation**; and
- A new less than one-mile double-circuit 230 kV transmission line to connect the new **St. Louis County Substation to the existing Minnesota Power 230 kV/115 kV Arrowhead Substation** (which is where the existing HVDC converter station interconnects to the AC local network transmission system).⁴³

As an asset renewal and grid reliability project primarily meeting the needs of Minnesota Power's customers, the cost of the HVDC Modernization Project will be borne by Minnesota Power's customers.

Both of these transmission projects in the Hermantown area were previously considered and approved by the Commission and include new or modified transmission infrastructure justified, permitted, and now under construction separate and distinct from the proposed ISA Project transmission infrastructure.

Separately, Minnesota Power filed the Google FCA with the Federal Energy Regulatory Commission ("FERC") on March 26, 2026. The Google FCA identifies the following facilities as necessary to interconnect the Google data center proposed to be located in Hermantown:

- Blackberry 115 kV Substation control and protection redundancy modifications;
- Modifications to the 230 kV bus to allow for a new 230 kV interconnection **at the existing Minnesota Power Arrowhead 230 kV/115 kV Substation**;
- Modifications to the 230 kV bus to allow for a new 230 kV interconnection **at the existing⁴⁴ Minnesota Power St. Louis County Substation**;

⁴² See *in the Matter of the Application of Minnesota Power for a Certificate of Need and Transmission Line for the HVDC Modernization Project in Hermantown, Saint Louis County*, Docket Nos. E015/CN-22-607 and E-015/TL-22-611, ORDER GRANTING CERTIFICATE OF NEED AND ISSUING ROUTE PERMIT (Oct. 25, 2024) (eDocket No. [202410-211332-01](#)).

⁴³ *Id.* at 2 (emphasis added).

⁴⁴ The St. Louis County Substation is currently under construction but is anticipated to be completed in 2028. It is anticipated it will be "existing" by the time these facilities are needed. Thus, for purposes of these comments, "existing" is used to describe the St. Louis County Substation when discussing the ISA Project and the FCA transmission facilities.

- Modifications to add a second 345 kV/230 kV transformer **at the existing Minnesota Power St. Louis County Substation**;
- Modifications to the existing **Minnesota Power 230 kV/115 kV Arrowhead Substation** and the Minnesota Power Forbes Substation (wave traps and disconnect switches);
- Rebuilding of approximately 4.3 miles of the existing Minnesota Power Arrowhead – Forbes 230 kV Transmission Line;
- Installation of 230 kV metering current transformers at the existing **Minnesota Power Arrowhead 230 kV/115 kV Substation and St. Louis County Substation**;
- New 230 kV transmission lines between **Minnesota Power’s Arrowhead 230 kV/115 kV Substation** and the customer’s site; and
- New 230 kV transmission lines between the **St. Louis County Substation** and the customer’s site.⁴⁵

Under the terms of the Google FCA, all of these transmission facilities would be paid for by the interconnecting customer (Google) and not by Minnesota Power’s other customers.

Meanwhile, the ISA Project that is the subject of this docket includes construction of 345 kV transmission infrastructure needed for long-term regional reliability and transfer capability, as identified in the MISO MTEP24 LRTP study and discussed in the Application. Specifically, in the Hermantown area, the ISA Project includes:

- New double-circuit and double-circuit capable 345 kV structures and conductor connecting Minnesota Power’s **existing St. Louis County Substation** to Minnesota Power’s existing Iron Range Substation approximately 66 miles to the northwest;
- 1.5 miles of new double-circuit 345 kV transmission line from Minnesota Power’s **existing St. Louis County Substation** to the **existing ATC Arrowhead 345 kV/230 kV Substation**;
- Expansion of the **existing St. Louis County Substation** to accommodate three additional 345 kV line entrances and associated high voltage equipment for the interconnection of the proposed 345 kV transmission lines; and
- Expansion of the **existing ATC Arrowhead 345 kV/230 kV Substation** to accommodate two additional 345 kV line entrances and associated high voltage equipment for the interconnection of the proposed 345 kV transmission lines.⁴⁶

The ISA Project is part of MISO LRTP Tranche 2.1, a regionally beneficial portfolio of transmission projects which has been determined by MISO to qualify for regional cost allocation according to the MISO Tariff. Therefore, MISO has identified that the LRTP

⁴⁵ See *In the Matter of the Petition for Approval of an Electric Service Agreement between Google and Minnesota Power*, Docket No. E015/M-26-159, Petition at Attachment H at A-1 – A-6 (Mar. 27, 2026) (eDocket No. [20263-229694-01](#)) (emphasis added); see also FERC Docket No. ER26-1928-000 (Mar. 26, 2026).

⁴⁶ See Combined Certificate of Need and Route Permit Application for the Iron Range – St. Louis County – Arrowhead 345 kV Transmission Line at 14 (Jan. 5, 2026) (eDocket No. [20261-226460-03](#)).

Tranche 2.1 Portfolio will be allocated to transmission customers across a broad region where the portfolio is located and provides proximate benefits. Minnesota Power's allocated share of the cost for this portfolio will be approximately 2.0 percent.⁴⁷

In the preceding descriptions, the **bold language** indicates where all of these projects require modifications or additions at the same three existing substations in the Hermantown area. As is evident from the descriptions, even though the HVDC Modernization Project (application filed in 2023 and approved by the Commission in 2024), the Duluth Loop Reliability Project (application filed in 2021 and approved by the Commission in 2023), the ISA Project (Application filed in January 2026), and the Google FCA (filed with FERC in March 2026) all require transmission infrastructure modifications at the same existing substations in the Hermantown area, all four projects have separate and distinct purposes, timelines, and cost considerations. The fact that these four separate and fundamentally distinct projects all rely on the same three existing substations in the Hermantown area is indicative of the pace of transformation in the industry and the accelerating need for transmission to support a reliable clean energy transition⁴⁸ and does not imply any direct relationship between the projects.

To be clear, the Google FCA requires 230 kV transmission infrastructure additions and modifications which connect to Minnesota Power's existing transmission infrastructure at important 230 kV transmission network hubs in the Hermantown area. None of the Google FCA facilities are included in the ISA Project nor are they related to the purpose and need for the ISA Project or other previously-permitted transmission projects in the area.

Proposed Schedule

During the public meetings, the PUC-EIP staff included a slide that proposed a schedule for the proceeding.⁴⁹ This was the first the Applicants had seen this schedule and were surprised to see that the proposed dates did not align with the schedule contemplated in Minn. Stat. § 216I.07. While the Applicants agreed to an overall extension of the proceedings commensurate with the timing necessary to accommodate the Applicants' request to reschedule the public meetings, that timing would only extend the schedule to eight months instead of the six months contemplated by the statute (as the public meetings were originally scheduled for February 10, 22, and 12, 2026 and rescheduled for approximately two months later on April 6, 7, and 9, 2026).

Therefore, the Applicants have drafted the schedule at **Attachment B** to align the Project proceedings and milestones with the Certificate of Need and Route Permit rules and statutes, respectively. The Applicants look forward to finalizing a proposed schedule for the Project and will participate in any prehearing conferences scheduled should the Commission refer the matter to the Court of Administrative Hearings with a request for an Administrative Law Judge to complete a summary of public testimony.

⁴⁷ *Id.* at 23-27.

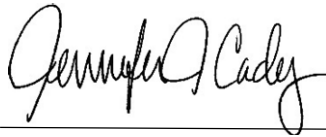
⁴⁸ *Id.* at 41 and related discussion of MISO Futures and the Reliability Imperative throughout Section 3.3.

⁴⁹ See Public Meeting Handouts and Presentation at 71 (Apr. 14, 2026) (eDocket No. [20264-230400-01](#)).

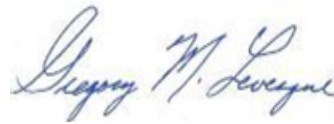
Conclusion

The Applicants appreciate the opportunity to provide these comments as the PUC-EIP staff considers its development of an EA Addendum. If you have additional questions or need additional information, please contact Jennifer Kuklenski, Manager – Regulatory Strategy and Policy, at jkuklenski@mnpower.com.

Sincerely,



Jennifer Cady
ALLETE
Vice President – ALLETE Public Policy &
External Affairs



Gregory Levesque
ATC
Vice President

cc: Service Lists

Audible Noise Study

Design Study

St Louis County (SL) Converter Station

Export Control Classification:

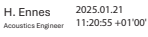


ECCN: EAR99	AL: N
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Index of Revisions for Document number: AcouErl 2024 104 1.0

Rev.	Date	Remark	Originator	Reviewer	Approver
01	Dec 03, 2024	First Version	H. Ennes	P. Hopp	J. Halbritter
02	Jan 21, 2025	Second reversion replaces previous versions completely. Changes are made due to MP comments to first revision 01 of this document.	 <small>H. Ennes 2025.01.21 Acoustics Engineer 11:20:55 +01'00'</small>	 <small>Patrick Hopp 2025.01.21 Acoustics Engineer 11:44:18 +01'00'</small>	 <small>Jürgen Halbritter 2025.01.21 Head of Acoustics & Noise 12:18:47 +01'00'</small>
03					
04					

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1 Introduction and task description

The contractor performed a noise study for the new St. Louis County Converter Station in Minnesota – USA (UM12).

The noise emitted from the converter station components shall not exceed the general noise requirements, described in chapter 3 of this study.

The audible noise study shall comprise:

- Noise level emission of functional groups to the environment
- Information about noise prognosis modelling and prognosis uncertainty
- Results of 3D noise modelling

This audible noise study is performed for Monopole Phase (900MW) during nighttime operation with the most stringent noise limits according to chapter 3.

The overall noise requirement are valid for stable operating condition under full load of the HVDC station during Monopole. The model assumes, that noise levels do not fluctuate and remain the same for the periods of stable operation.

Furthermore, the acoustical model considers the existing transformers of MP as well as the planned St. Louis County 345/230 kV transformer banks.

There are two variants considered in this audible noise study:

- With ballistic protection wall Height 2,5m and
- Without ballistic protection wall.

Ballistic wall requirements were still under evaluation at the time of this report.

The calculation results and conclusions provided within this study are directly connected and only valid, based on data and information provided by customer, e.g. drawings, operating condition, environmental conditions, contract documents etc., please refer to chapter 3 and 7.

Site location / GPS
USA – Minnesota, appr. 46°46'31.37"N , 92°18'34.93"W

Table 1-1: Site Location

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2 Terminology, symbols, definitions

Acoustic terms are explained in [9] to [16]:

The following symbols are mainly used in this study:

L_W	is the sound power level, in dB(A), re 10^{-12} W
L_P	is the sound pressure level, in dB(A), re $2 \cdot 10^{-5}$ Pa
\overline{L}_p	is the surface time-averaged sound pressure level, in dB(A), re $2 \cdot 10^{-5}$ Pa
L_{Aeq}	is the equivalent continuous sound pressure level, in dB(A), re $2 \cdot 10^{-5}$ Pa

(Further symbols are defined in the study.)

3 General acoustic requirements and criteria

3.1 Noise levels offsite criteria, Far Field

According to specification [1] the following noise limit can be applied:

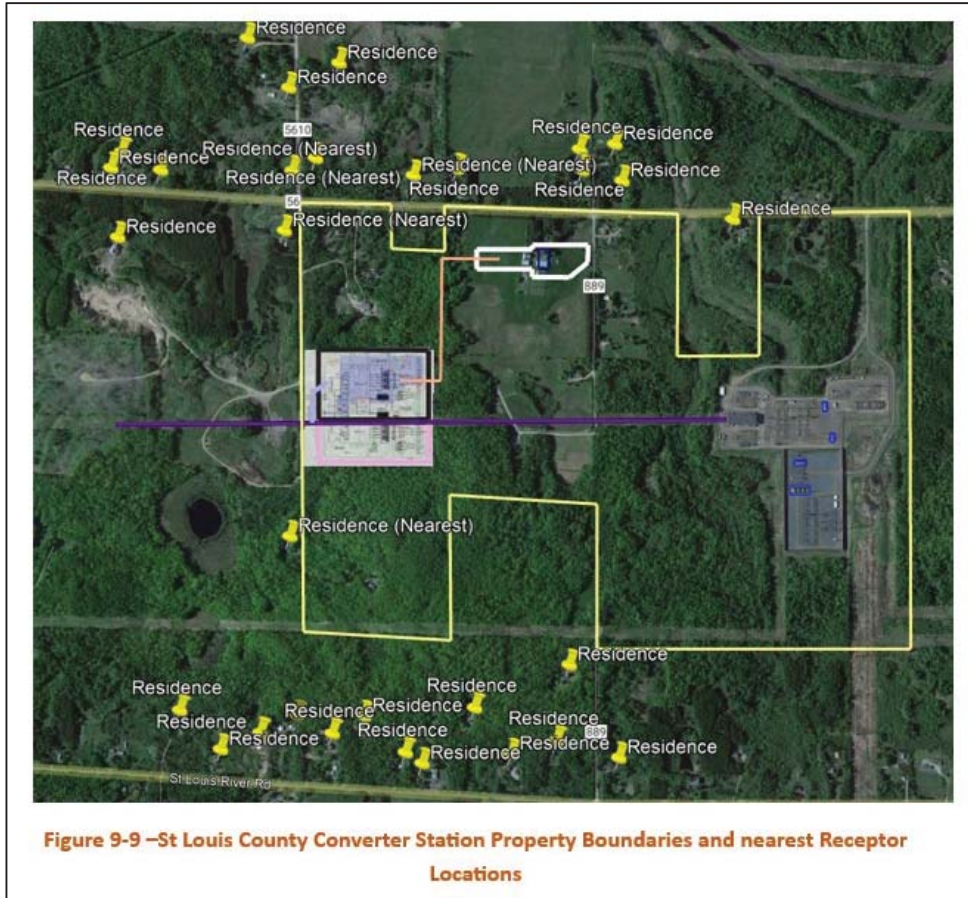
For the St. Louis County Converter Station, the design target L₅₀ sound levels from the converter equipment at the MP property boundaries during station operation shall not exceed the following levels:

Night-time noise 50dB(A)

Day time noise 55dB(A)

In the event that minimum noise requirements are met at the receptor locations but targeted noise levels are exceeded at the MP property boundary, Owner and Contractor shall investigate and agree upon reasonable options for controlling noise emissions to meet the target levels at the property boundaries or, at Owner's sole discretion, agree that no such remediation is necessary and audible sound levels are acceptable as long as minimum noise requirements are met at the receptor locations.

The locations of the Owner's property boundaries and receptor locations are shown in Figure 3-1 according to [1] chapter 9.19.1.



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Figure 3-1: This snapshot shows the MP property boundary line (yellow line) according [1] considered for this audible noise study.

Furthermore, the noise limits for nearest residence locations are stated in [1] accordingly:

For the St Louis County Converter Station, Minnesota Pollution Control Agency noise requirements applicable at the receptor location are provided in Table 9-7 below. All residences identified in Figure 9-9 are considered Noise Area Classification ("NAC") 1. While the MPCA noise standards establish minimum noise performance requirements for the St. Louis County Converter Station, the target noise performance for the Project is more restrictive, as described below.

The Minnesota Pollution Control Agency "MPCA" has established standards for the maximum noise allowable in certain areas based on the type of activities occurring in the area. The most limiting standard is 50 dBA (nighttime limit) applicable in any residential land use location. The daytime and nighttime noise standards by Noise Area Classifications ("NAC") are provided in Table 7_2_3-2 Minn R. 7030.0040).

Noise standards are expressed using the L₁₀ and L₅₀ statistical descriptors, which represent the range of permissible dBA within a one-hour period. The L₅₀ noise level represents the level exceeded 50 percent of the time, or for 30 minutes in an hour. The L₁₀ noise level represents the level exceeded 10 percent of the time, or for 6 minutes in an hour. NACs are categorized by the type of land use activities at a location and the sensitivity of those activities to noise. Residential-type activities including homes; churches; camping and picnicking areas; public, health, and education services; and hotels are included in NAC-1. Commercial-type activities including transit terminals and retail,

business, and government services are included in NAC-2 Industrial-type activities including manufacturing, fairgrounds and amusement parks, agriculture, and forestry activities are included in NAC-3. NAC 4 is for undeveloped or unused land.

Table 9-7 – Minnesota State Noise Standard

Land Use	NAC: Noise Area Classification	Exterior Hourly Noise Level Limits (dBA)			
		Daytime 7:00 am to 10:00 pm		Nighttime 10:00 pm to 7:00 am	
		L10	L50	L10	L50
Residential	NAC-1	65	60	55	50
Commercial	NAC-2	70	65	70	65
Industrial	NAC-3	80	75	80	75

Notes:

1. NAC-1 includes household units, transient lodging and hotels, educational, religious, cultural entertainment, camping and picnicking land uses.
2. NAC-2 includes retail and restaurants, transportation terminals, professional offices, parks, recreational and amusement land uses.
3. NAC-3 includes industrial, manufacturing, transportation facilities (except terminals), and utilities land uses
4. From Minnesota Pollution Control Agency, Minn. Rules sec. 7030.0040

Receptor locations are shown in

Figure 3-1.

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3.2 Operating Conditions for Far Field Noise Levels

The sound level guaranteed above, using an acoustical test procedure and measurement methods to be prepared by Contractor, are valid for steady state operation under full load of the HVDC station and excepted for the following transients:

- Start up and shut down operation
- Commissioning phase
- Station failure and Emergency conditions (e.g. diesel generator operation)
- Temporary test operating conditions
- Noise generated by sources supplied by others

During steady state operation no noise peaks are expected to occur.

3.3 Overview of acoustic model

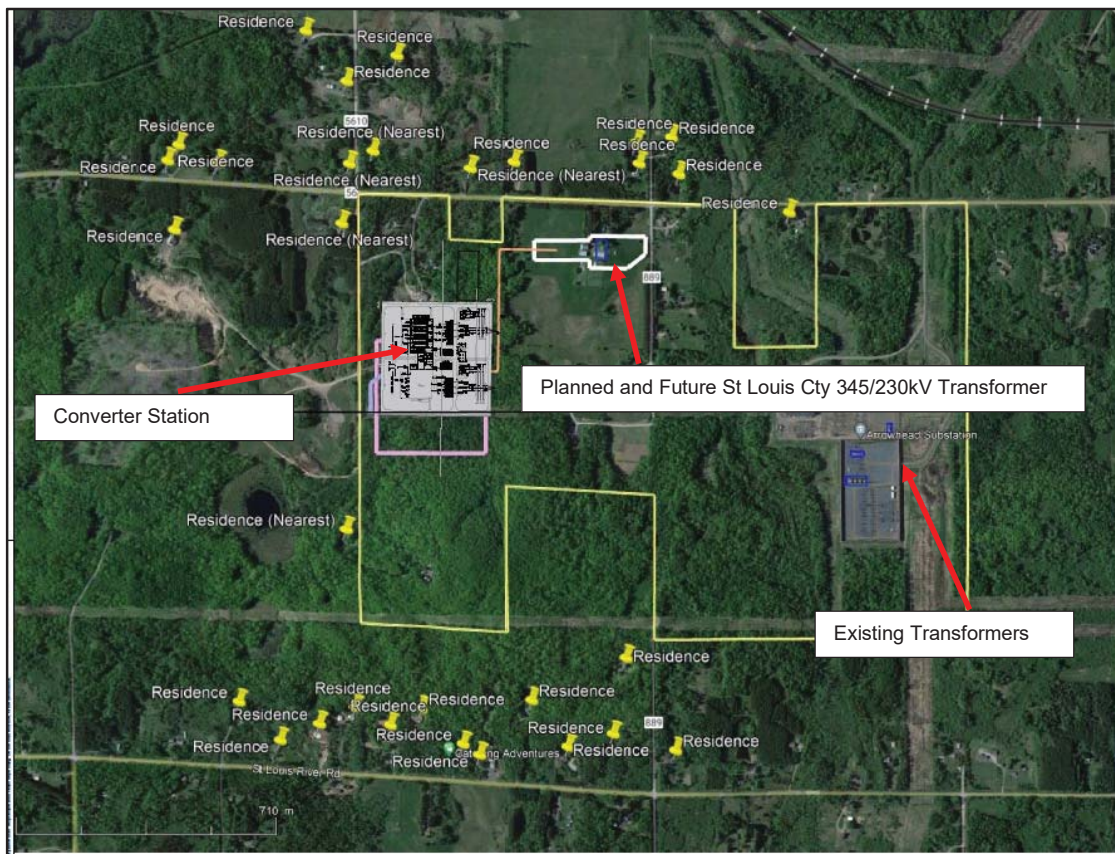


Figure 3-2: Overview of the acoustic model for St. Louis County Converter Station.

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3.4 Planned St. Louis County Transformer Banks

Furthermore, the acoustical model considers the existing transformers of MP as well as the planned St. Louis County 345/230 kV transformer banks.

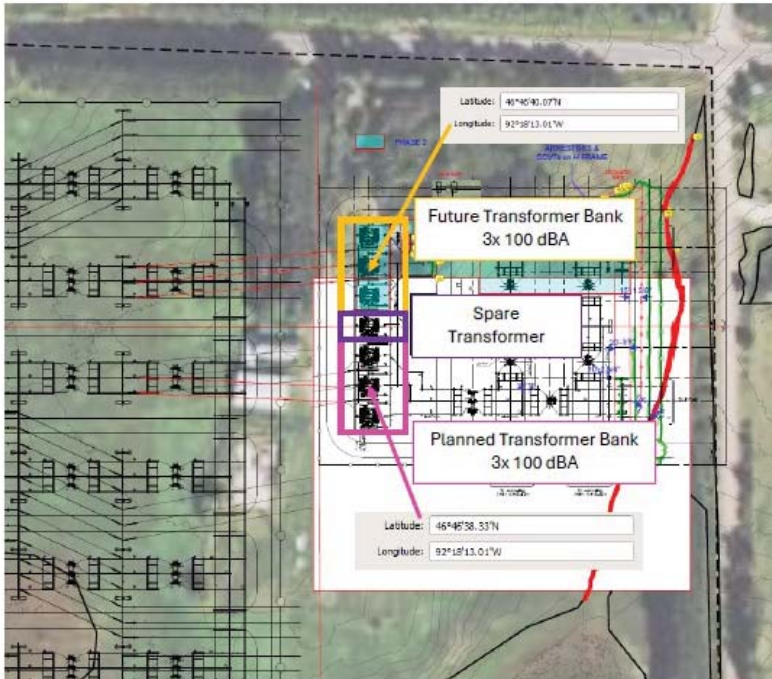


Figure 3-3: Snapshot of planned St. Louis County transformer banks according to [1] considered for this audible noise study, with conceptual future expansion considerations.

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4 Noise levels to the environment

4.1 General

The calculation of far field sound pressure levels expected in the surrounding and caused by the HVDC converter station depends on the sound power levels of the individual noise sources.

The determination of the sound power levels emitted to the environment is based on the following input data:

- Technical data provided by contractors/subcontractors of noise relevant machines, components and installations.
- Sound Protection measures for outdoor installed components
- Expected spatially averaged indoor noise level
- Design of civil structures

The calculation of the sound power levels emitted to the environment from the functional groups was performed for the octave band center frequencies from 31.5 Hz to 8000 Hz.

The overall noise requirement are valid for stable operating condition under full load of the HVDC station during Monopole. The model assumes, that noise levels do not fluctuate and remain the same for the periods of stable operation.

Taking into account the assumed noise control installations e.g. civil design of building, the essential functional groups of the HVDC Station will emit sound power levels to the environment as listed in the following table.

The acoustical 3D model is shown for the different variants in Appendix 1 and 2 in chapter 8:

- Monopole Phase with ballistic protection wall
- Monopole Phase without ballistic protection wall

Individual functional group sound power levels in this table are for informational use and are not binding, due to the fact, that sound power levels may change during detailed design. Any changes to the individual sound power levels in the table will not cause noise to exceed the requirements from chapter 3.

Functional Group	Lw in dB(A)
Existing and Planned Transformers	112
1x Existing Arrowhead 345/230kV Transformer 105 dB(A)	105
1x Existing Arrowhead 230/230kV Phase Shifter 105 dB(A)	105
1x Existing Arrowhead 230/115kV Transformer-1 105 dB(A)	105
1x Existing Arrowhead 230/115kV Transformer-2 105 dB(A)	105
3x Planned 345/230kV Transformer Bank each Lw 100 dB(A)	105
UM12 Monopole Phase	113
Monopole north	113
3x Converter Transformer Area each Lw 107dB(A)	112
RI Filter Area	85
AC Filter Area	85
3X PLC Filter each Lw 80 dB(A)	85
Converter Hall incl. Ventilation	94
6x DC Reactor each Lw 91 dB(A)	99
Outdoor Cooler Lw 100 dB(A) night	100
Control Building	70

Table 4-1: Expected sound power level (L_w) per functional group, during nighttime

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4.2 Noise protection measures

To fulfill the noise limits mentioned in chapter 3 of this audible noise study, sound barrier walls on the east side of the Converter Station Transformer are taken into account.

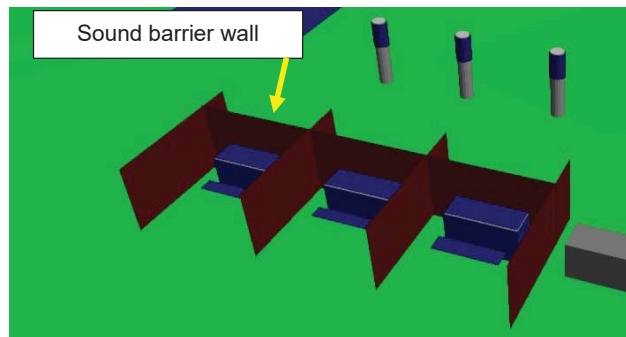


Figure 4-1: Snapshot of acoustic model for St. Louis County Converter Station showing the sound barrier walls on the east side of the transformer, for Monopole phase.

5 Far Field Noise Prognosis

On the basis of the noise emission data (Chapter 4), a sound propagation calculation was carried out for the new St. Louis County Converter Station in Minnesota – USA (UM12).

The calculation of the far field sound pressure levels was carried out in accordance with ISO 9613-1 [15] and ISO 9613-2 [16] with the noise propagation software CadnaA® from DataKustik in the latest version. For the software CadnaA®, a declaration of conformity is available “Prüfprotokoll nach DIN 45687” [11]

For the calculation of the distance-dependent sound level reduction the following effects are considered:

- Attenuation due to geometrical divergence
- Attenuation due to atmospheric absorption (air temperature 10°C. relative humidity 70%)
- Attenuation due to ground effects (frequency-dependent)
- Attenuation due to meteorology effects
- Attenuation effects due to a barrier
- The acoustic model considers terrain topography [5].

The calculated far field sound pressure levels are calculated for "mean downwind respectively moderate temperature inversion" levels according to ISO 9613-2 [16]. Strong temperature inversion which may occur e.g. over water surfaces at evening/morning times have not been considered.

The following ground absorption factors have been considered:

Ground Description	Ground Type	Absorption Factor
Overall terrain	Mixed ground	0.7
Inside the station boundary	Hard ground	0.4

To account for multiple reflections an order of two reflections has been considered.

The uncertainty for the far field calculation has been considered as follows:

- For the sound power levels of noise sources, a standard deviation of 3 dB according to DIN EN ISO 3746 (accuracy class 3) [14] has been considered.
- For the far field noise propagation, the standard deviation has been considered according to [9] and [10]. An overall confidence interval of 90% has been considered for the results of the far field calculation.

In addition, transient conditions, e.g. the circuit breaker closing/opening operation, are not taken into account because of the short duration.

The overall noise requirement are valid for stable operating condition under full load of the Converter Station. The acoustic model assumes, that noise levels do not fluctuate and remain the same for the periods of stable operation.

The results of noise propagation calculation are shown in the noise contour maps please refer to Appendix 3 and 4 in chapter 8.

6 Concluding remarks

During the development and design of the converter station layout and its components, appropriate noise-reducing measures and installation concepts were taken into account.

For noise reduction measures low noise components (low noise design implemented in the components design itself, e.g. outdoor coolers, DC-reactors), are used as applicable. According to this the long-term effectiveness of these reduction measures will remain and no changes in effectiveness is expected over the years.

The expected noise levels at permit boundary line according to [1] are shown in the different noise contour maps in chapter 8:

- Appendix 3: with ballistic protection wall,
- and Appendix 4: without ballistic protection wall.

The acoustic model and herewith developed far field noise propagation calculation shows that the sound pressure levels during steady state operation under full load of the converter station at nighttime are below 49 dB(A) at the nearest residence receptors.

To maintain sound pressure levels at or below 50 dB(A) at the property line, sound barrier walls were added on the east side of the converter transformers. These sound barrier walls have been incorporated into Contractor's site design. The inclusion of a ballistic protection barrier around part of the perimeter fenceline would further reduce sound pressure level at the property line, but is not necessary to achieve the targeted performance.

7 Reference

The audible noise study is based on the following documents and guidelines:

Project specific documents, contractual documents and drawings

- [1] Specification Documents: “290-30000-1_UMEX_HVDC_Detailed Technical Specification Rev0b” title: HVDC Modernization Project Upper Midwest Express (UMEX) (formerly Square Butte HVDC Project) Technical Specification, dated of Revision 31-Oct-2024
Chapter 9.19
- [2] Clarification on near field noise limits and far field noise limits in line with chapter 9.19.
- [3] Minnesota Power via e-mail, subject: Re: [EXTERNAL MAIL]
241001_UMEX_Preliminary_Noise_Contours, dated 10-Oct.2024, MP Response to Siemens Audible Noise Investigation.docx
- [4] Minnesota Power comments on “Noise investigation Mono and Bipole 28.10.2024” developed by SE, received via e-mail from Mr. Christian Winter (MP-Transmission) dated 6-Nov-2024
- [5] Topography for acoustic model received via e-mail from Tetrattech, subject UMEX MN Topo Update, dated 24. September 2024
- [6] Minnesota Power: UMEX Ballistics Recommendation, received via e-mail dated 31-Oct-2024
- [7] Drawing with boundary: P-020651_EL_32101#UM00&BLD020-UM12_Noise-Receptors Old property line- updated LO
- [8] Results of Contractor noise measurement tests at comparable converter stations

Guidelines and software documentation

- [9] WEA Geräuscherlass, Amt für Immissionsschutz des Landes Brandenburg, (wind turbine noise decree, Office for Immission Control of the State of Brandenburg), from 31. Juli 2003
- [10] Berechnung der Unsicherheiten bei Immissionspegelprognosen nach TA-Lärm (Calculation of uncertainties for noise propagation calculations according to TA-Lärm), from Propst W, Accon-DataKustik, April 2009
- [11] Prüfprotokoll nach DIN 45687 und ISO 17534 für das Softwareprogramm Cadna A (conformitaiton certificate according to DIN 45687 and ISO 17534 for Software Cadna A), from DataKustik GmbH, latest version.

Standards

- [12] DIN EN ISO 3740: 2019
Acoustics - Determination of sound power levels of noise sources -
Guidelines for the use of basic standards
- [13] DIN EN ISO 3744: 2011
Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Engineering method for an essentially free field over a reflecting plane
- [14] DIN EN ISO 3746: 2011
Acoustics - Determination of sound power levels and sound energy levels of noise sources using sound pressure - Survey method using an enveloping measurement surface over a reflecting plane

- [15] ISO 9613-1: 1993
Acoustics – Attenuation of sound during propagation outdoors – Part1: Calculation of the absorption of sound by the atmosphere
- [16] ISO 9613-2: 2024
Acoustics – Attenuation of sound during propagation outdoors – Part2: Engineering method for the prediction of sound pressure levels outdoors

8 Appendix

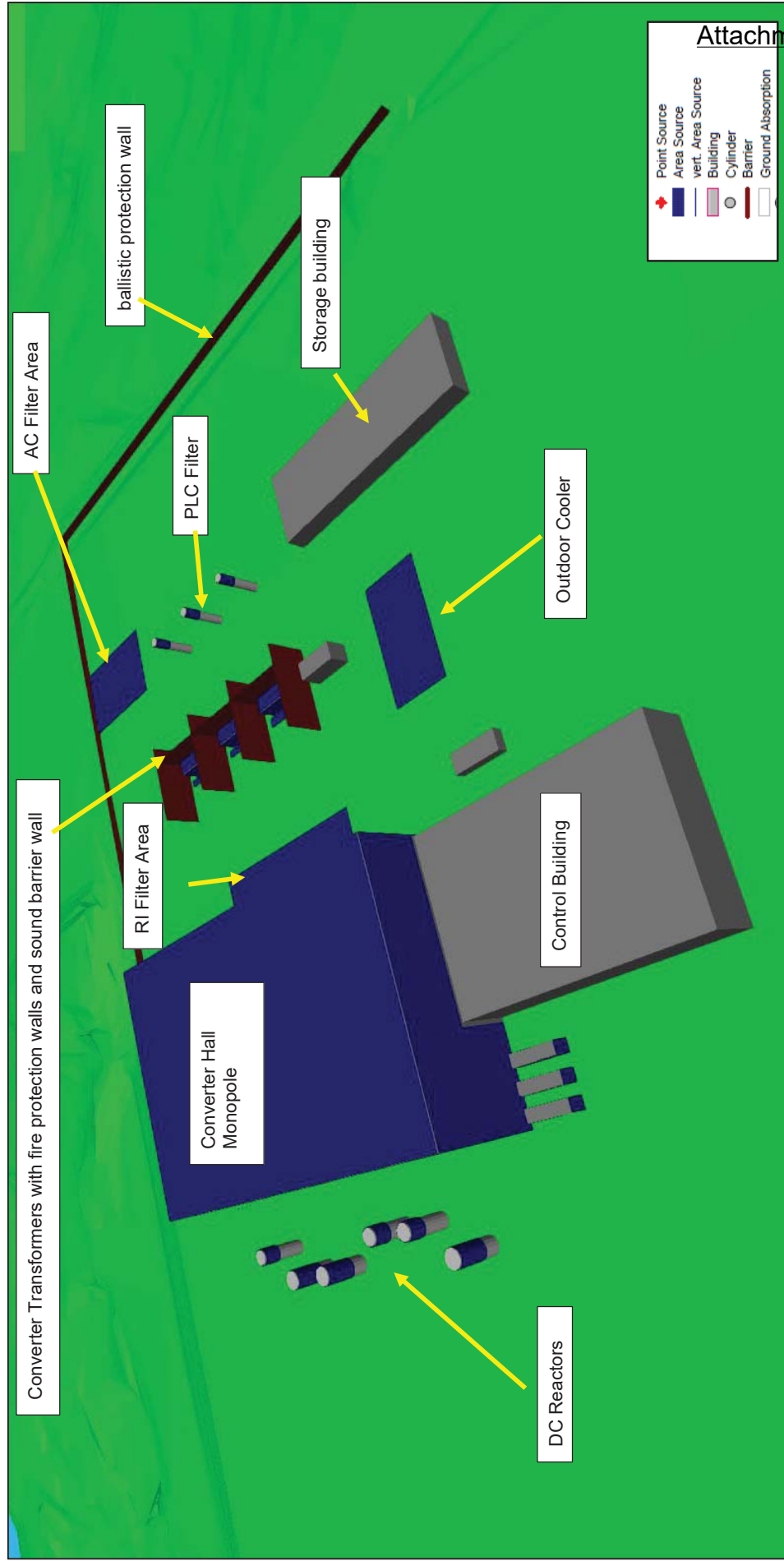
- Appendix 1: 3D model with ballistic protection wall
- Appendix 2: 3D model without ballistic protection wall

- Appendix 3: Noise Contour Map with ballistic protection wall
- Appendix 4: Noise Contour Map without ballistic protection wall

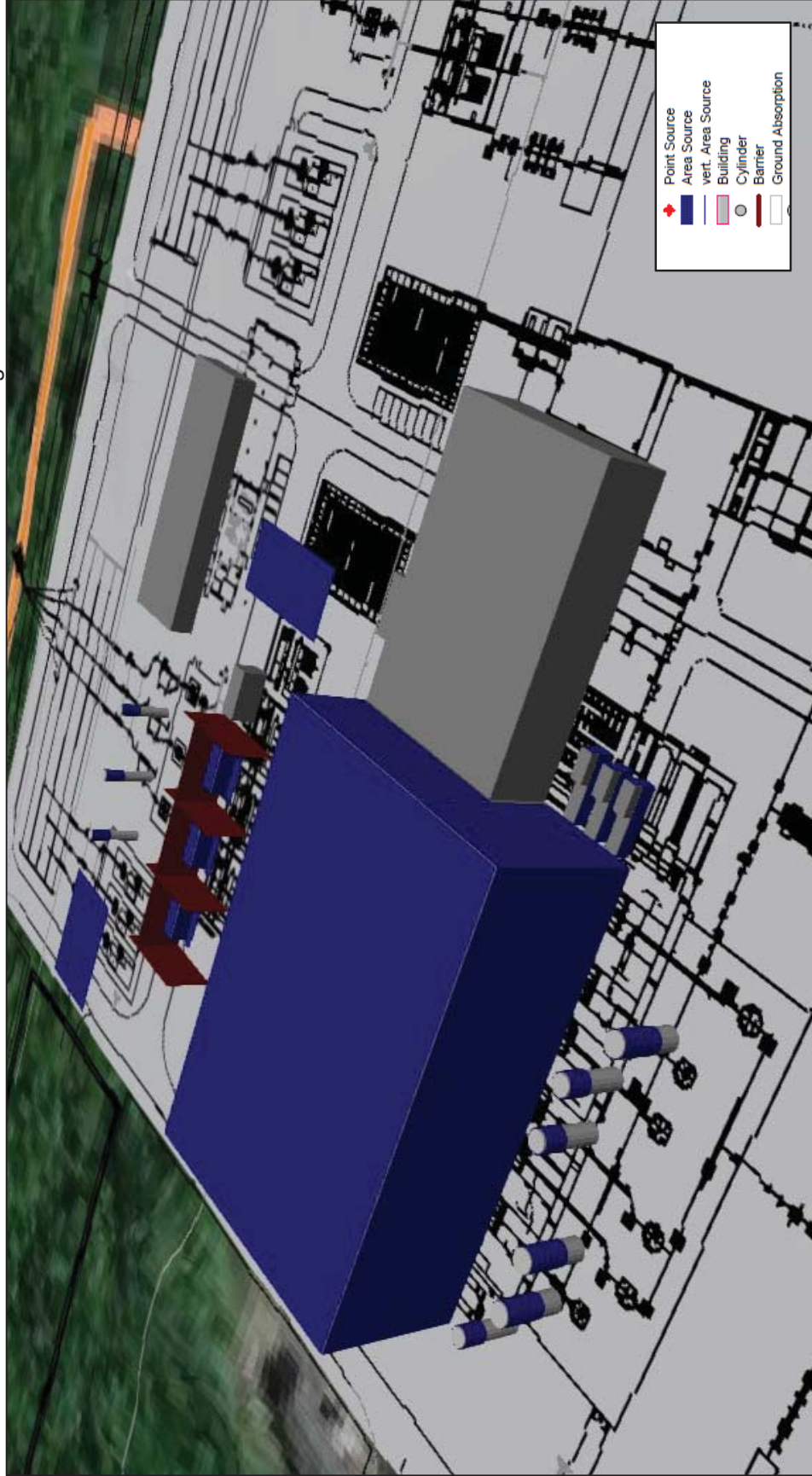
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----- END OF STUDY -----

Appendix 1: 3D model with ballistic protection wall



Appendix 2: 3D model without ballistic protection wall



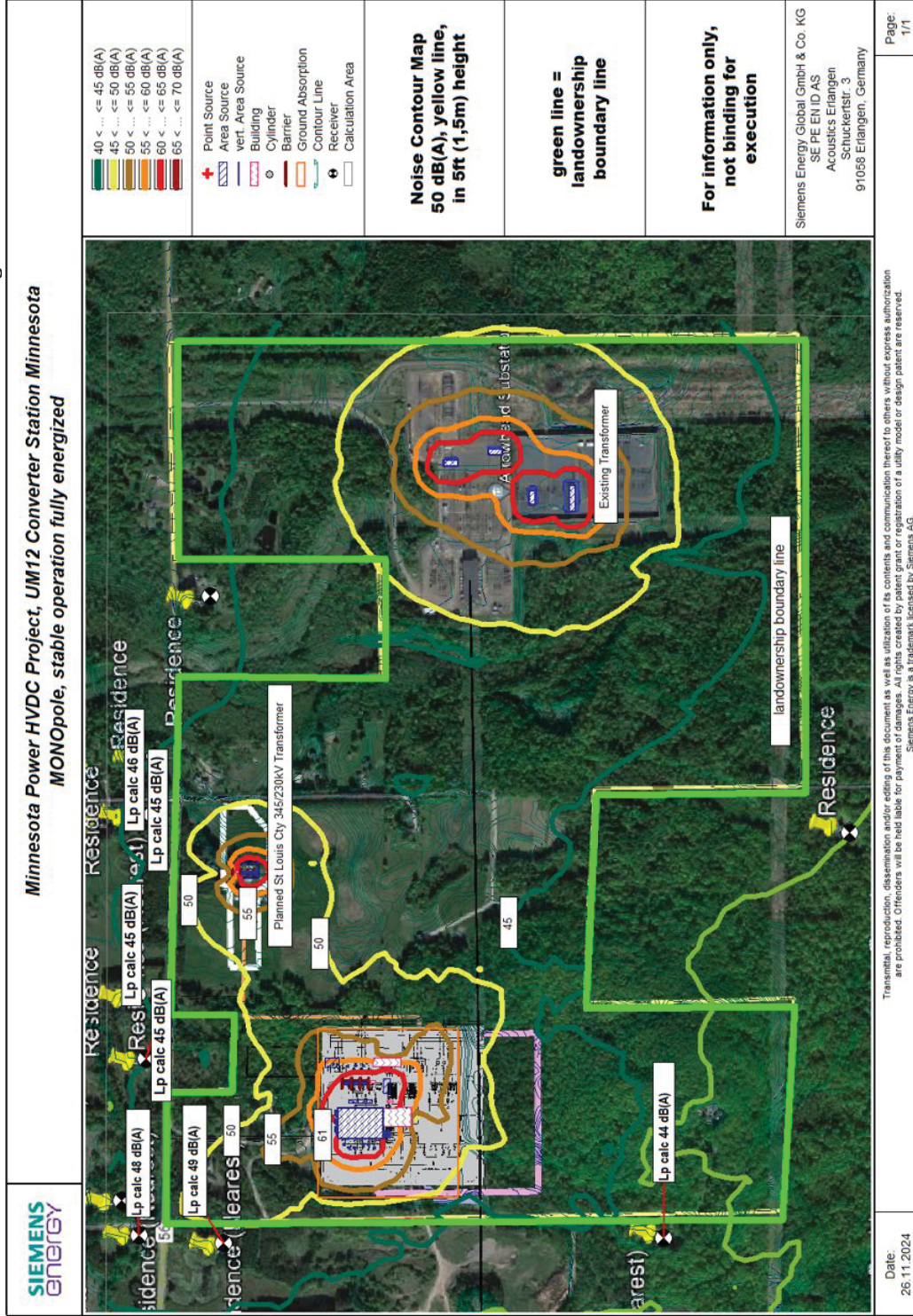


Louis_County_Audible_Noise_Study_900MW_v2.0

UMEX_St.

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Appendix 4: Noise Contour Map without ballistic protection wall



	PUC-EIP Scoping Meeting Slides	Proposed Schedule to Maintain Timing	Notes and Statutory References
Application Filed	January 5, 2026		
Application Deemed Complete	January 20, 2026		
Original Scheduled Public Information Meetings	February 10, 11, and 12, 2026		
Rescheduled Public Information Meetings	April 6, 7, and 9, 2026		
Close of the Comment Period	April 23, 2026		
Applicants Respond to Proposed Alternatives		May 1, 2026 ¹	
PUC-EIP Recommendation on an EA Addendum		May 8, 2026	
Commission Decision on an EA Addendum	June/July 2026	May 21, 2026 ²	
PUC-EIP Releases the EA Addendum and Draft Permit	Fall 2026	June 30, 2026	Minn. Stat § 216I.07, subd. 4(b) requires notice in the same manner as Minn. Stat. 216I.06, subd. 2(c). Minn. Stat. 216I.06, subd. 2(c) requires published and mailed notice at least ten days before the hearing.
Public Hearings on the EA Addendum and Draft Route Permit	Fall 2026	July 14-16, 2026	Allows for PUC-EIP to file any EA Addendum and Draft Permit and provide published and mailed notice at least ten days before the first day of the hearing.
Close of Public Hearing and Draft Route Permit Comment Period	Fall 2026	July 31, 2026	15-day comment period. No statutory requirement on timing.

¹ Proposed date – dependent on how promptly PUC staff is able to file all public comments received.

² Minn. R. 7849.1400, Subp. 9 provides that the environmental report (which Applicants propose be part of the EA Addendum) shall be completed within four months of the submission of the information required under Minn. R. 7849.1300, which was included in the Application deemed complete on January 20, 2026 and supplemented February 3, 2026.

	PUC-EIP Scoping Meeting Slides	Proposed Schedule to Maintain Timing	Notes and Statutory References
<i>ALJ Summary Report (if referred under Minn. Stat. § 216I.07, subd. 4(c))³</i>	None.	August 28, 2026	Assumes referral when the Commission decides on an EA Addendum.
Commission Decision	Fall/Winter 2026	September 2026 ⁴	Minn. Stat. § 216I.07, subd. 5(a); six months from Application completeness determination.

³ No referral to the Court of Administrative Hearings has been made in this proceeding at this time.

⁴ Minn. Stat. § 216I.07, subd. 5(a) provides, "A final decision on the request for a site or route permit under this section must be made within six months of the date the commission determines the application is complete. The commission may extend the time limit under this subdivision for up to three months for just cause or upon agreement with the applicant." In their February 5, 2026 letter requesting that the public information meetings be rescheduled, the Applicants agreed to an overall extension of the timeline commensurate with the time needed to reschedule the public meetings: "The Applicants acknowledge that this request to reschedule the Public Meetings may necessitate additional time for the Commission's process. Under Minn. Stat. § 216I.07, subd. 5, the Applicants are agreeing to extend the time limit commensurate with the delay between the originally-scheduled and eventually rescheduled Public Meeting dates." Request to Reschedule Public Information and Scoping Meetings at 2 (Feb. 5, 2026) (eDocket No. [20262-227890-01](#)). This proposed schedule includes the agreed-upon two-month delay as six months from January 2026 would have been July 2026. This has been extended to September 2026.