

STATE OF MINNESOTA
COURT OF ADMINISTRATIVE HEARINGS

FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of Crane Energy Storage
LLC for a Site Permit for the up to 200 MW
Crane Energy Storage Project in Olmsted
County, Minnesota

CAH Docket No. 25-2500-40988
MPUC Docket Nos. IP-7148/ESS-24-406
IP-7149/ESS-24-407

In the Matter of the Application of Sandhill
Energy Storage LLC for a Site Permit for
the up to 200 MW Sandhill Energy Storage
Project in Olmsted County, Minnesota

**FINDINGS OF FACT, CONCLUSIONS
OF LAW, AND RECOMMENDATION**

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In the Matter of Crane Energy Storage LLC for a Site Permit for the up to 200 MW Crane Energy Storage Project in Olmsted County, Minnesota

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IP-7149/ESS-24-407

In the Matter of the Application of Sandhill Energy Storage LLC for a Site Permit for the up to 200 MW Sandhill Energy Storage Project in Olmsted County, Minnesota

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION

This matter was assigned to Administrative Law Judge Megan J. McKenzie to conduct a public hearing on the Joint Site Permit Application (MPUC Docket Nos. IP-7148/ESS-24-406 and IP-7149/ESS-24-407) (Application) of Crane Energy Storage LLC (Crane Storage) and Sandhill Energy Storage LLC (Sandhill Storage) (collectively, the Applicants) to construct and operate the Crane Storage Project (Crane Project) and the Sandhill Storage Project (Sandhill Project), two adjacent, independent up to 200 megawatt (MW) battery energy storage systems (BESS) and associated facilities in Olmsted County, Minnesota (collectively, the Projects). The Minnesota Public Utilities Commission (Commission) also requested that the Administrative Law Judge prepare findings of fact and conclusions of law and provide recommendations, if any, on conditions and provisions of the proposed site permit.

Public hearings on the Application were held on December 2, 2025 (in-person), and December 3, 2025 (virtual). The factual record remained open until December 16, 2025, for the receipt of written public comments.

Jeremy P. Duehr and Shantal M. Pai, Fredrikson & Byron, and James Hingston, appeared on behalf of the Applicants.

Jacques Harvieux appeared on behalf of the Commission Staff.

Tessa Kothlow appeared on behalf of the Commission's Energy Infrastructure Permitting (PUC-EIP), formerly known as Department of Commerce-Energy Environmental Review and Analysis (DOC-EERA).¹

¹ On July 1, 2025, the Minnesota Energy Infrastructure Permitting Act, Minn. Stat. Ch. 216I, took effect and consolidated DOC-EERA staff and the Commission's Energy Facilities Permitting staff into a single entity – the Energy Infrastructure Permitting (EIP) unit. See Notice of Legislative Changes (July 9, 2025) (eDocket No. 20257-220799-01). For clarity, these Proposed Findings of Fact, Conclusions of Law, and Recommendations refer to PUC-EIP rather than DOC-EERA.

STATEMENT OF ISSUES

Have the Applicants satisfied the criteria established in Minn. Stat. § 216E.03, subd. 7(b) (2024) and Minn. R. 7850.4100 (2025) for a site permit for the Project?

SUMMARY OF RECOMMENDATIONS

The Applicants have satisfied the applicable legal requirements and, accordingly, the Commission should **GRANT** a Site Permit to Crane Energy Storage LLC for the Crane Project and **GRANT** a Site Permit to Sandhill Energy Storage LLC for the Sandhill Project, subject to the conditions discussed below.

Based on the evidence in the hearing record, the Administrative Law Judge makes the following:

FINDINGS OF FACT

I. APPLICANTS

1. The Applicants are wholly owned subsidiaries of Copenhagen Infrastructure Partners (CIP). CIP is an infrastructure investment firm specializing in renewable energy and other essential infrastructure projects.²

II. PROCEDURAL HISTORY

2. On February 21, 2025, Applicants filed a Notice of Intent to Submit a Joint Site Permit Application under the alternative permitting procedures of Minn. Stat. § 216E.04 (2024) and Minn. R. 7850.2800 - .3900 (2025).³

3. On March 5, 2025, Applicants submitted the Joint Application for Site Permits for the Projects with maps and appendices A-F.⁴ Applicants also submitted the Notice of Application.⁵

4. On March 11, 2025, the Commission announced a Notice of Comment Period regarding the completeness of the Application, requesting initial comments by March 25, 2025, reply comments by April 1, 2025, and supplemental comments by April 8, 2025. The notice requested comments on whether the Application contained the information required in Minn. R. 7850.3100; whether there were any contested issues of fact with respect to the representations made in the Application; whether the Commission should appoint an advisory task force; whether the Commission should direct the

² Ex. APP.-101 at 1 (Application).

³ Ex. APP.-100 (Notice of Intent to Submit a Joint Site Permit Application Under Alternative Review Process).

⁴ Ex. APP.-101 (Application); Ex. APP.-102 (Site Permit Application – Maps); Ex. APP.-103 (Site Permit Application – Appendix A); Ex. APP.-104 (Site Permit Application – Appendix B); Ex. APP.-105 (Site Permit Application – Appendix C); Ex. APP.-106 (Site Permit Application – Appendix D); Ex. APP.-107 (Site Permit Application – Appendix E); Ex. APP.-108 (Site Permit Application – Appendix F).

⁵ Ex. APP.-109 (Notice of Application).

Executive Secretary to issue an authorization to initiate consultation with the State Historic Preservation Office (SHPO); and whether there were any other issues or concerns that should be considered.⁶

5. On March 25, 2025, PUC-EIP filed comments recommending that the Commission accept the Application as substantially complete, require Applicants to file a draft Vegetation Management Plan (VMP) by the end of the Environmental Assessment (EA) scoping comment period, request the Commission not appoint an advisory task force at this time, and request a full Administrative Law Judge report with findings, conclusions, and recommendations for the Projects' hearing.⁷ The Commission also filed a public comment from Jeremy Andrist, a business manager of Local #6 Union, who encouraged the Commission to support the Projects, and recognized the value of projects like these for Minnesota laborers.⁸

6. On April 1, 2025, Applicants filed reply comments on Application completeness, agreeing with PUC-EIP recommendations and noting that the VMP is currently in progress. Applicants requested that the Commission accept the Application as substantially complete, authorize review of the Application under the alternative permitting process under Minn. Stat. § 216E.04 and Minn. R. 7850.2800 to 7850.3900, find that there were no contested issues of fact with respect to the representations made in the Application, find that no advisory task force is warranted, direct the Executive Secretary to issue an authorization to the Applicants to initiate consultation with the Minnesota SHPO, and refer the matter to the Court of Administrative Hearings for a public hearing and preparation of a full Administrative Law Judge report with recommendations.⁹

7. On April 29, 2025, the Commission issued an order finding the Application complete, requiring Applicants to file a draft VMP into the record by the end of the EA scoping comment period, declining to appoint an advisory task force at this time, requesting a full Administrative Law Judge's report with findings, conclusions, and recommendations for the Projects' public hearing, and directing the Executive Secretary to issue authorization to Applicants to initiate consultation with SHPO.¹⁰

8. On April 30, 2025, Applicants submitted a Confirmation of Notice compliance filing confirming that all notices required under Minn. R. 7850.2100, subp. 2(A), (B), and (C) (2025) were provided relating to Applicants' Joint Site Permits Application.¹¹

9. On May 13, 2025, Applicants submitted a draft VMP before the EA scoping comment period began.¹²

⁶ Ex. PUC-500 (Notice of Comment Period on Application Completeness).

⁷ Ex. EIP-400 (Comments and Recommendations Regarding Application Completeness).

⁸ J. Andrist Public Comment (March 25, 2025) (eDockets No. [20253-216794-01](#)).

⁹ Ex. APP.-110 (Completeness Reply Comments).

¹⁰ Ex. PUC-501 (Order Finding Application Complete).

¹¹ Ex. APP.-111 (Confirmation of Notice).

¹² Ex. APP.-112 (Draft Vegetation Management Plan).

10. On June 2, 2025, the Commission filed a letter authorizing Applicants to initiate consultation with the SHPO pursuant to Minn. Stat. § 138.665 (2024).¹³ SHPO consultation was completed by the Applicants and documentation of such consultation was included with the Application.¹⁴

11. On June 6, 2025, the Commission filed a Notice of Public Information and EA Scoping Meeting.¹⁵

12. On June 9, 2025, the Commission filed a revised Notice of Public Information and EA Scoping Meeting for June 25, 2025 (in-person), and June 26, 2025 (virtual). The Commission requested comments by July 10, 2025 on: (1) potential human and environmental impacts of the proposed Projects that should be studied in the EA; (2) any methods to minimize, mitigate, or avoid potential impacts of the proposed Projects that should be considered in the EA; and (3) any unique characteristics of the proposed Projects that should be considered in the EA.¹⁶

13. On June 24, 2025, the Commission filed a sample site permit for a battery energy storage system (BESS).¹⁷

14. On June 25, 2025, Applicants filed an Affidavit of Publication of Notice of Public Hearings and Availability of EA.¹⁸

15. Also on June 25, 2025, staff held an in-person public EA scoping meeting. One member of the public provided comments, expressing concerns about the safety measures, cooperation with the Fire Department, and had a question about connecting to the substation. The Applicants' fire safety expert, Michael Townsend, responded to questions about fire safety.¹⁹

16. On June 26, 2025, staff held a virtual public EA scoping meeting. One member of the public from the International Union of Operating Engineers Local 49 (IUOE Local 49) provided comments, emphasizing the importance of considering the potential impact of the Projects on local construction workers in the EA.²⁰

17. On July 9, 2025, the Commission filed a notice of legislative changes indicating that on July 1, 2025, the DOC-EERA moved to Commission to become the PUC-EIP. The Commission also indicated that matters like this one, which were initially filed prior to July 1, 2025 would continue to be reviewed under Minn. Stat. § 216E (2024)

¹³ Ex. PUC-502 (Authorization to Initiate SHPO Consultation).

¹⁴ Ex. APP.-104 (Site Permit Application – Appendix B)

¹⁵ Commission Notice of Public Information and EA Scoping Meetings (June 6, 2025) (eDockets No. [20256-219666-01](#)).

¹⁶ Ex. PUC-503 (Notice of Public Information and Environmental Assessment Scoping Meetings - Revised).

¹⁷ Ex. PUC-504 (Sample Site Permit).

¹⁸ Ex. APP.-113 (Affidavit of Publication of Notice of Public Hearings and Availability of Environmental Assessment).

¹⁹ Ex. EIP-401 (Oral Public Comments on Scope of Environmental Assessment).

²⁰ *Id.*

or Minn. Stat. § 216F (2024), as applicable. As noted, the alternative permitting procedures of Minn. Stat. § 216E.04 apply here.²¹

18. On July 10, 2025, the Minnesota Department of Natural Resources (MDNR) filed comments on the scope of the Application,²² and submitted the Natural Heritage Review Letter.²³ IUOE Local 49 and North Central States Regional Council of Carpenters (NCSRC of Carpenters) also filed scoping comments in support of the Application.²⁴

19. On July 17, 2025, PUC-EIP filed the oral public comments received during the in-person and virtual EA scoping meetings²⁵ and filed a summary of written comments, linking to the July 10, 2025 comments on the scope of the EA from MDNR and IUOE Local 49.²⁶

20. On July 24, 2025, PUC-EIP submitted a revised summary of written comments on the scope of the EA that also included Jeremy Andrist's Public Comment filed on March 25, 2025.²⁷ PUC-EIP also filed an Alternative Site Comment Letter recommending the Commission authorize PUC-EIP to include only the proposed BESS sites identified by the Applicants in their Application in the EA scoping decision, because no alternative sites were suggested during the scoping comment period.²⁸

21. On July 31, 2025, the Administrative Law Judge issued an order scheduling a prehearing conference for August 11, 2025.²⁹

22. On August 6, 2025, Applicants submitted a notice of appearance for Jeremy P. Duehr and Shantal M. Pai.³⁰

23. On August 11, 2025, a prehearing conference was held.³¹

24. On August 15, 2025, PUC-EIP filed the EA scoping decision.³²

25. On August 21, 2025, the Commission filed a notice of the EA scoping decision.³³

²¹ Ex. PUC-505 (Notice of Legislative Changes).

²² MDNR Comments (July 10, 2025) (eDockets No. [20257-220849-01](#)).

²³ MDNR Natural Heritage Review Letter (July 10, 2025). (eDockets No. [20257-220849-02](#)).

²⁴ Local 49 and NCSRC of Carpenters Comments (July 10, 2025) (eDockets No. [20257-220850-01](#)).

²⁵ Ex. EIP-401 (Oral Public Comments on Scope of Environmental Assessment).

²⁶ Ex. EIP-402 (Written Public Comments on Scope of Environmental Assessment).

²⁷ *Id.*

²⁸ Ex. EIP-403 (Scoping Comments Summary and Recommendation).

²⁹ Prehearing Order (July 31, 2025) (eDockets No. [20257-221614-01](#)).

³⁰ Ex. APP.-114 (Notice of Appearance of Jeremy P. Duehr and Shantal M. Pai).

³¹ Prehearing Conference Transcripts (November 17, 2025) (eDockets No. 202511-224971-01).

³² Ex. EIP-404 (Environmental Assessment Scoping Decision).

³³ Ex. PUC-506 (Notice of Environmental Assessment Scoping Decision).

26. On October 1 2025, the Administrative Law Judge filed the First Prehearing Order to establish a schedule for the proceeding.³⁴
27. On November 7, 2025, PUC-EIP filed the EA for the Projects.³⁵
28. On November 8, 2025, the Administrative Law Judge held a prehearing conference.³⁶
29. On November 12, 2025, the Commission filed a Notice of Public Hearings and Availability of EA.³⁷
30. On November 13, 2025, the Commission filed the Environmental Quality Board (EQB) Monitor Public Hearing Notice³⁸ and the Scoping Meeting Notice.³⁹
31. On November 19, 2025, PUC-EIP filed a Notice of EA Mailed to Public Library⁴⁰ and a Notice of EA to Permitting Agencies and Tribal Historic Preservation Officers (THPOs).⁴¹
32. On November 25, 2025, the Commission filed an Affidavit of Publication of the Notice of Public Hearings⁴² and Applicants filed Direct Testimony of J. Hingston with Schedules A-E.⁴³
33. On December 1, 2025, Applicants filed the Proposed Exhibit List.⁴⁴
34. On December 2, 2025, an in-person public hearing was held. All proposed exhibits were admitted into the record. One commenter submitted comments in support of the Projects on behalf of IUOE Local 49, a union with over 15,000 heavy equipment operators, mechanics, and stationary engineers as members.⁴⁵
35. On December 3, 2025, a virtual public hearing was held. One commenter submitted comments in support of the Projects on behalf of Laborers' International Union of North America (LIUNA), a construction union of about 14,000 members.⁴⁶

³⁴ First Prehearing Order (October 1, 2025) (eDockets No. [202510-223467-01](#)).

³⁵ Ex. EIP-405 (EA).

³⁶ Prehearing Conference Transcripts (November 8, 2025) (eDockets No. 202511-224971-01).

³⁷ Ex. PUC-507 (Notice of Public Hearings and Availability of Environmental Assessment).

³⁸ Ex. PUC-508 (EQB Monitor – Public Hearing Notice).

³⁹ Ex. PUC-509 (EQB Monitor – Scoping Meeting Notice).

⁴⁰ Ex. EIP-406 (Notification of EA Mailed to Public Libraries).

⁴¹ Ex. EIP-407 (Notice of EA to Permitting Agencies and Tribal Historic Preservation Officers).

⁴² Commission Affidavit of Publication of the Notice of Public Hearings (November 25, 2025) (eDockets No. [202511-225278-01](#)).

⁴³ Ex. APP.-115 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

⁴⁴ Proposed Exhibit List (December 1, 2025) (eDockets No. [202512-225401-02](#)).

⁴⁵ In-Person Public Hearing Tr. (December 2, 2025).

⁴⁶ Virtual Public Hearing Tr. at 20:15–24:9 (December 3, 2025).

36. On December 11, 2025, the Applicants filed the Final Exhibit List reflecting exhibits admitted at the December 2 hearing.⁴⁷

37. On December 16, 2025, PUC-EIP filed comments recommending modifications to the draft decommissioning plan, summarizing changes between the sample site permit and Draft Site Permits (DSPs), and addressing the Applicants' direct testimony.⁴⁸

38. Also on December 16, 2025, MDNR filed comments concluding that the EA adequately addressed wildlife concerns, and supporting special conditions included in the DSPs.⁴⁹

39. On December 23, 2025, the Applicants filed Reply Comments responding to comments from PUC-EIP and MDNR and indicating that Power Purchase Agreements (PPAs) had been entered with Xcel Energy for both Projects.⁵⁰

III. DESCRIPTION OF THE PROJECTS

A. Crane Project Description, Location, and Characteristics

40. Crane Storage proposes to construct a stand-alone up to 200-MW / 800-megawatt hour (MWh) BESS and interconnection infrastructure in Township 107N, Range 15W, Sections 30 and 31, in Olmsted County, Minnesota. The Crane Project will not generate electricity but will receive energy (charge) from the electrical grid via the Byron Substation (i.e., the point of interconnection (POI) for the Crane Project), store that energy on site, and then later deliver energy (discharge) back to the Byron Substation to be delivered to the electrical grid. The Crane Project is anticipated to include self-contained BESS units that contain batteries installed in purpose-built enclosures, a collector substation, an onsite maintenance area, a parking lot, trash enclosure, stormwater pond, and an approximately 700-foot-long 161-kV gen-tie line that will interconnect the collector substation to the Byron Substation.⁵¹

41. The Crane Project is located in Township 107N, Range 15W, Sections 30 and 31, in Olmsted County, Minnesota.⁵²

42. The Crane Project is owned by Crane Energy Storage LLC (Crane Storage), a wholly owned subsidiary of CIP. As required by Minn. R. 7850.1900, subp. 1(f) (2025), the Application included the names of the owners of the properties for the proposed site.⁵³

⁴⁷ Final Exhibit List (December 11, 2025) (eDockets No. [202512-225777-01](#)).

⁴⁸ PUC-EIP Hearing Comments at 1–4 (December 16, 2025) (eDockets No. [202512-225911-01](#)).

⁴⁹ MDNR Hearing Comments at 2 (December 16, 2025) (eDockets No. [202512-225931-01](#)).

⁵⁰ Applicants' Response to Public Hearing Comments (December 23, 2025) (eDockets No. [202512-226183-01](#)).

⁵¹ Ex. APP.-101 at 13 (Application).

⁵² *Id.*

⁵³ Ex. APP.-101 at 3 (Application).

43. The Land Control Area for the Crane Project encompasses approximately 36.3 acres, of which approximately 35.6 acres will comprise the Crane Preliminary Development Area and approximately 14.8 acres will host BESS operational components.⁵⁴

B. Sandhill Project Description, Location, and Characteristics

44. Sandhill Storage proposes to construct a stand-alone up to 200-MW / 800-MWh BESS and interconnection infrastructure in Township 107N, Range 15W, Sections 30 and 31, in Olmsted County, Minnesota. In order to capture all components that would be required to construct and operate the Sandhill Project, the Sandhill Land Control Area includes the shared facilities that would be within the Crane Land Control Area, including the primary access road, collector substation, and gen-tie line. The Sandhill Project will not generate electricity but will receive energy (charge) from the electrical grid via the Byron Substation (i.e., the POI for the Sandhill Project), store that energy on site, and then later deliver energy (discharge) back to the Byron Substation to be delivered to the electrical grid. The Sandhill Project is anticipated to include self-contained BESS units that contain batteries installed in purpose-built enclosures, a collector substation, an onsite maintenance area, a parking lot, trash enclosure, stormwater pond, and an approximately 700-foot-long 161-kV gen-tie line that will interconnect the collector substation to the Byron Substation.⁵⁵

45. The Sandhill Project is located in Township 107N, Range 15W, Sections 30 and 31, in Olmsted County, Minnesota.⁵⁶

46. The Sandhill Project is owned by Sandhill Energy Storage LLC (Sandhill Storage), a wholly owned subsidiary of CIP. As required by Minn. R. 7850.1900, subp. 1(f), the Application included the names of the owners of the properties for the proposed site.⁵⁷

47. The Land Control Area for the Sandhill Project encompasses approximately 42.7 acres, of which about 39.9 acres comprise the Sandhill Preliminary Development Area and approximately 13.3 acres will host BESS operational components.⁵⁸

C. Shared Project Facilities & Characteristics

48. Applicants proposed to construct the Crane Project and the Sandhill Project adjacent to one another in Township 107N, Range 15W, Sections 30 and 31, in Olmsted County, Minnesota. The POI for both Projects is the Southern Minnesota Municipal Power Agency (SMMPA) Byron Substation, located about 370 feet south of the sites in Section 31. Each BESS will charge its batteries with energy from the electric transmission grid via the POI, store that energy on site, and later deliver that energy back to the transmission

⁵⁴ Ex. APP.-115 at 3 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

⁵⁵ Ex. APP.-101 at 16-17 (Application).

⁵⁶ Ex. APP.-101 at 13 (Application).

⁵⁷ Ex. APP.-101 at 4 (Application).

⁵⁸ Ex. APP.-115 at 3 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

grid through the same collector substation, approximately 700-foot-long 161-kV gen-tie line, and POI.⁵⁹

49. Because the Crane Project and Sandhill Project share the access road, collector substation, and gen-tie line corridor, there is overlapping acreage: 19.2 acres of the Sandhill Land Control Area overlaps with and is already accounted for in the Crane Land Control Area. Similarly, about 18.7 acres of the Sandhill Preliminary Development Area overlaps with and is also accounted for in the Crane Preliminary Development Area.⁶⁰

IV. PROJECT SCHEDULES

A. Crane Project Schedule

50. Crane Storage anticipates receiving Commission approval for the Crane Project in the first quarter of 2026. After Commission approval is received, construction is anticipated to begin in first quarter of 2027 with an anticipated commercial operation date of second quarter of 2028.⁶¹

51. Crane Storage anticipates entering into a generator interconnection agreement (GIA) with Midcontinent Independent System Operator (MISO) in the first quarter of 2026.⁶²

B. Sandhill Project Schedule

52. Sandhill Storage anticipates receiving Commission approval for the Sandhill Project in the first quarter of 2026. After Commission approval is received, construction may begin as early as the third quarter of 2027 with a commercial operation date of fourth quarter of 2028. Construction of the Sandhill Project is expected to commence after construction of Crane Project is initiated.⁶³

53. Sandhill Storage is currently awaiting MISO approval to be admitted into the Expedited Resource Addition Study (ERAS). Based on the timelines set forth in the process, if the Sandhill Project is selected into ERAS, the earliest that a GIA could be executed for the Sandhill Project is mid-February 2026. If the Sandhill Project is not selected for ERAS, the earliest a GIA could be executed is August 2026. After Commission approval is received, construction may begin as early as the third quarter of 2027 with a commercial operation date of fourth quarter of 2028.⁶⁴

⁵⁹ Ex. APP.-101 at 1 (Application).

⁶⁰ Ex. APP.-115 at 3 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

⁶¹ Ex. APP.-101 at 5 (Application); Ex. APP.-115 at 7-8 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

⁶² Ex. APP.-115 at 7-8 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

⁶³ Ex. APP.-101 at 6 (Application); Ex. APP.-115 at 7 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

⁶⁴ Ex. APP.-115 at 7 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

V. SUMMARY OF PUBLIC COMMENTS

A. Scoping Comments

54. The Public Information and EA Scoping meetings were held on June 25, 2025 (in-person), and June 26, 2025 (virtual). During the in-person meeting, one member of the public, Don Voll, provided comments expressing concerns about the safety measures, cooperation with the Fire Department, and had a question about connecting to the substation. During the virtual meeting, one member from IUOE Local 49, Nathan Runke, provided comments emphasizing the importance of considering the potential impact of the Projects on local construction workers in the EA.⁶⁵

55. During the scoping comment period, MDNR filed written comments addressing potential environmental impacts regarding fencing, lighting, dust, wildlife-friendly erosion control, and recommending Applicants use a VMP and address the issues raised in the Natural Heritage Review, such as impacts to loggerhead shrikes.⁶⁶

56. MDNR recommended the security fence reach a minimum height of ten feet to prevent white tailed deer and other large wildlife from entering the facility and advised against the use of barbed wire due to entanglement and injury concerns it can cause to wildlife.⁶⁷ Applicants confirmed the ten-foot fence height complies with the National Electric Safety Code (NESC) and will accommodate MDNR's ten-foot fence height.⁶⁸

57. MDNR recommended that the EA address whether the proposed Projects have the potential to adversely affect the issues raised in the Natural Heritage Review letter and, if so, it should identify specific measures that will be taken to avoid or minimize disturbances. MDNR requested that sufficient information should be provided so the MDNR can determine whether a permit to take will be needed for any of the protected species mentioned in the letter.⁶⁹

58. MDNR recommended the EA discuss measures to mitigate the impacts lighting will have on wildlife and noted the MDNR's **Commercial Solar Siting Guidance** is relevant in advising the nominal color temperature of lighting installed at facilities does not exceed 4,000 kelvin and recommended that lighting is downlit and shielded to minimize blue hue, backlight, and glare.⁷⁰

⁶⁵ Ex. EIP-401 (Oral Public Comments on Scope of Environmental Assessment).

⁶⁶ MDNR Comments (July 10, 2025) (eDockets No. [20257-220849-01](#)); MDNR Natural Heritage Review Letter (July, 10, 2025). (eDockets No. [20257-220849-02](#)).

⁶⁷ MDNR Comments at 1 (July 10, 2025) (eDockets No. [20257-220849-01](#)).

⁶⁸ Ex. APP.-115 at 7 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

⁶⁹ MDNR Comments at 1-2 (July 10, 2025) (eDockets No. [20257-220849-01](#)).

⁷⁰ MDNR Comments at 2 (July 10, 2025) (eDockets No. [20257-220849-01](#)).

59. MDNR advised against the use of dust suppression agents containing chloride and recommended the EA address fugitive dust levels and dust suppression measures that will be taken during construction and once the Projects are operational.⁷¹

60. MDNR recommended that the EA discuss the use of wildlife-friendly erosion control. Due to entanglement issues with small animals, the MDNR recommended that erosion control blankets be limited to “bio-netting” or “natural netting” types, and specifically not products containing plastic mesh netting or other plastic components.⁷²

61. MDNR also recommended that the EA discuss the construction and vegetation reestablishment phases in the surrounding Project Boundary to minimize stormwater runoff, erosion, and support habitat and the VMP should be consistent with MDNR’s ***Prairie Establishment and Maintenance Technical Guidance for Solar Projects***.⁷³

62. IUOE Local 49 and NCSRC of Carpenters also filed scoping comments and recommended that the Commission approve the Application.⁷⁴

63. PUC-EIP recommended that the Commission authorize PUC-EIP to include only the proposed BESS sites identified by the Applicants in their Application in the EA scoping decision because no alternative sites were suggested during the scoping comment period.⁷⁵

B. Hearing Comments

64. Public hearings were held on December 2, 2025 (in-person), and December 3, 2025 (virtual). During the in-person hearing, Nathan Runke commented, on behalf of IUOE Local 49, that projects like the Crane Project and Sandhill Project are important to the over 15,000 heavy equipment operators, mechanics, and stationary engineers that are members of IUOE Local 49.⁷⁶ During the virtual hearing, Lucas Franco commented on behalf of LIUNA Minnesota and North Dakota, a construction union of about 14,000 members, to “express strong support for these projects and enthusiasm in general for the projects,” which are “exciting and innovative energy projects that will generate great work opportunities for the local workers.”⁷⁷

65. PUC-EIP filed comments recommending modifications to the draft Decommissioning Plan, explaining changes between the sample site permit filed by the Commission and the DSPs included in Appendices C and D of the EA prepared for the

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ Local 49 and NCSRC of Carpenters Comments (July 10, 2025) (eDockets No. [20257-220850-01](#)).

⁷⁵ Ex. EIP-403 (Scoping Comments Summary and Recommendation).

⁷⁶ In-Person Public Hearing Tr. at 21:3–22:2 (December 2, 2025).

⁷⁷ Virtual Public Hearing Tr. at 20:15–24:9 (December 3, 2025).

Projects to reflect changes in governing law, and noting on Applicants' commitment to accommodate MDNR's preference for a ten-foot fence height.⁷⁸

66. PUC-EIP recommended updates to the Decommissioning Plan before construction, including updates to the discussion of scheduled updates, updates to the Project description, updates to reflect where generation will be used, updates to reflect a preliminary list of permits required for decommissioning, and updates to clarify responsibilities, including by identifying the beneficiary of the financial assurance.⁷⁹

67. PUC-EIP comments also explained changes between the sample site permit and the DSPs to reflect changes in the law and the addition of special conditions, and added corrections to a few sections of the proposed DSPs to conform with changes in the law.⁸⁰

68. PUC-EIP noted that Applicants plan to accommodate MDNR's preference for a 10-foot fence height, continue to develop a site plan to minimize visual impacts, and supported the Applicants' security fencing plans.⁸¹

69. MDNR submitted comments acknowledging that the Applicants' planned security fencing design is consistent with MDNR recommended guidance.⁸²

70. MDNR also commented that the EA adequately addressed MDNR's concerns regarding loggerhead shrike, lighting, wildlife-friendly erosion control, and dust control, and supporting the inclusion of conditions related to lighting, wildlife-friendly erosion control, and dust control in the DSPs.⁸³

71. Last, MDNR recommended continued coordination with the Vegetation Management Plan Working Group (VMPWG) to refine the Projects' VMP and supported the inclusion of a special condition in the DSPs directing coordination with the VMPWG.⁸⁴

C. Reply Comments

72. In reply comments, the Applicants indicated that a Power Purchase Agreement (PPA) had been reached for the Crane Project and for the Sandhill Project.⁸⁵

73. Crane Storage entered into a PPA with Xcel Energy for all 200 MW of the Crane Project's nameplate capacity. Xcel Energy included the Crane Project in its

⁷⁸ PUC-EIP Hearing Comments (December 16, 2025) (eDockets No. [202512-225911-01](#)).

⁷⁹ PUC-EIP Hearing Comments at 1–4 (December 16, 2025) (eDockets No. [202512-225911-01](#)).

⁸⁰ PUC-EIP Hearing Comments at 4–9 (December 16, 2025) (eDockets No. [202512-225911-01](#)).

⁸¹ PUC-EIP Hearing Comments at 9–10 (December 16, 2025) (eDockets No. [202512-225911-01](#)).

⁸² MDNR Hearing Comments at 1 (December 16, 2025) (eDockets No. [202512-225931-01](#)).

⁸³ MDNR Hearing Comments at 1–2 (December 16, 2025) (eDockets No. [202512-225931-01](#)).

⁸⁴ MDNR Hearing Comments at 2 (December 16, 2025) (eDockets No. [202512-225931-01](#)).

⁸⁵ Applicants' Response to Public Hearing Comments (December 23, 2025) (eDockets No. [202512-226183-01](#)).

October 31, 2025 Petition requesting approval for solar and BESS capacity.⁸⁶ As noted in Xcel Energy’s Petition, the Crane Project is part of “the first set of new resources proposed to meet system needs identified in [Xcel Energy’s] Integrated Resource Plan,” which was approved by the Commission in April 2025. The Crane Project will be part of a slate of projects that “will reduce carbon emissions, create jobs and economic benefits, and provide necessary capacity and energy to serve [Xcel Energy’s] customers.” The Crane Project was selected through a Commission-approved acquisition process, and an Independent Auditor confirmed that the process was fairly and consistently run.⁸⁷

74. Sandhill Storage also entered into a PPA with Xcel Energy for all 200 MW of the Sandhill Project’s nameplate capacity. Xcel Energy included the Sandhill Project in its December 3, 2025 Petition requesting approval for projects in support of the company’s resource needs.⁸⁸ Like the Crane Project, Xcel Energy describes the Sandhill Project as part of a portfolio that, “represent[s] an investment that will deliver numerous benefits to our customers while providing the capacity and energy needed to serve them safely, reliably, and affordably” and “reflect[s] a strategic commitment to Minnesota’s energy future.”⁸⁹

75. The Applicants also noted PUC-EIP’s comments on the Decommissioning Plan and indicated that they would make the recommended updates and provide them as required before construction.⁹⁰

76. The Applicants agreed with PUC-EIP’s changes to the DSPs to reflect changes in governing law.⁹¹

77. The Applicants reiterated their commitment to meet the MDNR’s recommendation for a ten-foot fence height.⁹²

78. The Applicants also agreed with MDNR’s comments that the EA adequately addressed the issues raised in scoping, and agreed that the conditions in the DSPs are reasonable. The Applicants also noted that they would continue to coordinate with the VMPWG on the Projects’ VMP.⁹³

⁸⁶ *In the Matter of Xcel Energy’s 2024 Wind, Solar, Storage, and Hybrid Request for Proposals*, Petition – Solar & Storage Portfolio, Docket No. E002/M-24-230 (Oct. 31, 2025).

⁸⁷ Applicants’ Response to Public Hearing Comments (December 23, 2025) (eDockets No. [202512-226183-01](#)).

⁸⁸ *In the Matter of Northern States Power Company’s, d/b/a Xcel Energy, Petition for Approval of Generator Projects for MISO’s Expedited Resource Addition Study (ERAS)*, Petition – Proposed Generator Projects for MISO Expedited Resource Addition Study (ERAS), Docket No. E002/RP-24-67 (Dec. 3, 2025).

⁸⁹ Applicants’ Response to Public Hearing Comments (December 23, 2025) (eDockets No. [202512-226183-01](#)).

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.*

VI. PERMITTEES

79. The permittee for the Crane Project is Crane Energy Storage LLC and the permittee for the Sandhill Project is Sandhill Energy Storage LLC.⁹⁴

VII. CERTIFICATE OF NEED

80. The Projects are exempt from certificate of need requirements pursuant to Minn. Stat. § 216B.2422, subd. 8(9) (2024) because a certificate of need is not required for energy storage systems.⁹⁵

VIII. SITE PERMIT CRITERIA

81. Energy storage systems with a nameplate capacity of 10,000 kilowatts (kW) or greater require a Site Permit from the Commission prior to construction pursuant to Minn. Stat. § 216E.03, subd. 1 (2024).⁹⁶

82. The Projects are eligible for the alternative permitting process under Minn. Stat. § 216E.04, subd. 2(9) (2024) and Minn. R. parts 7850.2800- 7850.3900.⁹⁷ The Applicants filed the Joint Application for Site Permits under the alternative process established by the Commission in Minn. R. 7850.2800–7850.3900.⁹⁸

IX. APPLICATION OF SITING CRITERIA TO THE PROPOSED PROJECTS

A. Human Settlement

83. Minnesota law requires consideration of the Projects' effects on human settlement, including displacement of residences and businesses, noise created by construction and operation of the Projects, and impacts to aesthetics, cultural values, recreation, and public services.⁹⁹

1. Aesthetics.

84. The aesthetic impact intensity level is expected to be minimal to moderate and long-term. Impacts are anticipated to be minimal for travelers along public roadways.¹⁰⁰

85. The visible elements of the Crane Project will consist of approximately 236 BESS units, a fenced area of approximately 14.8 acres, a new ten-foot fence surrounding the facility, and a stormwater pond. The visible elements of the Sandhill Project will consist

⁹⁴ Ex. APP.-101 at 1 (Application).

⁹⁵ Ex. APP.-101 at 7 (Application).

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ Ex. APP.-100 (Notice of Intent to Submit a Joint Site Permit Application Under Alternative Review Process).

⁹⁹ Minn. R. 7850.4100, subp. A.

¹⁰⁰ Ex. EIP-405 at 8 (EA).

of approximately 236 BESS units, a fenced area of approximately 13.3 acres, a new 10-foot fence surrounding the facility, and a stormwater pond. Shared components of the Crane Project and Sandhill Project include a collector substation, gen-tie line, and a primary access road.¹⁰¹

86. The Crane Project will convert approximately 14.8 acres of agricultural land use to host the BESS facility components for operation of the facility. The Sandhill Project will convert approximately 13.3 acres of agricultural land use to host the BESS facility components for operation of the facility. Although the change will be noticeable, there are several other industrial and commercial developments surrounding the Projects such as the Bryon Substation with numerous transmission line interconnects. The presence of the Projects would be similar to the existing infrastructure and developed landscape.¹⁰²

87. For residents outside the Projects' vicinity and for others with low viewer sensitivity, such as travelers along public roadways, aesthetic impacts are anticipated to be minimal. For these viewers, BESS enclosures may be relatively difficult to see due to elements such as the surrounding rolling topography, screening vegetation, and other existing facilities—the substation and transmission structures would be indiscernible from those of the adjoining Bryon Substation. Residents in the Projects' vicinity and areas residents traveling local roads are likely to be more sensitive to aesthetic impacts, but the topography of the site and existing screening around nearby residences will tend to screen the ten-foot enclosures and surrounding fence.¹⁰³

88. Exterior security lighting will be installed at the Projects' shared collector substation. Additional down-lit security lighting and cameras will be installed where appropriate around the BESS site for worker safety during operation. Gates will be installed at the entrance of the facility and between the BESS and collector substation. Impacts to light-sensitive land uses are not anticipated given the rural project location and the minimal required lighting for operations.¹⁰⁴

89. Section 4.3.8 of both DSPs require the permittees to consider landowner input with respect to visual impacts and to use care to preserve the natural landscape.

90. In addition, Section 5.1 of both DSPs is a special condition requiring the permittees to minimize lighting impacts by using shielded and downward facing light fixtures and using lights that minimizes blue hue. Aesthetic impacts can also be mitigated through individual agreements with neighboring landowners (sometimes referred to as good neighbor agreements).¹⁰⁵

¹⁰¹ Ex. EIP-405 at 42-43 (EA); Ex. APP.-115 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

¹⁰² Ex. EIP-405 at 43 (EA).

¹⁰³ *Id.*

¹⁰⁴ Ex. EIP-405 at 43 (EA).

¹⁰⁵ Ex. EIP-405 at 43-44 (EA).

91. The record demonstrates that Applicants have taken steps to mitigate and avoid visual impacts, and will continue to develop a site plan to avoid and minimize visual impacts.¹⁰⁶

2. Noise.

92. The impact intensity level during construction will range from negligible to significant depending on the activity; potential construction impacts are anticipated to be intermittent and short-term. Impacts are unavoidable but can be minimized. These localized impacts may affect nearby residences and might exceed state noise standards. Once operational, noise impacts are anticipated to range from negligible to moderate at nearby residences. Noise impacts from operation of the facilities can be minimized and mitigated.¹⁰⁷

93. Noise is defined as any undesired sound. It is measured in units of decibels on a logarithmic scale. The A-weighted scale (dBA) is used to duplicate the sensitivity of the human ear. A three dBA change in sound is barely detectable to average human hearing, whereas a five dBA change is clearly noticeable. A ten dBA change is perceived as a sound doubling in loudness.¹⁰⁸

94. In Minnesota, noise standards are based on noise area classifications (NAC) corresponding to the location of the listener, referred to as a receptor. NACs are assigned to areas based on the type of land use activity occurring at that location. Household units, designated camping and picnicking areas, resorts and group camps are assigned to NAC 1; recreational activities (except designated camping and picnicking areas) and parks are assigned to NAC 2; agricultural and related activities are assigned to NAC 3.¹⁰⁹

95. The primary noise receptors are the local residences. Although there are no residences within the sites, there are approximately 17 residences within the local vicinity (1,600 feet) of the Crane Project and 105 residences within the local vicinity of the Sandhill Project. There are an additional 226 residences located between 1,600 and 3,200 feet from the Crane Storage site and an additional 346 residences located between 1,600 and 3,200 feet from the Sandhill Storage site. The proposed Projects are in a rural, agriculturally dominated area and are within half a mile of a railroad and US Highway 14. Residences are in NAC 1. Noise receptors could also include individuals working outside in the Projects' vicinity. Potential noise impacts from the Projects are associated with construction noise and operational noise.¹¹⁰

96. Noise from construction will be temporary in duration, limited to daytime hours, and potentially moderate to significant depending on location. Crane Storage and Sandhill Storage indicate their intent to limit construction noise to daytime hours.

¹⁰⁶ Ex. APP.-115 at 11 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

¹⁰⁷ Ex. EIP-405 at 8 (EA).

¹⁰⁸ Ex. EIP-405 at 44 (EA).

¹⁰⁹ Ex. EIP-405 at 44-45 (EA).

¹¹⁰ Ex. EIP-405 at 45 (EA).

Construction noise will vary depending upon the phase of construction and the equipment being used. Sound levels from grading equipment are not dissimilar from the typical tractors and larger trucks used in agricultural communities during harvest. If pier foundation type is selected for the BESS units, pile driving of the piers for BESS enclosures will also contribute to construction noise. The noise from construction activities would dissipate with distance and be audible at varying decibels, depending on the locations of the equipment and receptor. Crane Storage and Sandhill Storage estimate the equipment noise levels will typically be less than 85 dBA at 50 feet when equipment is in operation. Thus, construction noise could exceed state noise standards at select times and locations. Exceedances would be short-term and confined to daytime hours. Even without an exceedance, noise impacts will occur.¹¹¹

97. The primary noise sources during facility operation are the BESS containers equipped with integrated inverters and heating, ventilation, and air conditioning (HVAC) equipment, and electrical transformers. Unlike solar facilities, which do not operate during the night, BESS facilities can be expected to operate during the day and night, resulting in noise levels that may vary throughout the day and night.¹¹²

98. Applicants modeled noise levels for the Projects. A noise study was completed assuming both the Crane Project and Sandhill Project operate all of their equipment at full capacity at the same time. The noise report modeled noise levels from the facilities using manufacturers' information of 472 PowerTitan 2.0 BESS enclosures, 118 medium voltage transformers, and two project substation transformers. The Applicants indicate that if battery technology is changed before construction, noise study analysis will be updated.¹¹³

99. The proposed equipment sound levels were modeled using industry-accepted sound modeling software to predict future sound levels. A total of 453 noise receptors (residences) were modeled within 3,200 feet of the Projects. Applicants state that the noise report indicates that noise levels are predicted to not exceed the 50 dBA residential limit at all adjacent residential properties. Noise from routine maintenance activities is anticipated to be negligible to minimal. Noise from the electrical collection system is not expected to be perceptible.¹¹⁴

100. Applicants indicate that they will mitigate construction noise impacts by limiting construction to daytime hours and using construction equipment and vehicles with properly functioning mufflers and noise-control devices.¹¹⁵

101. The record demonstrates that Applicants have taken steps to avoid and minimize noise impacts. Further, Section 4.3.7 of the DSPs requires the permittees to comply with noise standards established under Minnesota noise standards as defined

¹¹¹ Ex. EIP-405 at 45-46 (EA).

¹¹² Ex. EIP-405 at 46 (EA).

¹¹³ Ex. EIP-405 at 46 (EA).

¹¹⁴ *Id.*

¹¹⁵ *Id.*

under Minn. R. 7030.010 to 7030.0080 (2025), and to limit construction and maintenance activities to daytime hours to the extent practicable.¹¹⁶

102. Section 5.2 of the DSPs is a special condition that requires the permittees to file a pre-construction noise modeling and impact assessment summarizing results from noise propagation modeling using the selected equipment and final layout prior to construction of the facility. This condition also requires the permittees to file an updated noise impact assessment, including any revisions to selected equipment or facility layout, prior to modifying the permitted facility.¹¹⁷

103. Section 5.3 of the DSPs is a special condition that requires the permittees to file a proposed methodology for conduct of a post-construction noise study prior to construction of the Projects and to file the noise study within 18 months of operation. This section also clarifies that both Projects must be operated to comply with Minnesota Pollution Control Agency (MPCA) noise standards at all times and that the Permittees may be required to modify design or operation of the facilities to comply with MPCA noise standards.¹¹⁸

104. Section 5.11 of the DSPs is a special condition that requires the permittees to demonstrate continual compliance with the noise impact assessment, should the permittees implement battery augmentation activities later in the Projects' life.¹¹⁹

3. *Cultural Values.*

105. Construction and operation of the Projects is not anticipated to impact or alter the work life and leisure pursuits of residents or visitors in the Project areas or affect land use in such a way as to impact the underlying culture or community unity of the area.¹²⁰

106. At the same time, development of the Projects may change the character of the area, at least where it is visible. In addition, the Projects represent a shift in energy infrastructure by introducing storage facilities to the landscape. The value residents put on the character of the landscape within which they live is subjective, meaning its relative value depends upon the perception and philosophical or psychological responses unique to individuals. Because of this, construction of the Projects might—for some residents—change their perception of the area's character, potentially eroding their sense of place. This tension between infrastructure projects and rural character creates real tradeoffs.¹²¹

107. Because of the Projects' compact size, close proximity to existing energy infrastructure, and distance from valued geographic features, businesses, and

¹¹⁶ Ex. EIP-405 at 47 (EA).

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *Id.*

¹²⁰ Ex. EIP-405 at 48 (EA).

¹²¹ *Id.*

recreational resource, impacts to cultural resources from the Projects are anticipated to be minimal.¹²²

108. There are no conditions included in the DSPs that directly address mitigation for impacts to cultural values. No mitigation is proposed.¹²³

4. *Land Use and Zoning.*

109. The impact intensity level on land use and zoning is anticipated to be minimal. Land use impacts are anticipated to be long-term and localized. Although energy storage systems are not specifically addressed in local planning documents or zoning codes, the proposed facility is generally consistent with local land use ordinances and Olmsted County's Comprehensive Plan. Constructing the Projects will change land use at the site from agricultural to energy storage production for the expected 30-year life of the Projects. After the Projects' useful life, the Land Control Area could be restored to agricultural or other planned land uses by implementing appropriate restoration measures. Impacts can be minimized.¹²⁴

110. Land use is the characterization of land based on what can be built on it and how the land is used. Zoning is a regulatory tool used by local governments (cities, counties, and some townships) to guide specific land uses within specific geographic areas. Land cover documents show how much of a region is covered by forests, wetlands, impervious surfaces, agriculture, and other land and water types, including wetlands. Construction of the BESS facilities will alter current and future land use and land cover in the Land Control Area.¹²⁵

111. The National Land Cover Database provides "spatial reference and descriptive data for characteristics of the land surface" nationwide. Current land use at both sites is agricultural; approximately 99.3 percent of the Crane Project site and approximately 99.4 percent of the Sandhill Project site is used for cultivated crops while the remainder for both sites is developed land.¹²⁶

112. A site permit from the Commission supersedes local zoning, building, and land use rules. Though zoning and land use rules are superseded, the Commission's site permit decision must be guided, in part, by consideration of impacts to local zoning and land use in accordance with the legislative goal to "minimize human settlement and other land use conflicts."¹²⁷

113. The sites are located within the Urban Service Area of the Olmsted County General Land Use Plan. This Urban Service Area includes cities, and the land around them, planned for municipal service extension within the next 25-50 years. Urban

¹²² *Id.*

¹²³ *Id.*

¹²⁴ Ex. EIP-405 at 8 (EA).

¹²⁵ Ex. EIP-405 at 48 (EA).

¹²⁶ *Id.*

¹²⁷ *Id.*

development, interim development, and resource uses consistent with long term urban density development, such as limited non-farm residences, continuing farming activities, parks, mining activities, and wildlife and forest management are accommodated in this area.¹²⁸

114. The sites are also in Byron's 25-year growth boundary, meaning that the Projects are within an area identified by the City of Byron within which additional commercial and industrial development is anticipated.¹²⁹

115. Neither Kalmar Township nor Olmsted County have land use regulations that specifically address BESS facilities. However, review of the Kalmar Township Zoning Ordinance indicates that public utility buildings (e.g., substations, transformer stations) are conditionally permitted in the Agricultural Protection District (A-2). Both BESS facilities and collector substation would be similar in nature to other substations or transformer stations. The Applicants indicated that they have designed the Projects to be consistent with the stated setback distance in the Agricultural Protection District.¹³⁰

116. Because the Projects are within the Bryon 25-year growth boundary, development of the Projects is consistent with future land use planning and development in the City of Byron. Additionally, development of the Projects in an Urban Service Area is compatible with the Olmsted County General Land Use Plan as that area classification is planned for municipal service extension within the next 25 to 50 years and development of the Projects would support operating and future renewable energy generation projects in Olmsted County.¹³¹

117. The Crane Project will convert 23.5 acres of agricultural land to industrial use (an additional 12.1 acres of agricultural land will be temporarily used for the construction phase of the Project only) and the Sandhill Project will convert 24.1 acres of agricultural land to industrial use (an additional 15.8 acres of agricultural land will be temporarily used for the construction phase of the Projects only).¹³²

118. Section 4.3.22 of the DSPs requires the permittees to avoid damage to drain tile and to repair or replace drain tile if damaged over the Projects' life.¹³³

119. Section 5.6 of the DSPs is a special condition that requires Applicants to prepare a VMP to prevent soil erosion and invests in soil health by establishing a plan to protect soil resources by ensuring perennial cover. The Applicants' draft VMP was submitted on May 13, 2025.¹³⁴

120. Section 9.2 of the DSPs requires removal of all project-related infrastructure and requires the Applicants to restore and reclaim the site to pre-project conditions to the

¹²⁸ Ex. EIP-405 at 49-50 (EA).

¹²⁹ Ex. EIP-405 at 50 (EA).

¹³⁰ *Id.*

¹³¹ Ex. EIP-405 at 50 (EA).

¹³² *Id.*

¹³³ *Id.*

¹³⁴ Ex. APP.-112 (Draft Vegetation Management Plan).

extent feasible. The Applicants' draft Decommissioning Plan is found in Appendix D of the Application.¹³⁵

121. The DSPs include a number of conditions to mitigate impacts on land use, and impacts will be minimized.¹³⁶

5. *Property Values.*

122. Impacts to property values within the local vicinity could occur; however, changes to a specific property's value are difficult to determine. Because of this uncertainty, impacts to specific properties in the Projects' vicinity could be minimal to moderate and decrease with distance and over time.¹³⁷

123. Electrical generating facilities can impact property values. Often, negative effects result from impacts that extend beyond the Projects' location. Examples include emissions, noise, and visual impacts. Unlike fossil-fueled electric generating facilities, the Projects would not generate emissions. Potential impacts from operational noise are possible. Aesthetic impacts will occur, but because the Projects are relatively low in height – as compared to a wind turbine or a smokestack – impacts would be localized.¹³⁸

124. Commission staff were unable to locate peer-reviewed literature that addressed potential impacts to property values from stand-alone BESS.¹³⁹

125. Impacts to the value of specific properties within the Projects' vicinity are difficult to determine but could occur. Considerations such as setbacks, benefits to the community, economic impact, noise, and screening could have an unpredictable range of influence over property value. The Projects are screened to some extent from nearby residences by the topography and existing windbreaks around homes.¹⁴⁰

126. To the extent that negative impacts do occur, they are expected to decrease with distance from the Projects. Aesthetic and noise impacts that might affect property values would be limited to residences and parcels in the Projects' vicinity where the facility may be visible and where noise impacts from operation may occur.¹⁴¹

127. Impacts to property values can be mitigated by reducing aesthetic impacts and encumbrances to future land use. Impacts can also be mitigated through individual agreements with neighboring landowners. Such agreements were not within the scope of the EA.¹⁴² No mitigation is proposed.¹⁴³

¹³⁵ Ex. EIP-405 at 51 (EA).

¹³⁶ Ex. EIP-405 at 49 (EA).

¹³⁷ Ex. EIP-405 at 8 (EA).

¹³⁸ Ex. EIP-405 at 51 (EA).

¹³⁹ Ex. EIP-405 at 52 (EA).

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ See Ex. EIP-405 at 51–52 (EA).

128. The record demonstrates that Applicants have taken steps to avoid and minimize noise impacts. Further, the DSPs include a number of conditions, including requiring the permittees to comply with Minnesota’s noise standards (Section 4.3.7),¹⁴⁴ to file a pre-construction noise modeling and impact assessment (Section 5.2),¹⁴⁵ and to file a proposed methodology for conduct of a post-construction noise study prior to construction of the Projects and to file the noise study within 18 months of operation (Section 5.3). Both Projects must be operated to comply with MPCA noise standards at all times (Section 5.3).¹⁴⁶ The permittees must demonstrate continual compliance with the noise impact assessment, should the permittees implement battery augmentation activities later in the Projects’ life (Section 5.11).¹⁴⁷

6. *Transportation and Public Services.*

129. Potential impacts to the electrical grid, roads and other utilities are anticipated to be short-term, intermittent, and localized during construction. Impacts to existing wells and septic systems are not expected to occur. Impacts to railroads and pipelines are not expected to occur. Overall, construction-related impacts are expected to be minimal, and are associated with possible traffic delays. During operation, negligible traffic increases would occur for maintenance. Impacts are unavoidable but can be minimized.¹⁴⁸

130. Most rural residences in Olmsted County are supplied water by wells or by water towers. The City of Bryon is supplied with water by two wells and two water towers. Sewage is serviced by a municipal wastewater treatment plant. There are no active wells within the Land Control Areas according to the Minnesota Department of Health (MDH) records.¹⁴⁹

131. Xcel Energy serves most of the City of Bryon west of 10th Avenue Northeast. The primary electric provider in the Project areas is Xcel Energy (Peoples Energy Cooperative serves all of Somerby and East of 10th Avenue NE). Six transmission lines connect to the SMMPA 161kV Bryon Substation from the southeast, south, northwest, and north. Two of these existing transmission lines intersect the Land Control Areas.¹⁵⁰

132. Minnesota Energy Resources provides natural gas service in the Project areas. There is one gas transmission pipeline that intersects the primary access road that will be shared by the Crane Project and Sandhill Project and generally runs east to west. This gas transmission pipeline is owned by Northern Natural Gas Company. There is one

¹⁴⁴ Ex. EIP-405 at 47 (EA).

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ *Id.*

¹⁴⁸ Ex. EIP-405 at 8 (EA).

¹⁴⁹ Ex. EIP-405 at 52 (EA).

¹⁵⁰ *Id.*

hazardous liquid pipeline mapped approximately 3.6 miles east of the Projects that generally runs north to south.¹⁵¹

133. The Dakota Minnesota and Eastern Railroad is south of the Bryon substation, between the site and US Highway 14. The Projects will avoid railroad property and railroad right-of-way (ROW).¹⁵²

134. The major roadway near the Project areas is U.S. Highway 14, located 0.5 miles south of the site. Other roads in the Projects' vicinity are county and township roads. The primary access road for the Projects will be off 13th Street NW.¹⁵³

135. The Rochester International Airport is the only registered airport in Olmsted County; it is located approximately 12 miles southeast of the Projects. The Dodge Center Airport is located approximately eight miles west of the site. In order to ensure safety, both the Federal Aviation Authority (FAA) and the Minnesota Department of Transportation (MnDOT) Office of Aeronautics have established guidelines for the location of structures near airports. The FAA has height restrictions for development near public airports and guidelines for placement of buildings and other structures near high frequency omnidirectional range navigation systems. MnDOT has zoning areas around public airports that restrict the area where buildings and other structures can be placed.¹⁵⁴

136. Large energy projects can impact public services, such as buried utilities or roads. These impacts are usually temporary, for example, road congestion associated with material deliveries. Impacts can be long-term if they change the area in a way that precludes or limits public services.¹⁵⁵

137. No wells or septic fields are present within the Project Land Control Areas. The preliminary Project layouts do not indicate intent to install any facilities where a well for drinking water or onsite-septic system for sanitary services is need.¹⁵⁶ A well construction permit from the MDH would be required if designs change and a well is installed for either Project.¹⁵⁷

138. No long-term impacts to utilities will occur. The Applicants will coordinate with the owners of existing transmission lines to avoid impacting these facilities and ensure interruptions in service are minimized or avoided to the extent possible. During interconnection of the Projects, customers may experience short outages when the Byron Substation is shut down. The timing and duration of any service interruptions would be determined and communicated by the interconnecting utility.¹⁵⁸

¹⁵¹ Ex. EIP-405 at 53 (EA).

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ Ex. EIP-405 at 53 (EA).

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ Ex. EIP-405 at 54 (EA).

¹⁵⁸ Ex. EIP-405 at 53 (EA).

139. Section 4.3.5 of the DSPs is a standard permit condition that requires the permittees to minimize disruptions to public utilities. The location of underground utilities can be identified using the Gopher State One Call system during engineering surveys and marking the underground utility locations prior to construction. If a utility is identified, the Project's component or the utility itself might need to be relocated if it cannot be successfully crossed. Relocation, as well as any necessary crossing, would need to be coordinated with the affected utility.¹⁵⁹

140. The shared access road crosses an existing gas transmission pipeline, owned by Northern Natural Gas Company, that generally runs east to west. Damage to the utility pipeline is not expected to occur during ground disturbing activities.¹⁶⁰

141. Section 5.5 of the DSPs is a special condition that requires the permittees to confer with the Northern Natural Gas Company to avoid impacts to the pipeline and further develop mitigation measures as needed.¹⁶¹

142. No impacts to railroads are anticipated. The Projects will avoid railroad property and railroad ROW.¹⁶² No additional mitigation is proposed.¹⁶³

143. During construction, workers and trucks delivering construction material and equipment will use the existing state, county, and township road system to access the Projects, primarily 13th Street NW. Traffic during construction is estimated to be approximately 31 to 70 pickup trucks, cars, and/or other types of employee vehicles onsite for the majority of construction. It is estimated that approximately eight semi-trucks per day will be used for delivery of facility components. Semi-truck delivery will vary per day depending on time of construction and delivery timeline of equipment. Overweight or oversized loads are unlikely. Traffic impacts during construction are anticipated on some public roads due to additional traffic and slow-moving construction vehicles. The increased traffic may be perceptible to area residents, but the increase in traffic volume is not expected to affect traffic function. The Applicants state that overweight or oversized loads are "unlikely," but will obtain appropriate approvals for these loads prior to construction. No impacts to roads are anticipated during the operations phase of the Projects; negligible traffic increases would occur for maintenance.¹⁶⁴

144. Section 4.3.19 of the DSPs requires permittees to inform road authorities of roads that will be used during construction and acquire necessary permits and approvals for oversize and overweight loads. Permitted fencing and vegetative screening cannot interfere with road maintenance activities, and the least number of access roads shall be constructed. In addition to permit requirements for driveway access and the conditions of the DSPs, the following practices can mitigate potential impacts: Pilot vehicles can accompany movement of heavy equipment, deliveries can be timed to avoid traffic

¹⁵⁹ Ex. EIP-405 at 54 (EA).

¹⁶⁰ *Id.*

¹⁶¹ Ex. EIP-405 at 54-55 (EA).

¹⁶² Ex. EIP-405 at 54 (EA).

¹⁶³ Ex. EIP-405 at 55 (EA).

¹⁶⁴ Ex. EIP-405 at 54 (EA).

congestion and dangerous situations on the roadway, traffic control barriers and warning devices can be used as necessary, and photographs can be taken prior to construction to identify pre-existing conditions.¹⁶⁵

145. The Applicants used the FAA's Notice Criteria to determine if further aeronautical study or FAA filing is needed. The Applicants indicate that no further studies are necessary. Impacts to local airports are not anticipated.¹⁶⁶

7. Socioeconomics.

146. The socioeconomic impact intensity level is anticipated to be minimal and positive. Effects associated with construction will, overall, be short-term and minimal. Impacts from operation will be negligible. Significant positive effects may occur for individuals. Adverse impacts are not anticipated.¹⁶⁷

147. Crane Storage anticipates that the Crane Project will require approximately 75 jobs during the construction phase, and up to four long-term personnel during the operations phase. Sandhill Storage anticipates that the Sandhill Project will require approximately 75 jobs during the construction phase, and one to two long-term personnel during the operations phase. Indirect benefits will occur from additional local spending on lodging, goods, and services and local sales tax.¹⁶⁸

148. Construction of the Projects is likely to result in increased expenditures for lodging, food and fuel, transportation, and general supplies at local businesses during construction. The Applicants will solicit bids for an Engineering, Procurement, and Construction (EPC) contractor to construct the Projects and will prioritize EPC contractor bids that utilize local, union construction personnel to the greatest extent feasible.¹⁶⁹

149. Unlike solar and wind facilities that pay a production tax based on energy generated, Crane Storage and Sandhill Storage will not pay a production tax because the facilities do not generate power, they store and then release power. Thus, neither the Crane Project nor Sandhill Project will generate tax revenue through a production tax. This said, the Projects will generate tax revenue through property tax payments. Crane Storage and Sandhill Storage, for each project separately, are estimated to provide property tax payments to Olmsted County of approximately \$4,000 annually (\$8,000 total) over the 30-year life of the Projects for a cumulative total of approximately \$120,000 (\$240,000 total). Additionally, Kalmar Township, for each project, is estimated to receive approximately \$760 (\$1,520 total) annually over the 30-year term for a cumulative total of approximately \$22,800 (\$45,600 total).¹⁷⁰

¹⁶⁵ Ex. EIP-405 at 55 (EA).

¹⁶⁶ Ex. EIP-405 at 54 (EA).

¹⁶⁷ Ex. EIP-405 at 8 (EA).

¹⁶⁸ Ex. EIP-405 at 56-57 (EA).

¹⁶⁹ Ex. EIP-405 at 57 (EA).

¹⁷⁰ *Id.*

150. Construction of the Projects is estimated to result in payment of sales and use taxes, with the State of Minnesota expected to receive \$17 million (\$34 million cumulatively) and Olmsted County to receive \$1.3 million (\$2.6 million cumulatively).¹⁷¹ The sales and use taxes are primarily a result of the purchase of equipment and construction materials needed to complete the Projects. In addition, purchase payments paid to the landowners will offset potential financial losses associated with removing a portion of their land from agricultural production.¹⁷²

151. Both Crane Storage and Sandhill Storage have entered PPAs with Xcel Energy.¹⁷³

152. Section 8.5 of the DSPs requires quarterly reports concerning efforts to hire Minnesota workers.¹⁷⁴

153. Section 8.6 of the DSPs requires the permittees, as well as construction contractors and subcontractors, to pay no less than the prevailing wage rate.¹⁷⁵

154. Socioeconomic impacts are anticipated to be positive in the short term and over the long-term operation of the Projects. No additional mitigation is proposed.

8. *Environmental Justice.*

155. The Projects will not have disproportionately high and adverse human health or environmental effects on low-income, minority, or tribal populations.¹⁷⁶

156. In Minnesota, environmental justice areas are defined as census tracts:

- 40 percent or more of the area's total population is nonwhite;
- 35 percent or more of households in the area have an income that is at or below 200 percent of the federal poverty level;
- 40 percent or more of the area's residents over the age of five have limited English proficiency; or
- The area is located within Indian Country, as defined in United States Code, title 18, section 1151.¹⁷⁷

¹⁷¹ Ex. APP.-115 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

¹⁷² Ex. EIP-405 at 57 (EA).

¹⁷³ Applicants' Response to Public Hearing Comments (December 23, 2025) (eDockets No. [202512-226183-01](#)).

¹⁷⁴ Ex. EIP-405 at 57 (EA).

¹⁷⁵ Ex. EIP-405 at 57 (EA).

¹⁷⁶ Ex. EIP-405 at 9 (EA).

¹⁷⁷ Ex. EIP-405 at 58 (EA).

157. The Projects are not located within an identified environmental justice area according to the MPCA mapping tool.¹⁷⁸

158. Since the Projects are not within a census tract which Minnesota deems an environmental justice area, disproportionate and adverse impacts to these populations are not expected, and mitigation is not proposed.¹⁷⁹

B. Public Health and Safety

159. Minnesota law requires consideration of the Projects' potential effect on health and safety.¹⁸⁰

1. Electric and Magnetic Fields (EMF).

160. Potential impacts are anticipated to be negligible and are not expected to negatively affect human health. Impacts will be long-term and localized but can be minimized. The primary sources of EMF from the facility will be from the buried electrical collection lines, the transformers installed at each inverter, and the Projects' tap line between the shared collector substation and the Byron substation. Because the electrical components, such as the transformers, will be enclosed in a grounded metal case and distant from residences, EMF levels are anticipated to be minimal.¹⁸¹

161. No health impacts from EMF are anticipated. EMF diminishes with distance from a conductor or inverter. The nearest residences are more than 1,000 feet from the BESS units, collector substation, and gen-tie line. At these distances both electric and magnetic fields will dissipate to background levels. No additional mitigation is proposed.¹⁸²

2. Public Safety and Emergency Services.

162. The inflow of temporary construction personnel could increase demand for emergency and public health services. On-the-job injuries of construction workers requiring assistance due to slips, trips or falls, equipment use, or electrocution can create a demand for emergency, public health, or safety services that would not exist if the Projects were not built. Although no road closures are anticipated during construction, any temporary closures could impede police, fire, and other rescue vehicles access to the site of an emergency.¹⁸³

163. As with other industrial facilities, there is the potential for falls, fire or other industrial accidents once operational. The main safety hazard of a BESS is battery failure leading to thermal runaway which has the potential to spread to nearby batteries and containers, quickly presenting an emergency. The movement of electrons and lithium ions

¹⁷⁸ *Id.*

¹⁷⁹ Ex. EIP-405 at 59 (EA).

¹⁸⁰ Minn. Stat. § 216E.03, subd. 7(b)(1); Minn. R. 7850.4100, subp. B.

¹⁸¹ Ex. EIP-405 at 63 (EA).

¹⁸² *Id.*

¹⁸³ Ex. EIP-405 at 64 (EA).

within the battery cell produces electricity as well as heat. Lithium-ion batteries are designed to allow heat to dissipate from the cell to maintain a controlled reaction. Thermal runaway is a phenomenon when a battery cell generates heat at a greater rate than the heat can dissipate from the cell, resulting in a cascading chemical reaction which produces additional heat.¹⁸⁴

164. Thermal runaway events can result in extremely high temperatures, smoke, fire, and potentially ejection of gas, shrapnel, and particulates. Although BESSs are a relatively new technology, there is a growing body of research that informs industry standards to minimize the potential for these types of incidents and mitigate potential safety concerns in the event of such incident.¹⁸⁵

165. There are two major types of lithium-ion battery technology used in BESS facilities. The chemistry of nickel manganese cobalt (NMC) batteries allows them to charge and discharge at higher rates (referred to as “energy density”) than lithium iron phosphate (LFP) batteries. The ability to charge and discharge at high rates made them a popular choice in early BESS projects. However, compared to LFP batteries, the NMC batteries have a lower thermal runaway temperature, creating increased risks and requiring enhanced monitoring. In comparison, LFP batteries have a higher thermal runaway temperature, making them more stable and less prone to fire. As a result of the relative thermal stability compared to NMC technology as well as decreased costs as the LFP technology matured, the energy storage industry has recently pivoted to LFP technology.¹⁸⁶

166. Emergency response to fires or thermal runaway events at BESS facilities requires specialized response. Fires at BESS facilities present unique challenges to firefighters. Unlike other utilities or industrial sites, BESS facilities do not have a single point of disconnect and, although separate parts of the system can be disconnected, the batteries will remain energized. Because of the gases that accumulate within containers during a thermal runaway event or fire, first responders should not approach or enter the containers.¹⁸⁷ The Projects will use self-contained BESS units that contain batteries installed in purpose-built enclosures, so it will not be possible to enter the containers.¹⁸⁸ Because of the difficulty in extinguishing fires, the risk that some batteries will remain energized, and the potential exposure to toxic gas, the industry recommends that first responders monitor the event and allow fires to burn themselves out as the energy is depleted from the batteries.¹⁸⁹

167. The Projects will be designed and constructed in compliance with applicable electric codes. Electrical inspections will ensure proper installation of all components, and

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ Ex. EIP-405 at 64-65 (EA).

¹⁸⁷ Ex. EIP-405 at 65 (EA).

¹⁸⁸ Ex. APP.-101 at 13 & 17 (Application).

¹⁸⁹ Ex. EIP-405 at 65 (EA).

the Projects will undergo routine inspection. Electrical work will be completed by trained technicians.¹⁹⁰

168. Construction is bound by federal and state Occupational Safety and Health Administration (OSHA) requirements for worker safety, and must comply with local, state, and federal regulations regarding installation of the facilities and qualifications of workers. Established industry safety procedures will be followed during and after construction of the Projects. Crews will be trained and briefed on safety issues, reducing the risk of injury. The Projects will be fenced to prevent unauthorized access.¹⁹¹

169. Construction crews must comply with local, state, and federal regulations when installing the BESS components and associated facilities. This includes standard construction-related health and safety practices. This generally includes safety orientation and training, as well as daily/weekly safety meetings.¹⁹²

170. In addition to the use of the more stable LFP technology, Applicants' facility designs use modular containers that are tested by the manufacturer to ensure fire resistance. Modern BESS containers include explosion prevention systems to remove flammable gases during a thermal runaway event and relieve pressure to limit gas levels within the containers from reaching levels that can be flammable or explosive. The containers are spaced to minimize the potential for fire to spread to other containers. The BESS equipment is monitored remotely, tracking cell voltage and temperature to identify and isolate potential issues before they occur. The facility will also install fire detection systems at the containers to recognize incidents and disconnect and isolate failed equipment.¹⁹³

171. NFPA standards require BESS facilities to prepare a hazard mitigation analysis (HMA) detailing the results of the equipment testing and the risks associated with the technology prior to installation of the BESS.¹⁹⁴

172. Section 4.3.7 of the DSPs requires the permittees to take several public safety measures, including landowner educational materials, appropriate signs and gates, etc.¹⁹⁵

173. Section 5.4 of the DSPs is a special condition that requires the permittees to file an HMA detailing the testing results for the selected equipment and the risks associated with the technology at least 30 days prior to the pre-construction meeting.¹⁹⁶

174. Section 8.11 of the DSPs is a standard condition that requires permittees to file an Emergency Response Plan with the Commission and local first responders prior to operation. As discussed above, the fire hazards associated with BESS facilities require

¹⁹⁰ *Id.*

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ Ex. EIP-405 at 65 (EA).

¹⁹⁴ Ex. EIP-405 at 66 (EA).

¹⁹⁵ *Id.*

¹⁹⁶ *Id.*

additional training for first responders. Emergency response plans for BESS facilities require project-specific details on emergency response to incidents at the BESS. This includes BESS-specific training. The American Clean Power Association has developed an Emergency Response Plan template for BESS Facilities.¹⁹⁷

175. Section 8.12 of the DSPs requires disclosure of extraordinary events, such as fires, etc.¹⁹⁸

176. Section 9.1 of the DSPs requires a Decommissioning Plan prior to construction and updates every five years. Periodic updates of the plan will address the developing information on end-of-life issues related to batteries.¹⁹⁹

C. Land-Based Economies

177. Minnesota law requires consideration of the Projects' potential effect on land-based economies – specifically, agriculture, forestry, tourism, and mining.²⁰⁰

178. Of the economies listed in Minn. R. 7850.4100(C) (2025), agriculture, tourism, and recreation are present in the area around the Projects. Because forestry and mining do not occur within the area, impacts will not occur.²⁰¹

1. Agriculture.

179. The Crane Project will result in the conversion of 14.8 acres of agricultural land to impervious surfaces during its operating life and will not result in a significant impact to land-based economies in the Project vicinity as this acreage constitutes less than 0.01 percent of the cropland in Olmsted County. The land could be returned to agricultural uses after the Crane Project is decommissioned and the site is restored.²⁰²

180. The Sandhill Project will result in the conversion of 13.4 acres of agricultural land to impervious surfaces during its operating life and will not result in a significant impact to land-based economies in the Project vicinity as this acreage constitutes less than 0.01 percent of the cropland in Olmsted County. The land could be returned to agricultural uses after the Crane Project is decommissioned and the site is restored.²⁰³

181. Additionally, the Projects will mitigate the loss of crop-related revenue to affected landowners by providing payments as provided in the applicable voluntary Purchase Option Agreements and easement agreements. Consequently, the Projects are not expected to have a significant impact on agricultural production in the county.²⁰⁴

¹⁹⁷ *Id.*

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100, subp. C.

²⁰¹ Ex. EIP-405 at 66 (EA).

²⁰² Ex. EIP-405 at 67–68 (EA).

²⁰³ Ex. EIP-405 at 68 (EA).

²⁰⁴ Ex. APP.-101 at 38 (Application).

182. The DSPs include measures to mitigate agricultural and soil impacts, including, for example, the protection of topsoil (Section 4.3.9), minimization of soil compaction (Section 4.3.10), implementation of a VMP and erosion prevention and sediment control practices (Section 4.3.11 & Section 5.6), development of an Invasive Species Management Plan (Section 4.3.17), and restoration or compensation for damages to crops and agricultural infrastructure (Section 4.3.26).

2. *Tourism & Recreation.*

183. In 2023, the leisure and hospitality industry in Olmsted County accounted for about \$627.7 million in gross sales and employed an estimated 9,412 people. The Rochester metropolitan area is approximately nine miles east of the Projects, and there are multiple tourist destinations in Rochester, including the Rochester Art Center, the Charles E. Gagnon Museum and Sculpture Garden, and the History Center of Olmsted County.²⁰⁵

184. There are no wildlife management areas, scientific and natural areas or state parks within one mile of the site. The closest wildlife management area is the Moon Valley Wildlife Management Area, located approximately eight miles northeast of the site. Although there are a number of parks in and near the cities of Byron and Rochester, the nearest park to the Projects is Oxbow Park & Zollman Zoo approximately three miles northwest from the sites.²⁰⁶

185. Impacts to recreation are anticipated to be nominal and the construction and operation of the Projects is not anticipated to impact recreation or tourism in the area.²⁰⁷ No mitigation is proposed.²⁰⁸

D. Archaeological and Historic Resources

186. Minnesota law requires consideration of the Projects' potential effects on historic and archaeological resources.²⁰⁹

187. Archaeological resources are locations where objects or other evidence of archaeological interest exist, and can include aboriginal mounds and earthworks, ancient burial grounds, prehistoric ruins, or historical remains. Historic resources are sites, buildings, structures, or other antiquities of state or national significance.²¹⁰

188. The Applicants engaged TRC Companies, Inc. (TRC) to conduct a background literature review to identify previously recorded cultural resources that could be affected by the Crane and Sandhill Projects within the sites or the one-mile buffer. The literature review identified two previously recorded archaeological sites and 13 historic structures within one mile of the Crane and Sandhill Land Control Areas. Neither of the

²⁰⁵ Ex. EIP-405 at 69 (EA).

²⁰⁶ *Id.*

²⁰⁷ *Id.*

²⁰⁸ *Id.*

²⁰⁹ Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100, subp. D.

²¹⁰ Ex. EIP-405 at 69 (EA).

two archaeological sites have been evaluated for listing in the National Register of Historic Places (NRHP). Six of the 13 historic structures have been determined not eligible for listing in the NRHP, including the two historic structures nearest the Crane and Sandhill Land Control Areas. The remaining seven historic structures have not been evaluated for NRHP listing.²¹¹

189. TRC also conducted a Phase I field inventory for the Crane and Sandhill Land Control Areas in November 2024. The phase I field inventory checked for previously undocumented archaeological sites that could affect the Projects. No cultural resources were documented during the field review.²¹²

190. The results of TRC's background literature review and Phase I field inventory was submitted to SHPO for review in September and December of 2024. SHPO agreed with the findings and recommendations in the Phase I field inventory report and commented that the Projects would not affect properties listed in the National or State Registers of Historic Places or within the Historic Sites Network.²¹³

191. The Applicants also contacted the 11 federally recognized tribal nations in Minnesota and the Minnesota Indian Affairs Council for additional information or comment on the Projects.²¹⁴

192. Before construction of the Projects begins, the Applicants will prepare an Unanticipated Discoveries Plan that will outline the steps to be taken if previously unrecorded cultural resources or human remains are encountered during construction. Should previously unknown archaeological resources be inadvertently encountered during construction and/or operation of the Projects, work will stop, and the discovery will be examined by an archaeologist.²¹⁵

193. The record demonstrates that the Projects will not cause adverse impacts to archaeological and historic resources. Further, Sections 4.3.20 and 5.7 of the DSPs address archaeological and historic resources.²¹⁶

E. Natural Environment

194. Minnesota law requires consideration of the Projects' potential effects on the natural environment, including effects on air and water quality resources and flora and fauna.²¹⁷

²¹¹ Ex. EIP-405 at 70 (EA).

²¹² Ex. EIP-405 at 70 (EA).

²¹³ *Id.*

²¹⁴ *Id.*

²¹⁵ Ex. APP.-101 at 71 (Application).

²¹⁶ Ex. EIP-405 at 70–71 (EA).

²¹⁷ Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100, subp. E.

1. Air Quality.

195. Minimal intermittent air emissions are expected during construction of the Projects. Air emissions associated with construction are highly dependent upon weather conditions and the specific activity occurring. For example, traveling to a construction site on a dry gravel road will result in more fugitive dust than traveling the same road when wet. Once operational, neither the generating facility nor the transmission line will generate criteria pollutants or carbon dioxide.²¹⁸

196. Motorized equipment will emit exhaust. This includes construction equipment and vehicles travelling to and from the Projects. Exhaust emissions, primarily from diesel equipment, would vary according to the phase of construction. Exhaust emissions can be minimized by keeping vehicles and equipment in good working order, and not running equipment unless necessary.²¹⁹

197. All projects that involve movement of soil or exposure of erodible surfaces generate some type of fugitive dust emissions. The Projects will generate fugitive dust from travel on unpaved roads, grading, and excavation.²²⁰ Over the life of the Projects, fugitive dust emissions will be reduced by the elimination of farming and establishment of permanent vegetative cover.²²¹ Applicants will implement best management practices during construction and operation of the Projects to minimize dust emissions. Additional practices may include watering or treating haul and access roads and other exposed dust-producing areas, containment of excavated material, protection of exposed soil, soil stabilization, and treatment stockpiles to control fugitive dust.²²²

198. Following construction, the Projects will not generate criteria pollutants or carbon dioxide emissions during normal operation.²²³

199. The record demonstrates that Applicants have taken steps to avoid and minimize impacts to air quality. Further, several sections of the DSPs indirectly mitigate impacts to air quality, including sections related to soils, vegetation removal, restoration, and pollution and hazardous wastes.²²⁴

2. Geology and Groundwater.

200. Minnesota is divided into six groundwater provinces based on bedrock and glacial geology. The Project sites are within Province 3, the Karst province, which can be characterized as having thin glacial sediments overlying thick and extensive bedrock prone to karst features such as sinkholes and caves. In this province, groundwater is typically derived from bedrock aquifers below the glacial sediment cover. Groundwater is generally readily available, but water quality is susceptible to pollution from surface

²¹⁸ Ex. EIP-405 at 72 (EA).

²¹⁹ Ex. EIP-405 at 73 (EA).

²²⁰ *Id.*

²²¹ Ex. APP.-101 at 71 (Application).

²²² Ex. EIP-405 at 73 (EA).

²²³ Ex. EIP-405 at 71 (EA).

²²⁴ Ex. EIP-405 at 73 (EA).

activity because fractures and sinkholes can form passageways that funnel water and contaminants quickly from the surface to groundwater.²²⁵

201. Potential impacts to geology and groundwater can occur directly or indirectly. Impacts to geological resources are likely to be minimal, due to the thickness of surficial materials (100 to 200 feet) and the absence of karst features. Direct impacts to groundwater, including aquifers, are not anticipated as water supply needs will be quite limited. The closest documented well is 410 feet from the portion of the Crane and Sandhill Land Control Areas that overlaps to form the access road which minimizes the risk of impacts on private wells in the area. Other direct impacts to groundwater associated with construction (for example, structure foundations that could penetrate shallow water tables or groundwater usage) are not anticipated. Indirect impacts could occur through spills or leaks of petroleum fluids or other contaminants that contaminate surface waters and that could ultimately contaminate groundwater. The disturbance of soil and vegetative cover could affect water quality in groundwater resources. Once constructed, the impervious surface area for the Crane Project will be approximately 14.8 acres, and for the Sandhill Project will be 13.4 acres. For each Project, these acres converted to impervious surfaces separately include acreage for shared facilities such as the access road and collector substation.²²⁶

202. The Projects are not located within any Wellhead Protection Areas or Drinking Water Supply Management Areas.²²⁷

203. If any previously unmapped wells are discovered, Crane Storage and Sandhill Storage will cap and abandon the well in place in accordance with MDH requirements.²²⁸

204. Construction of Project facilities is not likely to require subsurface blasting. Therefore, disturbances to groundwater flow from newly fractured bedrock are not anticipated. Any dewatering required during construction will be discharged to the surrounding surface, thereby allowing it to infiltrate back into the ground to minimize potential impacts. If, during construction, dewatering exceeds withdrawal of more than 10,000 gallons of water per day or one million gallons per year, the Applicants will obtain a Water Appropriation Permit from MDNR.²²⁹

205. Stormwater management will ensure that BESS components maintain their integrity and that rainwater and surface runoff drain away from the project components in a way that does not adversely affect existing drainage systems, roads, or nearby properties. Appropriate permanent stormwater management measures, including minimizing the area of impervious surfaces at the site to reduce the volume and velocity

²²⁵ *Id.*

²²⁶ Ex. EIP-405 at 74–75 (EA).

²²⁷ Ex. EIP-405 at 74 (EA).

²²⁸ Ex. EIP-405 at 76 (EA).

²²⁹ *Id.*

of the stormwater runoff and the establishment of multiple stormwater ponds, will be adopted to address drainage from the newly established impervious areas.²³⁰

206. Because the Projects will each disturb more than one acre, Crane Storage and Sandhill Storage must each obtain a Construction Stormwater Permit (CSW) from the MPCA. The CSW Permit will identify BMPs for erosion prevention and sediment control. As part of the CSW Permit, Crane Storage and Sandhill Storage will also each develop a SWPPP that describes construction activity, temporary and permanent erosion and sediment controls, BMPs, and permanent stormwater management that will be implemented during construction and through the life of the Projects. Implementation of the protocols outlined in the SWPPP will minimize the potential for soil erosion and detail stormwater management methods during construction and operation of the facilities.²³¹

207. The Applicants plan to construct one stormwater basin per Project (two total) to manage stormwater collection and filtration on-site. In accordance with the CWS permits, the stormwater basins will be constructed to prevent adverse impacts to groundwater resources.²³²

208. In sum, impacts to domestic water supplies are not expected and impacts to geology are not anticipated. Direct impacts to groundwater are also not anticipated, but indirect, localized impacts to groundwater resources could occur. Impacts will be mitigated through use of BMPs for stormwater management.²³³ Further, the DSPs include conditions to require the permittees to obtain an MPCA CSW Permit and implement the BMPs for erosion prevention and sediment control.²³⁴

3. Soils.

209. Impacts to soils will occur during construction and decommissioning of the Projects. The impact intensity level is expected to be minimal.²³⁵

210. Soil characteristics within the Crane and Sandhill Land Control Areas were accessed using the Soil Survey Geographic Database (SSURGO).²³⁶ Construction of the Crane facilities will disturb 35.6 acres and construction of the Sandhill facilities will disrupt 39.9 acres within their respective Land Control Areas.

211. As with any ground disturbance, there is potential for soil compaction and erosion. Primary impacts to soils include compaction from construction equipment, soil profile mixing during grading and pole auguring, rutting from tire traffic, and soil erosion.

²³⁰ Ex. EIP-405 at 75 (EA).

²³¹ Ex. EIP-405 at 75 (EA).

²³² *Id.*

²³³ Ex. EIP-405 at 73–76 (EA).

²³⁴ Ex. EIP-405 at 75 (EA).

²³⁵ Ex. EIP-405 at 76 (EA).

²³⁶ *Id.*

Impacts to soils are likely to be greatest with the below-ground electrical collection system.²³⁷

212. Soil health will likely improve for the portion of the sites that is revegetated with native perennial vegetation for the operating life of the Projects. The access road and the area within and surrounding the fenced areas (14.8 acres for the Crane project and 13.3 acres for the Sandhill project) will be covered with asphalt or crushed rock, while the remainder of the sites will be a mixture of native groundcover plantings and an area that would continue to be used for agriculture.²³⁸

213. Heavy rainfall events during construction or prior to establishment of permanent vegetation increase the risk that significant sedimentation and erosion could occur. Soil cover and management at the facilities will change from cultivated cropland to a mixture of impervious and pervious surfaces.²³⁹

214. The DSPs include a number of conditions to mitigate soil impacts, including Section 4.3.9 (requiring protection and segregation of topsoil), Section 4.3.11 (requiring the permittees to obtain an MPCA CSW Permit and implement BMPs for erosion prevention and sediment control), and Section 5.6 (special condition requiring the permittees to develop a VMP to define how the land control area will be revegetated and monitored).²⁴⁰

4. *Surface Water and Floodplains.*

215. The Projects are designed to avoid direct impacts to surface waters by siting away from surface waters.²⁴¹ The Projects are in the Zumbro River Watershed Basin. No lakes or ponds were identified within the two Land Control Areas. There are no waterbodies or watercourses listed on the MDNR Public Waters Inventory (PWI) in the Crane and Sandhill Land Control Areas. The closest PWI watercourse is Cascade Creek which is located approximately 3,500 feet south of the Projects' Land Control Areas. The final, approved wetland delineation for the Projects confirmed that no wetlands or jurisdictional streams are located within the areas to be impacted by the Projects.²⁴²

216. The Federal Emergency Management Agency (FEMA) delineates floodplains and determines flood risks in areas susceptible to flooding. The base flood that FEMA uses, known as the 100-year flood, has a one percent chance of occurring during each year. According to the FEMA website, the project areas are mapped as Zone X, which is an area of minimal flood hazard. The nearest mapped 100-year floodplain is

²³⁷ Ex. EIP-405 at 77 (EA).

²³⁸ Ex. EIP-405 at 77–78 (EA).

²³⁹ Ex. EIP-405 at 77 (EA).

²⁴⁰ Ex. EIP-405 at 78 (EA).

²⁴¹ Ex. EIP-405 at 79 (EA).

²⁴² Ex. APP.-115 at 8:25–9:12 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E); Ex. EIP-405 at 80 (EA).

Zone A along Cascade Creek, located approximately 3,000 feet from the Crane and Sandhill Land Control Areas.²⁴³

217. There are no waters listed by the MPCA as impaired waters within one mile of the Projects. The nearest impaired water to the site is 9,550 feet from the northern edge of the Crane and Sandhill Land Control Areas.²⁴⁴

218. Construction of the Projects creates a potential for indirect impacts if sediment or fugitive dust created by excavation, grading, vegetation removal, and construction traffic reaches nearby surface waters. Standard construction management practices, including but not limited to containment of excavated soils, protection of exposed soils, stabilization of restored soils, and controlling fugitive dust, would minimize the potential for eroded soils to reach surface waters.²⁴⁵

219. In addition, BMPs to minimize the impact on surface waters will be adopted as a part of the SWPPP, including but not limited to sediment control, revegetation plans, and management of exposed soils to prevent sediment from entering waterbodies. Further, Section 4.3.11 of the DSPs requires the permittees to “implement erosion prevention and sediment control practices recommended by the MPCA” and to obtain a CSW Permit. This Section also requires the permittees to implement erosion and sediment control measures, grade contours to provide for proper drainage, and restore all disturbed areas to pre-construction conditions.²⁴⁶

5. Wetlands.

220. The Crane and Sandhill Projects have been designed to minimize all impacts to surface waters to the extent practicable. The Projects’ components are not sited within surface waters and all wetlands are avoided.²⁴⁷

221. A wetland and waterway delineation was conducted from July 20 to July 23, 2024, to identify and characterize wetlands and waterways per United States Army Corps of Engineers’ methodology.

222. On September 11, 2025, the Technical Evaluation Panel (TEP), under the Wetland Conservation Act, visited the site for the Crane and Sandhill Projects for a Wetland Type Confirmation, Delineation Concurrence, and No-Loss Decision. The TEP determined that certain revisions to the wetland delineation were needed before the Notice of Decision (NOD) could be issued. The TEP concluded that three previously identified wetland areas were, in fact, not wetlands, and recommended that the extent of one wetland be reduced from 0.969 acres to 0.006 acres. The revisions reduced total

²⁴³ Ex. EIP-405 at 79 (EA).

²⁴⁴ *Id.*

²⁴⁵ Ex. EIP-405 at 79 (EA).

²⁴⁶ *Id.*

²⁴⁷ Ex. EIP-405 at 81 (EA).

wetlands within the Land Control Areas from 4.463 to 3.229 acres. The revisions also eliminated a previously identified ephemeral stream identified by the prior delineation.²⁴⁸

223. Applicants received the NOD on October 21, 2025. Based on the TEP's evaluation on September 11, 2025, and following Applicants' incorporation of the TEP's suggested revisions, the NOD concluded that, "[b]ased on the footprint of the future BESS project as provided, the project as designed will result in no impact to wetland and qualifies as a No Loss under WCA 12 8420.0415.subp. A – No wetland will be impacted during this project."²⁴⁹

224. The Crane and Sandhill Project components are not sited within surface waters and all wetlands are avoided.²⁵⁰ There may be potential for temporary, short-term impacts to wetlands outside the site if there is erosion resulting from construction.²⁵¹

225. The Projects include several measures to minimize erosion from construction. BMPs identified in the SWPPP will minimize potential for sediment to reach offsite wetlands during construction such as: silt fencing (or other erosion control devices), revegetation plans, and management of exposed soils to prevent sediment from entering adjacent surface waters. Stormwater basins will be constructed to help control runoff during rain events. The Applicants will submit an SWPPP to the MPCA for review and approval prior to construction as part of obtaining coverage under the General Construction Stormwater Permit. Further, the DSPs include two standard conditions that address potential impacts to surface waters: Section 4.3.11 requires the permittees to implement erosion prevention and sediment control practices, and Section 4.3.13 generally prohibits placing a BESS or associated facilities in public waters and public waters wetlands.²⁵²

6. Vegetation.

226. Current land-use in the Project Areas is predominately cultivated agricultural, consisting of corn and soybean. Additionally, there are several herbaceous agriculture conservation buffers that divide the crop fields consisting of orchard grass (*Dactylus glomerata*), timothy (*Phleum pratense*), smooth brome (*Bromus inermis*), clovers (*Trifolium spp.*), and scattered individuals of common milkweed (*Asclepias syriaca*).²⁵³

227. After construction, for portions of the sites that are not converted to Project facilities, the Applicants will re-vegetate with perennial vegetation (grasses) or restore to agricultural uses. Crane Storage estimates that approximately 23.5 acres (including facility components and a re-vegetated area outside the fence line) will be converted from cropland for the life of the Crane Project, with 12.2 acres converted to perennial

²⁴⁸ Ex. APP.-115 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

²⁴⁹ Ex. APP.-115 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

²⁵⁰ *Id.*

²⁵¹ Ex. EIP-405 at 81 (EA).

²⁵² *Id.*

²⁵³ Ex. EIP-405 at 82 (EA).

vegetation (grasses), and 11.8 acres will be restored for agricultural uses upon completion of the Crane Project construction activities.²⁵⁴

228. Sandhill Storage estimates that approximately 24.1 acres (including facility components and a re-vegetated area outside the fence line) will be converted from cropland for the life of the Sandhill Project, 14.0 acres will be converted to perennial vegetation (grasses), and 15.5 acres will be restored for agricultural uses upon completion of the Sandhill Project construction activities.²⁵⁵

229. Removal of vegetative cover exposes soils and could result in soil erosion. Temporary or permanent removal of vegetation also has the potential to affect wildlife habitat. Construction activities could introduce or spread invasive species and noxious weeds and the early phases of site restoration and seeding of native species can result in populations of non-native and invasive species on-site.²⁵⁶

230. Crane Storage and Sandhill Storage will implement the procedures in the Projects' SWPPPs to control erosion, prevent sedimentation, and promote soil stabilization in disturbed areas. The planting of perennial vegetation and restoration activities will help prevent erosion and sedimentation and promote soil stabilization long term. In addition, several sections of the DSPs address impacts to vegetation, including: Section 4.3.15 (requiring the permittees to minimize the number of trees removed), Section 4.3.17 (requiring the permittees to employ BMPs to avoid potential introduction and spread of invasive species and to file an Invasive Species Management Plan prior to construction), and Section 4.3.18 (requiring the permittees to take all reasonable precautions to prevent the spread of noxious weeds during construction). In addition, Section 5.6 of the DSPs is a special condition that requires the permittees to develop a VMP that defines how the Land Control Areas will be revegetated and monitored over the life of the Projects. Appropriate seeding rates and timing of revegetation will stabilize soils and improve overall soil health.²⁵⁷

7. *Wildlife and Habitat.*

231. The Projects' landscapes are dominated by agriculture and developed areas (roads, railroads, homes, and farmsteads) with the greater surrounding area consisting of agricultural buffer strips and forested areas, creating edge habitats.²⁵⁸

232. Wildlife present in this area is likely white-tailed deer, raccoon, coyote, red fox, gray fox, skunk, American toad, garter snake, and a variety of insects including native bees, butterflies, and moths. Avian species common to the site include red-tailed hawk, wild turkey, American crow, eastern bluebird, mourning dove, and ring-necked pheasant.

²⁵⁴ *Id.*

²⁵⁵ Ex. EIP-405 at 82–83 (EA).

²⁵⁶ Ex. EIP-405 at 83 (EA).

²⁵⁷ *Id.*

²⁵⁸ *Id.*

Common waterfowl like Canada geese and mallards may use the site for short-term foraging after harvest.²⁵⁹

233. Individual non-avian wildlife may be displaced to adjacent habitats during construction. Because the land control area does not provide critical habitat, this should not impact life cycle functions, such as nesting. Direct significant impacts to individuals might occur; that is, small species might be crushed or otherwise killed during construction. Population level impacts are not anticipated.²⁶⁰

234. After construction, outside of permanent project infrastructure and the converted perennial vegetation area, the land will continue to be used for agricultural purposes. Overall, the Projects will not contribute to significant habitat loss or degradation or create new habitat edge effects.²⁶¹

235. The Projects' fencing creates a potential for wildlife impacts. Specifically, deer may jump fences and become tangled in smooth or barbed-wire fences, especially if wires are loose or too close together. Predators may use fences to corner and kill prey species. Because the Projects have small fenced-in area footprints, overall impacts are anticipated to be minimal.²⁶²

236. The Applicants have committed to installing the MDNR requested ten-foot fence to exclude deer from the fenced portions of the Projects.²⁶³ The DSPs include special condition 5.8 that requires the permittees to coordinate with MDNR to ensure the fence used in the Projects minimizes impacts to wildlife.²⁶⁴

237. MDNR indicated appreciation for the Applicants' willingness to comply with its recommended minimum height of ten feet for the security fence to minimize entanglement and injury concerns barbed wire can cause to wildlife. MDNR also supports special condition 5.8 of the DSP requiring the Permittee to design the final security fence in coordination with the MDNR.²⁶⁵

238. Plastic erosion control netting is frequently used for erosion control during construction and landscape projects and can negatively impact wildlife populations. Wildlife entanglement and death from plastic netting and other plastic materials has been documented in birds, fish, mammals, and reptiles.²⁶⁶ The DSPs include Section 5.9, which is a special condition that requires use of wildlife-friendly erosion control.²⁶⁷

²⁵⁹ Ex. EIP-405 at 83–84 (EA).

²⁶⁰ Ex. EIP-405 at 84 (EA).

²⁶¹ Ex. EIP-405 at 85 (EA).

²⁶² Ex. EIP-405 at 84 (EA).

²⁶³ Ex. APP.-115 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

²⁶⁴ Ex. EIP-405 at 85 (EA).

²⁶⁵ MDNR Hearing Comments at 1 (December 16, 2025) (eDockets No. [202512-225931-01](#)).

²⁶⁶ Ex. EIP-405 at 84 (EA).

²⁶⁷ Ex. EIP-405 at 85 (EA).

8. *Climate Change.*

239. Climate change refers to any significant change in measures of climate lasting for an extended period. Greenhouse gases (GHG) are gaseous emissions that trap heat in the atmosphere and contribute to climate change. These emissions occur from natural processes and human activities. The most common GHGs emitted from human activities include carbon dioxide, methane, and nitrous oxide.²⁶⁸

240. The Projects have the potential to support the shift of energy production in Minnesota and the Upper Midwest toward carbon-free sources. Construction emissions will have a short-term negligible increase in greenhouse gases that contribute to climate change. Once operational, the Projects will generate minimal GHG emissions. Emissions that do occur would result from vehicle usage to and from the facilities for maintenance and operation.²⁶⁹

241. The Projects' designs incorporate elements that minimize impacts from the increase in extreme weather events such as increased flooding, storms, and heat wave events that are expected to accompany a warming climate.²⁷⁰

F. Rare and Unique Natural Resources

242. Minnesota law requires consideration of the Projects' potential effects on rare and unique natural resources.²⁷¹

243. No impacts to any federally listed species are anticipated throughout construction and operation of the Projects.²⁷² The Applicants reviewed the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) database for the potential occurrence of federally-listed species, candidate species, or designated critical habitat that may occur within or near the site.²⁷³ One threatened species, the Prairie bush-clover (*Lespedeza leptostachya*), one proposed threatened species, the Monarch butterfly (*Danaus Plexippus*), and one experimental population, non-essential species, the whooping crane (*Grus americana*), may occur in the Project areas, but the Projects "will have no effect" on these species.²⁷⁴

244. The MDNR classifies rare plant or animal communities across the state. These include Scientific and Natural Areas, High Conservation Value Forest, Minnesota Biological Survey (MBS) Native Plant Communities, and MBS Sites of Biodiversity Significance. MBS systematically collects, interprets, and provides baseline data on the distribution and ecology of rare plants, rare animals and native plant communities. There is a site housing MDNR Native Plant Communities (Mesic Hardwood Forest System) and

²⁶⁸ Ex. EIP-405 at 88 (EA).

²⁶⁹ Ex. EIP-405 at 88 & 90 (EA).

²⁷⁰ Ex. EIP-405 at 88–89 (EA).

²⁷¹ Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100, subp. F.

²⁷² Ex. EIP-405 at 85–86 (EA).

²⁷³ Ex. EIP-405 at 85–86 (EA).

²⁷⁴ Ex. EIP-405 at 86 (EA).

an MBS site of biodiversity significance (Mantorville 24 SE) about 0.7 miles northwest from the Crane and Sandhill Land Control Areas.²⁷⁵

245. The Division of Ecological and Water Resources within MDNR manages the Natural Heritage Information System (NHIS). NHIS data includes federally endangered, threatened, or candidate plant species, and endangered or threatened animal species. The system also includes records of state endangered, threatened, or special concern species. The NHIS database provides a useful source of information, but not the sole source for identifying these resources, as some areas have not been extensively surveyed. Crane Storage and Sandhill Storage reviewed MDNR's NHIS system for potential impacts to state-listed species within one mile of the Projects. One endangered species was identified, the Loggerhead Shrike.²⁷⁶ Loggerhead Shrike in the Crane and Sandhill Land Control Areas is unlikely and thus, impacts are not anticipated.²⁷⁷

G. Energy Efficiency

246. Minnesota law requires consideration of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity.²⁷⁸

247. The Applicants are not required to analyze alternative sites pursuant to Minn. R. 7850.3100 (2025) unless they rejected alternative sites.²⁷⁹ The Applicants selected the proposed Crane and Sandhill Land Control Areas based on proximity to the electrical grid and existing infrastructure (i.e., the Byron Substation), willing landowner participation, minimal environmental impacts, and available capacity on the electrical grid for interconnecting the Projects.²⁸⁰

248. Batteries used at BESS facilities will lose the ability to store and deliver energy over time. This process, sometimes referred to as “derating” or “degradation,” results in diminished capacity and efficiency, shorter operational life, and a decline in performance over time. To maintain a facility’s capacity and accreditation, BESS facilities replace degraded batteries with new batteries periodically over the course of the facility’s operating life. This periodic replacement is referred to as “augmentation.”²⁸¹

249. The Applicants will adopt an augmentation schedule for the Crane and Sandhill Projects to maintain overall functionality of the two Projects, which will be determined during the design process after final equipment selection and will be based on the projected degradation of the batteries.²⁸²

²⁷⁵ Ex. EIP-405 at 87 (EA).

²⁷⁶ Ex. EIP-405 at 87 (EA).

²⁷⁷ Ex. EIP-405 at 88 (EA).

²⁷⁸ Minn. R. 7850.4100, subp. G.

²⁷⁹ Minn. R. 7850.3100; Ex. APP.-101 at 39 (Application).

²⁸⁰ Ex. APP.-101 at 39 (Application).

²⁸¹ Ex. EIP-405 at 24 (EA).

²⁸² Ex. EIP-405 at 24–25 (EA).

H. Use of Existing Large Electric Power Generations

250. Minnesota law requires consideration of the use of existing large electric power generating plant (LEPGP).²⁸³

251. The Applicants do not propose to use an existing LEPGP site for the Projects.²⁸⁴

I. Use of Existing Rights-of-Way

252. Minnesota law requires consideration of the use of existing rights of way.²⁸⁵ This factor does not apply because the factor is intended specifically for routing permit projects.

J. Electrical System Reliability

253. Minnesota law requires consideration of electrical system reliability.²⁸⁶

254. General key benefits associated with BESS include enhancing grid stability and reliability, decreasing grid interruptions during influx power demands, reducing costs for consumers, and supporting the shift to renewable energy generation. Locally, the Projects will aid the region's ongoing transition to renewables, ensure reliable electric service in the area, and provide significant economic benefits to residents.²⁸⁷

K. Costs of Constructing, Operating, and Maintaining the Facility

255. Minnesota law requires consideration of the costs of constructing, operating, and maintaining a facility which are dependent on design and route.²⁸⁸ This factor does not apply because the design of the proposed Projects is the only design under consideration.

L. Adverse Human and Natural Environmental Effects that Cannot Be Avoided

256. Minnesota law requires consideration of the adverse human and natural environmental effects that cannot be avoided.²⁸⁹ Resource impacts are unavoidable when an impact cannot be avoided even with mitigation strategies.²⁹⁰

257. The primary unavoidable impacts associated with construction include the following: fugitive dust, noise disturbance, visual disturbance to nearby residents and

²⁸³ Minn. R. 7850.4100(I).

²⁸⁴ Ex. EIP-405 at 14 (EA).

²⁸⁵ Minn. R. 7850.4100(H) and (J).

²⁸⁶ Minn. R. 7850.4100(K).

²⁸⁷ Ex. EIP-405 at 3 (EA).

²⁸⁸ Minn. Stat. § 216E.03, subd. 7(b)(10); Minn. R. 7850.4100, subp. K.

²⁸⁹ Minn. Stat. § 216E.03, subd. 7(b)(6); Minn. R. 7850.4100, subp. M.

²⁹⁰ Ex. EIP-405 at 91 (EA).

recreationalists, soil compaction and erosion, vegetative clearing, disturbance and temporary displacement of wildlife, as well as direct impacts to wildlife inadvertently struck or crushed, minor amounts of marginal habitat loss, and possible traffic delays.²⁹¹

258. Unavoidable adverse impacts associated with the operation would last as long as the life of the Projects, and include: visual impacts of the Projects, noise disturbance to nearby residents, cultural impacts due to a change in the sense of place for local residents, loss of land for agricultural purposes, injury or death of birds and mammals from fencing.²⁹²

259. Avoidable impacts are reasonably mitigated through the recommended permit conditions and other mitigation measures. The remaining unavoidable impacts are reasonable in light of the nature, scope, and benefits of the Projects.

M. Irreversible and Irrecoverable Commitments of Resources

260. Minnesota law requires consideration of the irreversible and irretrievable commitments of resources that are necessary for the Projects.²⁹³ Resource commitments are irreversible when it is impossible or very difficult to redirect that resource to a different future use; an irretrievable commitment of resources means the resource is not recoverable for later use by future generations.²⁹⁴

261. Irreversible and irretrievable resource commitments are primarily related to project construction, including the use of water, aggregate, hydrocarbons, steel, concrete, wood, and other consumable resources. Some, like fossil fuel use, are irretrievable. Others, like water use, are irreversible. Still others might be recyclable in part, for example, the raw materials used to construct batteries and enclosures would be an irretrievable commitment of resources, excluding those materials that may be recycled at the end of useful life. The commitment of labor and fiscal resources to develop, construct, and operate the project is considered irretrievable.²⁹⁵

N. Cumulative Potential Effects

262. Cumulative potential effects are impacts to the environment that result 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.” The “environmentally relevant area” includes locations where the potential effects of the project coincide with the potential effects of other projects to impact the elements studied in this EA.²⁹⁶

²⁹¹ Ex. EIP-405 at 91 (EA).

²⁹² *Id.*

²⁹³ Minn. Stat. § 216E.03, subd. 7(b)(11); Minn. R. 7850.4100, subp. N.

²⁹⁴ Ex. EIP-405 at 92 (EA).

²⁹⁵ Ex. EIP-405 at 92 (EA).

²⁹⁶ Ex. EIP-405 at 94 (EA).

263. There are two projects that are reasonably foreseeable in the next five years in the environmentally relevant area. The construction-related impacts of these projects are short-term; for example, construction impacts may cause local disturbances such as increased noise levels and traffic delays or reroutes.²⁹⁷

264. The Byron Solar Project is a 200 MW solar facility located on approximately 1,800 acres, and interconnecting at the Byron Substation through approximately three miles of 345 kV transmission line. The Commission issued site and route permits for the Byron Solar Project in 2023. The project has not yet been built, but is anticipated in 2027.²⁹⁸

265. The Snowshoe BESS is a 150 MW BESS with approximately 600 MWh of energy capacity on a site of approximately 28 acres in Kalmar Township, Olmsted County, Minnesota. The Commission issued a site permit for the project in September 2025, and the project is anticipated in 2027.²⁹⁹

266. Cumulative potential effects on human settlements are anticipated to be moderate. Some projects would have positive effects on human settlements by improving transportation and safety. Future energy projects will result in aesthetic impacts. The increase in renewable energy projects and energy storage projects in the area may increase tension in the project area between renewable energy and rural character.³⁰⁰

267. Cumulative potential effects on public health and safety are anticipated to be minimal to moderate. Impacts on public health and safety as a result of the Crane BESS and Sandhill BESS are anticipated to be moderate to significant. The addition of battery storage facilities introduces potential public safety hazards from thermal runaway events. Response to thermal runaway events and fires at BESS facilities requires specialized training. Employing best practices in facility design and operation, including identifying hazards and developing training for emergency responders, can mitigate potential impacts.³⁰¹

268. As discussed above, the DSPs include a number of conditions to address emergency response, including emergency response for thermal runaway events. Section 4.3.7 of the DSPs requires the permittees to take several public safety measures, including landowner educational materials, appropriate signs and gates, etc.³⁰² Section 5.4 of the DSPs is a special condition that requires the permittees to file an HMA detailing the testing results for the selected equipment and the risks associated with the technology at least 30 days prior to the pre-construction meeting.³⁰³ Section 8.11 of the DSPs is a standard condition that requires permittees to file an Emergency Response Plan with the

²⁹⁷ *Id.*

²⁹⁸ *Id.*

²⁹⁹ *Id.*

³⁰⁰ Ex. EIP-405 at 95 (EA).

³⁰¹ *Id.*

³⁰² Ex. EIP-405 at 66 (EA).

³⁰³ Ex. EIP-405 at 66 (EA).

Commission and local first responders prior to operation.³⁰⁴ Section 8.12 of the DSPs requires disclosure of extraordinary events, such as fires, etc.³⁰⁵

269. Cumulative potential effects on land-based economies are anticipated to be minimal. Additional energy infrastructure will result in conversion of agricultural land from production to power generation and storage, but the loss of agricultural land is anticipated to be minimal overall.³⁰⁶

270. Because archaeological resources are unidentified, cumulative potential effects are unknown. With proper mitigation measures, impacts to these resources can be minimized.³⁰⁷ As discussed above, the record demonstrates that the Projects will not cause adverse impacts to archaeological and historic resources, and Sections 4.3.20 and 5.7 of the DSPs address archaeological and historic resources.³⁰⁸

271. Cumulative potential effects on the natural environment are anticipated to be minimal to moderate. Most of the foreseeable projects are in cultivated agricultural areas resulting in minimal loss of high-quality habitat. Wildlife might be inadvertently harmed or killed during construction, but the overall impact intensity level is expected to remain minimal.³⁰⁹

272. Cumulative potential effects on rare and unique natural resources are expected to be minimal since there are relatively few rare and unique species in the project area, and there are no direct impacts to high quality habitat.³¹⁰

X. SITE PERMIT CONDITIONS

273. The Commission's Site Permits include a number of proposed permit conditions, many of which have been discussed above. The conditions apply to site preparation, construction, cleanup, restoration, operation, maintenance, abandonment, decommissioning, and other aspects of the Project.

274. Many of the conditions contained in the Draft Site Permit were established as part of the site permit proceedings of other BESS projects permitted by the Commission. Comments received by the Commission have been considered in development of the permit conditions for this Project.

275. The EA and DSPs prepared by EIP include various recommendations and potential site permit conditions specific to the Projects.

³⁰⁴ *Id.*

³⁰⁵ *Id.*

³⁰⁶ Ex. EIP-405 at 95 (EA).

³⁰⁷ *Id.*

³⁰⁸ Ex. EIP-405 at 70–71 (EA).

³⁰⁹ Ex. EIP-405 at 95–96 (EA).

³¹⁰ Ex. EIP-405 at 96 (EA).

276. The Applicants responded to EIP’s recommendations and proposed permit conditions in the Direct Testimony of James Hingston,³¹¹ as well as in Reply Comments.³¹² The Applicants commented that the conditions in the DSPs are reasonable and supported by the record.³¹³

277. EIP submitted comments including a number of citation changes to the DSPs to ensure the DSPs are consistent with recent permitting reform. These changes are reasonable and supported by the record.

XI. NOTICE

278. Minnesota statutes and rules require an applicant to provide certain notice to the public and local governments before and during the Application process.³¹⁴ The Applicants have provided notices to the public and local governments in satisfaction of Minnesota statutory and rule requirements.³¹⁵

279. Minnesota statutes and rules also require the Commission to provide certain notice to the public throughout the Application process.³¹⁶ The Commission provided the notices in satisfaction of Minnesota statutes and rules.³¹⁷

XII. COMPLETENESS OF EA

280. The EA process is the alternative environmental review approved for large electric power generating plants.³¹⁸ As part of the alternative review process, the Commission is required to determine the completeness of the EA. An EA is complete if it and the record address the issues identified in the scoping decision.³¹⁹

281. The Minnesota Legislature requires that the Commission utilize applicable provisions of Minn. R. Ch. 7850 when considering whether to issue a site permit for energy storage systems until energy storage system specific rules are promulgated.³²⁰ Further, Minnesota statutes provide that the Commissioner of the Department of Commerce “shall prepare for the [C]ommission an [EA],” and such EA “shall be the only

³¹¹ Ex. APP.-115 (Direct Pre-Filed Testimony of James Hingston, with Schedules A-E).

³¹² Applicants’ Response to Public Hearing Comments (December 23, 2025) (eDockets No. [202512-226183-01](#)).

³¹³ *Id.*

³¹⁴ Minn. Stat. § 216E.03, subps. 3a, 4; Minn. R. 7850.3300; Minn. R. 7850.2100, subps. 2, 4.

³¹⁵ See Ex. APP.-100 (Notice of Intent to Submit a Joint Site Permit Application Under the Alternative Review Process); Ex. APP.-109 (Notice of Application); see also Ex.APP.-111 (Confirmation of Notice).

³¹⁶ Minn. Stat. § 216E.03, subps. 3a, 4; Minn. R. 7850.3300; Minn. R. 7850.2100, subps. 2, 4.

³¹⁷ See Ex. PUC-503 (Notice of Public Information and Environmental Assessment Scoping Meetings-Revised); Ex. PUC-507 (Notice of Public Hearings and Availability of Environmental Assessment); Ex. PUC-506 (Notice of Environmental Assessment Scoping Decision); Ex. EIP-407 (Notice of EA to Permitting Agencies and Tribal Historic Preservation Officers); Ex. EIP-406 (Notice of EA Mailed to Public Libraries); Ex. PUC-509 (EQB Monitor – Scoping Meeting Notice); and Ex. PUC-508 (EQB Monitor – Public Hearing Notice).

³¹⁸ Minn. R. 4410.4400, subp. 3 (2025); Minn. R. 7850.3900, subp. 2.

³¹⁹ Minn. R. 7850.3900, subp. 2

³²⁰ 2023 Minn. Laws ch. 60, art. 12, § 67(b).

state environmental review document required to be prepared” on a project identified in Minn. Stat. § 216E.04 subd. 2, and submitted under the alternative review process under Minn. R. 7850.2800 to 7850.3900.³²¹

282. The evidence in the record demonstrates that the EA is adequate because the EA and the record created at the public hearing and during the subsequent comment period address the issues raised in the scoping decision.

Based on the foregoing Findings of Fact and the record in this proceeding, the Judge makes the following:

CONCLUSIONS OF LAW

1. Any of the forgoing Findings of Fact more properly designated as Conclusions of Law are hereby adopted as such.
2. The Commission and the Administrative Law Judge have jurisdiction over the Joint Site Permit Application pursuant to Minn. Stat. §§ 216E.02 and 216E.03 (2024).
3. The Commission accepted the Application as complete on April 29, 2025.³²²
4. Applicants have substantially complied with the procedural requirements of Minn. Stat. Ch. 216E (2024) and Minn. R. Ch. 7850 (2025).
5. The Commission has substantially complied with the procedural requirements of Minn. Stat. Ch. 216E and Minn. R. Ch. 7850.
6. PUC-EIP has conducted an appropriate environmental analysis of the Projects for purposes of the Site Permits proceeding pursuant to Minn. R. 7850.3700 (2025).
7. Public hearings were conducted virtually and in a community near the Projects. Proper notice of the public hearings was provided, and members of the public had the opportunity to speak at the hearing and to submit written comments.
8. The EA prepared for the Projects and the record created at the public hearing address the issues identified in the EA scoping decision.
9. The Commission has the authority under Minn. Stat. § 216E.03 to place conditions in LEPGP site permits.
10. The DSPs, as revised by EIP staff, contain a number of important mitigation measures and other reasonable conditions.

³²¹ Minn. Stat. § 216E.04 subd. 5.

³²² Ex. PUC-501 (Order Finding Application Complete).

11. It is reasonable to amend the DSPs to include the changes proposed by EIP staff in the EA and in reply comments.

12. The record in this proceeding demonstrates that Applicants have satisfied the criteria for Site Permits as set forth in Minn. Stat. § 216E.03 and Minn. R. Ch. 7850 and all other applicable legal requirements.

13. The Projects, with the permit conditions discussed above, satisfy the Site Permit criteria for an LEPGP in Minn. Stat. § 216E.03 and meet all other applicable legal requirements.

14. The Projects, with the permit conditions discussed above, do not present a potential for significant adverse environmental effects pursuant to the Minnesota Environmental Rights Act and/or the Minnesota Environmental Policy Act.

15. Any of the foregoing conclusions of law which are more properly designated findings of fact are hereby adopted as such.

RECOMMENDATIONS

The Commission should issue Site Permits to Applicants to construct and operate the Projects and associated facilities in Olmsted County, Minnesota and the permits should include the draft permit conditions amended as set forth in the Findings and Conclusions above.

Dated: February 12, 2026


MEGAN MCKENZIE
Administrative Law Judge

February 12, 2026

See Attached Service List

Re: *In the Matter of the Application of Crane Energy Storage LLC for a Site Permit for the up to 200 MW Crane Energy Storage Project in Olmsted County, Minnesota*

In the Matter of the Application of Sandhill Energy Storage LLC for a Site Permit for the up to 200 MW Sandhill Energy Storage Project in Olmsted County, Minnesota

**CAH 25-2500-40988
MPUC Docket Nos. IP-7148/ESS-24-406; IP-7149/ESS-24-407**

To All Persons on the Attached Service List:

Enclosed and served upon you is the Administrative Law Judge's **FINDINGS OF FACT, CONCLUSIONS OF LAW AND RECOMMENDATION** in the above-entitled matter.

If you have any questions, please contact me at (651) 361-7970, cara.hunter@state.mn.us, or via facsimile at (651) 539-0310.

Sincerely,



CARA HUNTER
Legal Assistant

Enclosure

cc: Docket Coordinator

STATE OF MINNESOTA
COURT OF ADMINISTRATIVE HEARINGS
PO BOX 64620
600 NORTH ROBERT STREET
ST. PAUL, MINNESOTA 55164

CERTIFICATE OF SERVICE

<p>In the Matter of the Application of Crane Energy Storage LLC for a Site Permit for the up to 200 MW Crane Energy Storage Project in Olmsted County, Minnesota</p> <p>In the Matter of the Application of Sandhill Energy Storage LLC for a Site Permit for the up to 200 MW Sandhill Energy Storage Project in Olmsted County, Minnesota</p>	<p>CAH Docket No.: 25-2500-40988</p> <p>MPUC Docket Nos. IP-7148/ESS-24-406 IP-7149/ESS-24-407</p>
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On February 12, 2026, a true and correct copy of the **FINDINGS OF FACT, CONCLUSIONS OF LAW AND RECOMMENDATION** was served by eService, and United States mail, (in the manner indicated on the attached service list) to the following individuals:

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
1	Sasha	Bergman	sasha.bergman@state.mn.us		Public Utilities Commission	121 7th Pl E Ste 350 St. Paul MN, 55101 United States	Electronic Service		Yes	24-406 Official CC Service List
2	Mike	Bull	mike.bull@state.mn.us		Public Utilities Commission	121 7th Place East, Suite 350 St. Paul MN, 55101 United States	Electronic Service		Yes	24-406 Official CC Service List
3	Generic	Commerce Attorneys	commerce.attorneys@ag.state.mn.us		Office of the Attorney General - Department of Commerce	445 Minnesota Street Suite 1400 St. Paul MN, 55101 United States	Electronic Service		Yes	24-406 Official CC Service List
4	Monika	Davis	monika.davis@merjent.com			1 Main Street Suite 300 Minneapolis MN, 55414 United States	Electronic Service		No	24-406 Official CC Service List
5	Martin	Donovan	martin.donovan@state.mn.us		Department of Natural Resources	500 Lafayette Road St Paul MN, 55155 United States	Electronic Service		No	24-406 Official CC Service List
6	Jeremy	Duehr	jduehr@fredlaw.com	Fredrikson & Byron, P.A.		60 S Sixth St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	24-406 Official CC Service List
7	Sharon	Ferguson	sharon.ferguson@state.mn.us		Department of Commerce	85 7th Place E Ste 280 Saint Paul MN, 55101-2198 United States	Electronic Service		No	24-406 Official CC Service List
8	Joseph	Finocchiaro	jfinocchiaro@tenaska.com	Sparrow Energy Storage LLC		412 W 15th Street, Fl 15 New York NY, 10011 United States	Electronic Service		No	24-406 Official CC Service List
9	Jacques	Harvieux	jacques.harvieux@state.mn.us		Public Utilities Commission	121 7th Place East Suite 350 Saint Paul MN, 55101-2147 United States	Electronic Service		No	24-406 Official CC Service List

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10	Breann	Jurek	bjurek@fredlaw.com	Fredrikson & Byron PA		60 S Sixth St Ste 1500 Minneapolis MN, 55402 United States	Electronic Service		No	24-406 Official CC Service List
11	Tessa	Kothlow	tessa.kothlow@state.mn.us		Public Utilities Commission		Electronic Service		No	24-406 Official CC Service List
12	Megan	McKenzie	megan.mckenzie@state.mn.us		Office of Administrative Hearings	PO Box 64620 St Paul MN, 55164 United States	Electronic Service		Yes	24-406 Official CC Service List
13	Shantal	Pai	spai@fredlaw.com	Fredrikson and Byron, P.A.		60 South Sixth Street Suite 1500 Minneapolis MN, 55402 United States	Electronic Service		No	24-406 Official CC Service List
14	Kevin	Pranis	kpranis@liunagroc.com	Laborers' District Council of MN and ND		81 E Little Canada Road St. Paul MN, 55117 United States	Electronic Service		No	24-406 Official CC Service List
15	Generic Notice	Residential Utilities Division	residential.utilities@ag.state.mn.us		Office of the Attorney General - Residential Utilities Division	1400 BRM Tower 445 Minnesota St St. Paul MN, 55101-2131 United States	Electronic Service		Yes	24-406 Official CC Service List
16	Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix & Associates		7400 Lyndale Avenue South Suite 190 Richfield MN, 55423 United States	Electronic Service		Yes	24-406 Official CC Service List
17	Suzanne	Steinhauer	suzanne.steinhauer@state.mn.us		Public Utilities Commission	121 7th Place E, Suite 350 St. Paul MN, 55101 United States	Electronic Service		No	24-406 Official CC Service List

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2	Mike	Bull	mike.bull@state.mn.us		Public Utilities Commission	121 7th Place East, Suite 350 St. Paul MN, 55101 United States	Electronic Service		Yes	24-407 Official CC Service List
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6	Jeremy	Duehr	jduehr@fredlaw.com	Fredrikson & Byron, P.A.		60 S Sixth St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	24-407 Official CC Service List
7	Sharon	Ferguson	sharon.ferguson@state.mn.us		Department of Commerce	85 7th Place E Ste 280 Saint Paul MN, 55101-2198 United States	Electronic Service		No	24-407 Official CC Service List
8	Joseph	Finocchiaro	jfinocchiaro@tenaska.com	Sparrow Energy Storage LLC		412 W 15th Street, Fl 15 New York NY, 10011 United States	Electronic Service		No	24-407 Official CC Service List
9	Jacques	Harvieux	jacques.harvieux@state.mn.us		Public Utilities Commission	121 7th Place East Suite 350 Saint Paul MN, 55101-2147 United States	Electronic Service		No	24-407 Official CC Service List

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12	Megan	McKenzie	megan.mckenzie@state.mn.us		Office of Administrative Hearings	PO Box 64620 St Paul MN, 55164 United States	Electronic Service		Yes	24-407 Official CC Service List
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18	Onur	Usmen	ousm@cisc.dk	Crane Energy Storage LLC c/o Copenhagen Infrastructure Service		200 S. Wacker Drive, Suite 1600 Chicago IL, 60606 United States	Electronic Service		No	24-407 Official CC Service List