

STATE OF MINNESOTA  
COURT OF ADMINISTRATIVE HEARINGS  
FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Application of North  
Star Energy Storage, LLC, for an up to  
100-megawatt Battery Storage System  
Site Permit for the North Star Storage  
Project in Chisago County, Minnesota

**TABLE OF CONTENTS**

<b>STATEMENT OF THE ISSUE</b> .....	4
<b>SUMMARY OF RECOMMENDATION</b> .....	4
<b>FINDINGS OF FACT</b> .....	4
I. APPLICANT/PERMITTEE .....	4
II. PROCEDURAL BACKGROUND .....	4
III. DESCRIPTION OF THE PROJECT .....	9
IV. SITE LOCATION AND CHARACTERISTICS .....	10
V. PROJECT SCHEDULE .....	11
VI. CERTIFICATE OF NEED .....	13
VII. SITE PERMIT CRITERIA .....	13
VIII. APPLICATION OF SITING CRITERIA TO THE PROPOSED PROJECT .....	16
A. Human Settlement .....	16
IX. NOISE .....	17
X. DISPLACEMENT .....	19
XI. PROPERTY VALUES .....	19
XII. LAND USE AND ZONING .....	19
XIII. CULTURAL VALUES .....	20
XIV. TRANSPORTATION AND PUBLIC SERVICES .....	20
XV. SOCIOECONOMICS .....	21
XVI. ENVIRONMENTAL JUSTICE .....	22
A. Public Health and Safety .....	22

B.	Land-Based Economies.....	24
C.	Archaeological and Historic Resources .....	24
D.	Natural Environment.....	25
XVII.	GEOLOGY AND GROUNDWATER .....	26
XVIII.	SOILS.....	27
XIX.	SURFACE WATER RESOURCES .....	28
XX.	VEGETATION .....	29
XXI.	WILDLIFE AND HABITAT. ....	30
XXII.	CLIMATE CHANGE.....	31
A.	Rare and Unique Natural Resources .....	31
B.	Application of Various Design Considerations .....	32
C.	Use of Existing Large Electric Power Generations .....	33
D.	Use of Existing Rights-of-Way .....	33
E.	Electrical System Reliability.....	34
F.	Costs of Constructing, Operating, and Maintaining the Facility.....	34
G.	Adverse Impacts that Cannot be Avoided.....	34
H.	Irreversible and Irretrievable Commitments of Resources .....	35
XXIII.	SITE PERMIT CONDITIONS.....	36
XXIV.	NOTICE.....	38
XXV.	COMPLETENESS OF EA .....	38
	<b>CONCLUSIONS OF LAW</b> .....	39
	<b>RECOMMENDATION</b> .....	39
	<b>NOTICE</b> .....	40

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

This matter was assigned to Administrative Law Judge Jim Mortenson to conduct a public hearing on the Site Permit Application (MPUC Docket No. ESS-25-123) (Application) of North Star Energy Storage, LLC (Applicant or North Star). The application is to construct to 100-megawatt (MW), 400 megawatt-hour (MWh) battery energy storage system (BESS) and associated facilities adjacent to the existing North Star Solar Facility within the municipal boundary of North Branch (Project).<sup>1</sup> The Public Utilities Commission (Commission) requested that the Judge provide a full report with findings of fact, conclusions of law, and recommendations regarding the Project following public hearings.

Public hearings on the Application were held on October 28, 2025 (in-person), and October 29, 2025 (remote-access). Public comments were accepted until November 12, 2025.

Jeremy P. Duehr, Fredrikson & Byron P.A., and Joel Puritz, Project Developer for DESRI Renewables, L.L.C. (DESRI), appeared on behalf of North Star Storage at the public hearings.

Sam Weaver, Environmental Review Manager, appeared on behalf of the Commission Energy Infrastructure Permitting unit (EIP), formerly part of the Department of Commerce and known as Energy Environmental Review and Analysis team (DOC-EERA), at the public hearings.

Scott Ek, Energy Facilities Planner, appeared on behalf of Commission staff, appeared on behalf of the Commission at the at the public hearings.

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<sup>1</sup> North Star amended the Application on August 22, 2025.

## STATEMENT OF THE ISSUE

Has North Star satisfied the legal criteria<sup>2</sup> for a site permit for the Project?

## SUMMARY OF RECOMMENDATION

North Star has satisfied the applicable legal requirements. Accordingly, the Judge recommends that the Commission **GRANT** a site permit for the Project, subject to the permit conditions discussed below.

Based on the Application, proceedings, and other evidence in the record, the Judge makes the following:

## FINDINGS OF FACT

### I. APPLICANT/PERMITTEE

1. North Star is a Delaware limited liability company and an affiliate of DESRI, also a Delaware limited liability company.<sup>3</sup>

2. Since 2010, DESRI has developed over 10 gigawatts of solar and wind power generation and battery storage projects in 24 states throughout the United States.<sup>4</sup>

3. The permittee for the Project is North Star.<sup>5</sup>

### II. PROCEDURAL BACKGROUND

4. On February 13, 2025, North Star filed a Notice of its Intent to Submit a Site Permit Application for the Project under the alternative permitting procedures of Minn. R. 7850.2800-.3900 (2025).<sup>6</sup>

5. On March 7, 2025, the Commission issued a Notice of Comment Period regarding the completeness of the Application, requesting initial comments which opened were accepted through March 20, 2025, reply comments through March 27, 2025, and supplemental comments through April 1, 2025.<sup>7</sup>

6. On March 19, 2025, the DOC-EERA (now EIP) filed written comments recommending the Commission accept the Application as substantially complete but require that the Applicant continue to coordinate with the DOC-EERA. In addition, the

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<sup>2</sup> Minn. Stat. § 216E.03, subd. 7 (2024) and Minn. R. 7850.4100 (2025).

<sup>3</sup> Exhibit (Ex.) NSS-3 at 1 (Application) (Feb. 28, 2025) (eDocket No. 20252-215915-02).

<sup>4</sup> Ex. NSS-3 at 1 (Application).

<sup>5</sup> Ex. NSS-3 (Application).

<sup>6</sup> Ex. NSS-1 (Notice of Intent by North Star Storage to Submit a Site Permit Application under the Alternative Permitting Process) (Feb. 13, 2025) (eDocket No. 20252-215380-01).

<sup>7</sup> Ex. PUC-1 at 1 (Notice of Comment Period on Application Completeness) (March 7, 2025) (eDocket No. 20253-216148-01).

DOC-EERA recommended the Commission not appoint an advisory task force and request a full administrative law judge report with recommendations.<sup>8</sup>

7. On March 20, 2025, a landowner submitted written comments suggesting that DESRI have additional discussions with highway maintenance officials about the proposed access road to the Project site. The landowner submitted a map with two alternative locations for the access road. The landowner also requested the Commission encourage North Star to construct the Project on a footprint which could allow for the addition of 12-hour batteries in the future.<sup>9</sup>

8. On March 25, 2025, the International Union of Operating Engineers (IUOE) Local 49 and North Central States Regional Council (NCSRC) of Carpenters filed written comments recommending the Commission find the applications to be complete and use a joint process without a contested case hearing.<sup>10</sup>

9. On March 27, 2025, North Star filed reply comments concerning the completeness of the applications in response to public comments and the DOC-EERA comments.<sup>11</sup> North Star stated it had conversations with Chisago County and the landowner to discuss the access road and would continue to do so to make sure that the Project is sited in a responsible manner. Regarding the landowner's request for the addition of 12-hour batteries, North Star noted the Project was developed in response to Xcel Energy's Request for Proposals (RFP) that specifically sought a 4-hour BESS, not a 12-hour BESS.<sup>12</sup> North Star asked the Commission to accept the Application as complete; decline to appoint an advisory task force; request a full administrative law judge report with recommendations; and to direct the Executive Secretary to issue an authorization for North Star to initiate consultation with the Minnesota State Historic Preservation Office (SHPO).<sup>13</sup>

10. On April 1, 2025, Dennis Anderson submitted supplemental comments noting that North Star's reply was thoughtfully and thoroughly written and satisfied his expressed concerns.<sup>14</sup>

11. On April 15, 2025, the Commission issued an order finding the Application complete, declining to appoint an advisory task force, requesting a full administrative law

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<sup>8</sup> Ex. PUC-13 at 6 (EIP Comments and Recommendations on Application Completeness) (March 19, 2025) (eDocket No. 20253-216563-01).

<sup>9</sup> Comments regarding DESRI North Star BESS Permit Application (March 20, 2025) (eDocket No. 20253-216630-01); Map 3 Overview of Preliminary Project Layout North Star BESS Project (March 20, 2025) (eDocket No. 20253-216630-02).

<sup>10</sup> IUOE Local 49 and NCSRC of Carpenters Completeness Comments (March 25, 2025) (eDocket No. 20253-216776-01).

<sup>11</sup> Ex. NSS-12 (North Star Energy Reply Comments on Completeness) (March 27, 2025) (eDocket No. 20253-216909-01).

<sup>12</sup> See *In the Matter of Xcel Energy's Competitive Resource Acquisition Process for up to 800 Megawatts of Firm Dispatchable Generation*, MPUC Docket No. E-002/CN-23-212, Sherco West BESS Proposal at 4, 10 (Jan. 22, 2024).

<sup>13</sup> Ex. NSS-12 at 3.

<sup>14</sup> Comments by Dennis Anderson (March 27, 2025) (eDocket No. 20254-217093-01).

judge report with findings, conclusions, and recommendations following public hearings, and directing the Executive Secretary to issue an authorization to North Star to initiate consultation with the SHPO.<sup>15</sup>

12. On April 22, 2025, the Executive Secretary issued an authorization to North Star to initiate consultation with the SHPO.<sup>16</sup>

13. On May 14, 2025, the Commission issued a Notice of Public Information and Environmental Assessment Scoping Meeting. An in-person meeting was scheduled for May 28, 2025, in Stacy, Minnesota, and a remote hearing was scheduled for May 29, 2025. The Notice announced that written comments would be accepted through June 13, 2025. The Notice requested comments on “What potential human and environmental impacts or unique characteristics of the proposed project should be considered in the environmental assessment? Are there any methods to minimize, mitigate, or avoid potential impacts of the proposed project that should be considered in the environmental assessment?”<sup>17</sup>

14. On May 15, 2025, the Notice was published in the Chisago County Press.<sup>18</sup>

15. On May 20, 2025, the Commission filed the Notice in the EQB Monitor.<sup>19</sup>

16. On May 21, 2025, North Star filed confirmation that it had notified those persons on the Commission’s general service list, landowners, and local government officials that North Star had filed its application.<sup>20</sup>

17. On May 28, 2025, Commission and DOC-EERA staff held an in-person public EA scoping meeting in Stacy, Minnesota. Five members of the public provided oral comments during the meeting. No members of the public submitted oral comments or questions during the remote-access public meeting held on May 29, 2025.<sup>21</sup>

18. On May 29, 2025, Denis Anderson filed comments regarding the certificate of survey for the 60-acre Anderson parcel. Anderson noted that the 60-acre parcel survey shows the route of an underground gas pipeline and wetlands, which appear to be two impediments for North Star to overcome in routing the access road for the Project.<sup>22</sup>

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<sup>15</sup> Ex. PUC-2 (Order on Application Completeness) (April 15, 2025) (eDocket No. 20254-217702-01).

<sup>16</sup> Ex. PUC-4 (Authorization to Initiate SHPO Consultation) (April 22, 2025) (eDocket No. 20254-217978-01).

<sup>17</sup> Ex. PUC-5 (Notice of Public Information and EA Scoping Meetings) (May 14, 2025) (eDocket No. 20255-218909-01).

<sup>18</sup> Ex. PUC-7 (Affidavit of Publication of Notice of Public Information and Scoping Meetings) (June 20, 2025) (eDocket No. 20256-220096-01).

<sup>19</sup> Ex. PUC-6 (Notice of Public Information and EA Scoping Meetings, EQB Monitor) (May 20, 2025) (eDocket No. 20255-219112-01).

<sup>20</sup> Ex. NSS-13 (Confirmation of Notice Compliance Filing) (May 21, 2025) (eDocket No. 20255-219156-01).

<sup>21</sup> Ex. PUC-15 (Oral Public Comments on Scope of EA) (June 17, 2025) (eDocket No. 20256-219969-01).

<sup>22</sup> Ex. PUC-14 (Written Public Comments on the Scope of the EA) (June 17, 2025) (eDocket No. 20256-219970-01).

19. On June 13, 2025, the Department of Natural Resources (DNR) filed comments on security fencing, lighting, dust suppression, erosion control, and vegetation management that should be considered in scoping for the EA<sup>23</sup> The DNR also submitted a Natural Heritage Review Letter identifying Blandings turtles, a state listed threatened species in the Project area and avoidance measures that are required.<sup>24</sup>

20. On June 18, 2025, the DOC-EERA filed transcripts from the public meetings held on May 28, 2025 and May 29, 2025.<sup>25</sup>

21. The same day, the DOC-EERA also filed a letter stating no alternative sites were identified during the scoping comment period. It recommended the Commission authorize the DOC-EERA to include only North Star's identified site for the Project in the scoping decision for the EA.<sup>26</sup>

22. On July 1, 2025, the Judge issued a Notice of and Order for Prehearing Conference.<sup>27</sup>

23. On July 1, 2025, the Commission authorized that only the site identified by North Star be included in the scoping decision for the EA.<sup>28</sup>

24. On July 9, 2025, the Commission issued a statement on legislative changes wherein staff from the DOC-EERA moved to the Commission, which resulted in the EIP unit at the Commission.<sup>29</sup>

25. On July 17, 2025, EIP issued the EA Scoping Decision.<sup>30</sup>

26. On August 22, 2025, North Star filed a Site Permit Application Amendment, requesting that the nameplate capacity be increased from 80 MW to 100 MW with approximately 400 MWh of energy capacity rather than 320 MWh of capacity.<sup>31</sup>

27. On August 28, 2025, the Judge issued a Prehearing Order establishing a schedule for the proceedings.<sup>32</sup>

28. On August 29, 2025, EIP filed an Amended EA Scoping Decision.<sup>33</sup>

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<sup>23</sup> DNR Comments (June 13, 2025) (eDocket No. 20256-219887-01).

<sup>24</sup> Natural Heritage Review Letter (June 13, 2025) (eDocket No. 20256-219887-02).

<sup>25</sup> Ex. PUC-15 (Oral Public Comments on Scope of EA).

<sup>26</sup> Ex. PUC-16 (Alternatives Identified During Scoping Comment Period) (June 18, 2025) (eDocket No. 20256-219989-01).

<sup>27</sup> Notice and Order for Prehearing Conference (July 1, 2025) (eDocket No. 20257-220559-01).

<sup>28</sup> Ex. PUC-8 (Order) (July 1, 2025) (eDocket No. 20257-220521-01).

<sup>29</sup> Notice of Legislative Changes (July 9, 2025) (eDocket No. 20257-220799-01).

<sup>30</sup> Ex. PUC-18 (EA Scoping Decision) (July 17, 2025) (eDocket No. 20257-221112-01).

<sup>31</sup> Ex. NSS-14 (Site Permit Application Amendment) (Amended Application) (Aug. 22, 2025) (eDocket No. 20258-222299-01).

<sup>32</sup> Prehearing Order (Aug. 28, 2025) (eDocket No. 20258-222514-01).

<sup>33</sup> Ex. PUC-19 (Amended EA Scoping Decision).

29. On October 2, 2025, the Judge filed an Amended Prehearing Order.<sup>34</sup>

30. On October 13, 2025, EIP issued the EA for the Project.<sup>35</sup> The Commission also filed the Notice of Public Hearings and Availability of the EA. The Notice included the dates, times, methods and locations of the October 28 and 29 public hearings. The Commission also requested comments from the public on: (1) Does the EA adequately address the issues identified in the scoping decision; (2) should the Commission grant a site permit; and if granted, what additional conditions or requirements should be included in the site permit. The Commission stated that written comments would be accepted through November 12, 2025.<sup>36</sup>

31. On October 16, 2025, the Commission published the Notice of Public Hearings and Availability of the EA in the Chisago County Press.<sup>37</sup>

32. On October 21, 2025, the Commission published the Notice of Public Hearings and Availability of the EA in the EQB Monitor.<sup>38</sup>

33. Also on October 21, 2025, North Star filed Direct Testimony from Joel Puritz. Among other topics, the Puritz's testimony addressed an overview, updates and benefits of the Project; the Applicant's coordination with the SHPO; and comments on the EA and the Draft Site Permit proposed by EIP.<sup>39</sup>

34. A public hearing was held on October 28, 2025, at the Lent Town Hall, 33155 Hemingway Avenue in Stacy, Minnesota. The transcript from that hearing was filed on November 12, 2025. Three people provided oral comments at the hearing.<sup>40</sup>

35. A remote-access public hearing via Webex on October 29, 2025. The transcript from that hearing was filed on November 12, 2025. No members of the public provided oral comments or questions at the hearing.<sup>41</sup>

36. On November 12, 2025, the DNR and the Minnesota Interagency Vegetation Management Planning Working Group (VMPWG) submitted written comments.<sup>42</sup>

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<sup>34</sup> Amended Prehearing Order (Oct. 02, 2025) (eDocket No. 202510-223525-01).

<sup>35</sup> Ex. PUC-20 (EA) (Oct. 13, 2025) (eDocket No. 202510-223823-01).

<sup>36</sup> Ex. PUC-10 (Notice of Public Hearings and Availability of Environmental Assessment) (Oct. 13, 2025) (eDocket No. 202510-223820-01).

<sup>37</sup> Ex. PUC-12 (Affidavit of Publication of Notice of Public Hearings and Availability of the EA) (Nov. 6, 2025) (eDocket No. 202510-224697-01).

<sup>38</sup> Ex. PUC-11 (Notice of Public Hearings and Availability of the EA, EQB Monitor) (Oct. 21, 2025) (eDocket No. 202510-224143-01).

<sup>39</sup> Ex. NSS-15 (Direct Testimony of Joel Puritz) (Oct. 21, 2025) (eDocket No. 202510-224153-01).

<sup>40</sup> Stacy Public Hearing Transcript (Nov. 12, 2025) (eDocket No. 202511-224830-01).

<sup>41</sup> Virtual Public Hearing Transcript (Nov. 12, 2025) (eDocket No. 202511-224830-02).

<sup>42</sup> DNR Comments (Nov. 12, 2025) (eDocket No. 202511-224882-01); VMPWG Comments (Nov. 12, 2025) (eDocket No. 202511-224874-01).

37. On December 3, 2025, North Star filed responses to the comments submitted during the hearing and post-hearing comment period.<sup>43</sup>

38. On December 17, 2025, EIP submitted responses to hearing comments.<sup>44</sup>

### III. DESCRIPTION OF THE PROJECT

39. The proposed Project is an energy storage system with a nameplate capacity of up to 100 MW and the capability to store at least 400 MWh of energy at a given time within the municipal boundary of the City of North Branch in Township 35N, Range 21W, Section 36, Chisago County, Minnesota. The proposed Project is adjacent to the existing North Star Solar Facility (Solar Facility), which is owned and operated by North Star Solar PV LLC, a Delaware limited liability company and affiliate of North Star Storage. The Solar Facility received a Site Permit from the Commission in February 2016 under MPUC Docket Number IP-6943/GS-15-33,<sup>45</sup> All land required for construction and operation of the proposed Project was previously reviewed for compliance with the environmental information and siting factors in Minn. R. Chapter 7850.1900, Subd. 3 and Minn. R. Chapter 7850.4100.<sup>46</sup>

40. The Project will not generate electricity but will receive energy from the electrical grid through the adjacent Solar Facility, store that energy on site, and deliver energy back to the grid through the point of interconnection (POI). The energy can be stored during low demand periods or periods of excess generation for use at times of higher demand or lower electrical generation, such as in the evening during peak electrical use periods after solar generation has ceased for the day.<sup>47</sup>

41. The preliminary design of the Project includes up to 120 BESS containers at full build-out after augmentation. The containers contain multiple battery cells within purpose-built enclosures. There will be an onsite maintenance area and a stormwater basin. The Project will include underground collection and communication lines to connect the BESS units to the existing collector substation for the Solar Facility. Security fencing will encompass the entire facility and warning signs will be installed on the security fencing in accordance with the National Electrical Safety Code. Gates will be installed at the entrance to the Project site and a sign will be installed on the entrance gate providing a 24-hour emergency response number. The area within the fence line of the Project will be graveled and the BESS units will be spaced to allow operations personnel to drive between the BESS units as needed during operation of the Project.<sup>48</sup>

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<sup>43</sup> North Star Storage Reply Comments (Dec. 3, 2025) (eDocket No. 202512-225507-01).

<sup>44</sup> EIP Response to Hearing Comments and Applicant's Proposed Findings of Fact (Dec. 17, 2025) (eDocket No. 202512-225974-01).

<sup>45</sup> See *In the Matter of the Combined Application of North Star Solar PV LLC for a Site Permit and Route Permit for the North Star Solar Electric Power Generating Plant and Associated 115 kV High-Voltage Transmission Line in Chisago County*, MPUC Docket No. IP-6943/GS-15-33, Order Granting Site and Route Permits with Conditions (Feb. 16, 2026).

<sup>46</sup> Ex. NSS-3 at 10 (Application); NSS-14 (Amended Application).

<sup>47</sup> Ex. NSS-3 at 10 (Application).

<sup>48</sup> Ex. NSS-3 at 11 (Application).

42. The Project will be sited directly adjacent to the existing Solar Facility's collector substation and the existing infrastructure that connects the Solar Facility to the Chisago County Substation. The substation is the POI for the Solar Facility and will be the POI for the Project as well. The Project will connect to the Solar Facility's collector substation via buried 34.5 kilovolt medium voltage collection lines and, as a result, no new high voltage transmission line or generation tie line are required.<sup>49</sup>

43. The Project has been developed in response to the Xcel Energy Request for Proposals in MPUC Docket Number E-002/CN-23-212 and will aid the region's ongoing transition to renewables, ensure reliable electric service in the area, and provide economic benefits to local residents.<sup>50</sup>

44. North Star intends to share interconnection rights via a Surplus Large Generator Interconnection Agreement between the existing Solar Facility and the Project. At this time, North Star has no intention of expanding the Project beyond 100 MW.<sup>51</sup>

#### **IV. SITE LOCATION AND CHARACTERISTICS**

45. The proposed facility is located on an agricultural site within North Branch in Chisago County, Minnesota. The topography of the area is level to gently rolling. There are no lakes or streams within the site, the nearest surface water bodies are unnamed ponds and lakes, located within the local vicinity of the site. Built features common to the area include residences and buildings, paved and gravel roads, and electric power infrastructure including substations, transmission lines, and distribution lines.<sup>52</sup>

46. The Project site will encompass 77.9 acres of predominantly agricultural and rural residential. The area has scattered, and increasing, commercial and industrial land uses such as the Solar Facility. The Solar Facility is adjacent to the eastern side of the site, and the substation is within the site.<sup>53</sup>

47. County Roads 11 and 14 are the major transportation corridors in the Project area.<sup>54</sup> North Star is considering two options for a permanent access road to the Project: a western access road approaching from Lincoln Trail which is west of the Project site; and an eastern access road approaching from an existing internal access road within the Solar Facility.<sup>55</sup>

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<sup>49</sup> Ex. NSS-3 at 14 (Application).

<sup>50</sup> Ex. NSS-3 at 1 (Application).

<sup>51</sup> Ex. NSS-3 at 15 (Application).

<sup>52</sup> Ex. PUC-20 at 35-6 (EA).

<sup>53</sup> Ex. PUC-20 at 36 (EA).

<sup>54</sup> Ex. PUC-20 at 36 (EA).

<sup>55</sup> NSS-14 at 4 (Amended Application); Ex. NSS-3 at 10-11 (Application).

## V. PROJECT SCHEDULE

48. North Star plans to construct the Project beginning in the second or third quarter of 2026 with an anticipated commercial operation date of the second quarter of 2027.<sup>56</sup>

## VI. SUMMARY OF PUBLIC COMMENTS

49. During the completeness comment period ending April 1, 2025, written comments were submitted by EIP,<sup>57</sup> IUOE Local 49 and NCSRC of Carpenters,<sup>58</sup> and Dennis Anderson.<sup>59</sup> North Star responded to written comments concerning Application completeness on March 27, 2025.<sup>60</sup>

50. On May 28, 2025, Commission and the DOC-EERA staff held an in-person public EA scoping meeting where five members of the public provided oral comments.<sup>61</sup> A member of the public expressed concerns about lithium battery safety, impacts of the batteries on humans and livestock, monitoring of the batteries, emergency response, and power surges in people's homes.<sup>62</sup> Nathan Dull of Minnesota Land Liberty Coalition asked about how the stored energy would be dispatched into the electrical grid and how the batteries have evolved.<sup>63</sup> An adjacent landowner asked about noise levels from the Project.<sup>64</sup> Another member of the public asked about discharge mechanics and revenue impacts.<sup>65</sup> A member of the public asked about the access road location.<sup>66</sup>

51. No members of the public submitted oral comments or questions during the remote-access public meeting held on May 29, 2025.<sup>67</sup>

52. On June 13, 2025, the DNR submitted written comments recommending no site or system alternatives.<sup>68</sup> The DNR commented on potential environmental impacts that should be considered in the EA. DNR requested that EIP address fugitive dust levels and dust suppression measures, the use of wildlife friendly erosion control measures, Blanding's Turtles avoidance measures, and the construction and vegetation re-establishment phases in the surrounding Project Boundary in the EA. DNR also recommended that the Project's security fence reach a minimum height of 10 feet and not utilize barbed wire. DNR also recommended that the Project utilize downward facing

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<sup>56</sup> See Ex. NSS-15 at 9:19-21 (Direct Testimony of Joel Puritz).

<sup>57</sup> Ex. PUC-13 (EIP Comments and Recommendations on Application Completeness).

<sup>58</sup> IUOE Local 49 and NCSRC of Carpenters Completeness Comments.

<sup>59</sup> Comments regarding DESRI North Star BESS Permit Application; Map 3 Overview of Preliminary Project Layout North Star BESS Project; Comments by Dennis Anderson.

<sup>60</sup> Ex. NSS-12 (North Star Energy Reply Comments on Completeness).

<sup>61</sup> Ex. PUC-15 (Oral Public Comments on Scope of EA).

<sup>62</sup> Ex. PUC-15 at 23-35(Oral Public Comments on Scope of EA).

<sup>63</sup> Ex. PUC-15 at 35-41 (Oral Public Comments on Scope of EA).

<sup>64</sup> Ex. PUC-15 at 41-44 (Oral Public Comments on Scope of EA).

<sup>65</sup> Ex. PUC-15 at 44-46 (Oral Public Comments on Scope of EA).

<sup>66</sup> Ex. PUC-15 at 46-49 (Oral Public Comments on Scope of EA).

<sup>67</sup> Ex. PUC-15 (Oral Public Comments on Scope of EA).

<sup>68</sup> DNR Comments.

lighting that minimizes blue hue, biodegradable erosion control materials, and advised against the use of chloride products to control dust.<sup>69</sup>

53. On October 28 and 29, 2025, Judge Mortenson presided over public hearings on the Application for the Project via in-person and remote means, respectively.<sup>70</sup> Three individuals provided comments during the in-person hearing,<sup>71</sup> and no individuals commented during the remote-access hearing.<sup>72</sup>

54. During the in-person public hearing, residents voiced concerns primarily about the visual, financial, and safety impacts of the proposed Project. Steve Perrault, a nearby homeowner, requested the battery facility be relocated further south to reduce its visibility from his home.<sup>73</sup> Paul Dennison inquired about the Project's fiscal impact, and was assured it would generate additional tax revenue and support broader renewable energy efforts.<sup>74</sup> Aaron Nysse raised public safety concerns regarding battery discharge risks and emergency response capabilities, seeking clarity on who would bear the costs of necessary upgrades and decommissioning.<sup>75</sup> DESRI representatives addressed each concern, citing safety features of the lithium iron phosphate battery technology, commitments to fund emergency preparedness, and a financial plan to cover end-of-life decommissioning, while also offering to meet with residents to discuss site-specific issues.<sup>76</sup>

55. On November 12, 2025, the DNR submitted written comments emphasizing the need for wildlife protection and ecological considerations for the Project. The DNR's key concerns included mitigating impacts on Blanding's turtles, a state-listed threatened species, through adherence to special permit conditions. The DNR also recommended increasing the security fence height to 10 feet to prevent wildlife entry and reduce injury risks from barbed wire. The DNR recommended continued coordination with the Vegetation Management Plan Working Group (VMPWG) on the Vegetation Management Plan (VMP).<sup>77</sup>

56. On November 12, 2025, the VMPWG also submitted written comments providing guidance on refining the VMP to meet Site Permit requirements. The VMPWG recommended defining clear short- and long-term vegetation management objectives, delineating management units, and specifying site preparation techniques. The VMPWG stressed the need for diverse, native perennial seed mixes (such as BWSR's low-growing solar mixes), proper seed installation methods, and clarity on cover crop use. The VMPWG also provided guidance on visual screening, impervious surface impacts, herbicide and weed control practices, and monitoring protocols. The VMPWG called for

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<sup>69</sup> DNR Comments.

<sup>70</sup> Stacy Public Hearing Transcript; Virtual Public Hearing Transcript.

<sup>71</sup> Stacy Public Hearing Transcript.

<sup>72</sup> Virtual Public Hearing Transcript.

<sup>73</sup> Stacy Public Hearing Transcript at 22-33.

<sup>74</sup> Stacy Public Hearing Transcript at 33-35.

<sup>75</sup> Stacy Public Hearing Transcript. at 35-41.

<sup>76</sup> Stacy Public Hearing Transcript at 22-41.

<sup>77</sup> DNR Comments.

annual monitoring reports, third-party oversight, and ongoing coordination with agencies to ensure successful restoration and compliance.<sup>78</sup>

## **VI. CERTIFICATE OF NEED**

57. The Project is exempt from certificate of need requirements pursuant to Minn. Stat. § 216B.243, subd. 8(a)(9) (2024) because the Project is an energy storage system.<sup>79</sup>

## **VII. SITE PERMIT CRITERIA**

58. Until recently, energy storage systems were governed by the Minnesota Power Plant Siting Act (Minn. Stat. ch. 216 or PPSA) and Minn. R. ch. 7850.<sup>80</sup> Minn. Stat. § 216E.01, subd. 3a, defines “energy storage system” as “equipment and associated facilities designed with a nameplate capacity of 10,000 kilowatts or more that is capable of storing generated electricity for a period of time and delivering the electricity for use after storage.”

59. The proposed Project is a BESS with a nominal power rating of up to 100 MW with approximately 400 MWh of energy capacity and, therefore, a site permit is required from the Commission prior to construction of the Project.<sup>81</sup>

60. North Star filed its Application under the alternative permitting process established by the Commission in Minn. R. 7850.2800 to 7850.3900.<sup>82</sup>

61. Under Minn. Stat. § 216E.04, for an energy storage system permitted under the alternative permitting process, EIP prepares an EA containing information on the human and environmental impacts of the proposed Project and addresses mitigating measures. The EA is the only state environmental review document required to be prepared on the Project.<sup>83</sup>

62. The PPSA requires that site permit determinations “be guided by the state’s goals to conserve resources, minimize environmental impacts, minimize human settlement and other land use conflicts, and ensure the state’s electric energy security through efficient, cost-effective power supply and electric transmission infrastructure.”<sup>84</sup>

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<sup>78</sup> VMPWG Comments.

<sup>79</sup> Ex. NSS-3 at 6 (Application).

<sup>80</sup> See 2023 Minn. Laws, ch. 60, art. 12, § 67 (directing the Commission to utilize applicable provisions of Minn. R. ch. 7850 to site energy storage systems and exempting energy storage systems from the requirements of Minn. R. 7850.4400); see *also* Ex. NSS-3 at 1 (Application). Chapter 216E was largely replaced by Chapter 216I, effective July 1, 2025. Because this matter was initiated under 216E, that law is applicable.

<sup>81</sup> Ex. NSS-3 at 1, 6 (Application).

<sup>82</sup> Ex. NSS-1 (Notice of Intent to Submit a Site Permit Application Under the Alternative Permitting Process).

<sup>83</sup> Minn. Stat. § 216E.04, subd. 5.

<sup>84</sup> Minn. Stat. § 216E.03, subd. 7.

63. Under the PPSA, the Commission must be guided by the following responsibilities, procedures, and considerations:

- (1) evaluation of research and investigations relating to the effects on land, water and air resources of large electric power facilities and the effects of water and air discharges and electric and magnetic fields resulting from such facilities on public health and welfare, vegetation, animals, materials and aesthetic values, including baseline studies, predictive modeling, and evaluation of new or improved methods for minimizing adverse impacts of water and air discharges and other matters pertaining to the effects of power plants on the water and air environment;
- (2) environmental evaluation of sites and routes proposed for future development and expansion and their relationship to the land, water, air and human resources of the state;
- (3) evaluation of the effects of new electric power generation and transmission technologies and systems related to power plants designed to minimize adverse environmental effects;
- (4) evaluation of the potential for beneficial uses of waste energy from proposed large electric power generating plants;
- (5) analysis of the direct and indirect economic impact of proposed sites and routes including, but not limited to, productive agricultural land lost or impaired;
- (6) evaluation of adverse direct and indirect environmental effects that cannot be avoided should the proposed site and route be accepted;
- (7) evaluation of alternatives to the applicant's proposed site or route proposed pursuant to subdivisions 1 and 2;
- (8) evaluation of potential routes that would use or parallel existing railroad and highway rights-of-way;
- (9) evaluation of governmental survey lines and other natural division lines of agricultural land so as to minimize interference with agricultural operations;
- (10) evaluation of the future needs for additional high-voltage transmission lines in the same general area as any proposed route, and the advisability of ordering the construction of structures capable of expansion in transmission capacity through multiple circuiting or design modifications;

- (11) evaluation of irreversible and irretrievable commitments of resources should the proposed site or route be approved;
- (12) when appropriate, consideration of problems raised by other state and federal agencies and local entities;
- (13) evaluation of the benefits of the proposed facility with respect to (i) the protection and enhancement of environmental quality, and (ii) the reliability of state and regional energy supplies;
- (14) evaluation of the proposed facility's impact on socioeconomic factors; and
- (15) evaluation of the proposed facility's employment and economic impacts in the vicinity of the facility site and throughout Minnesota, including the quantity and quality of construction and permanent jobs and their compensation levels. The commission must consider a facility's local employment and economic impacts, and may reject or place conditions on a site or route permit based on the local employment and economic impacts.<sup>85</sup>

64. In addition to the PPSA, the Commission is governed by Minn. R. 7850.4100, which mandates consideration of the following factors when determining whether to issue a permit for a large electric power generating plant:

- A. effects on human settlement, including, but not limited to, displacement, noise, aesthetics, cultural values, recreation, and public services;
- B. effects on public health and safety;
- C. effects on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining;
- D. effects on archaeological and historic resources;
- E. effects on the natural environment, including effects on air and water quality resources and flora and fauna;
- F. effects on rare and unique natural resources;
- G. application of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity;

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<sup>85</sup> Minn. Stat. § 216E.03, subd. 7.

- H. use or paralleling of existing rights-of-way, survey lines, natural division lines, and agricultural field boundaries;
- I. use of existing large electric power generating plant sites;
- J. use of existing transportation, pipeline, and electrical transmission systems or rights-of-way;
- K. electrical system reliability;
- L. costs of constructing, operating, and maintaining the facility which are dependent on design and route;
- M. adverse human and natural environmental effects which cannot be avoided; and
- N. irreversible and irretrievable commitments of resources.<sup>86</sup>

65. There is sufficient evidence in the record for the Commission to assess the Project using the criteria and factors set out above.

## **VIII. APPLICATION OF SITING CRITERIA TO THE PROPOSED PROJECT**

### **A. Human Settlement**

66. Minnesota law requires consideration of the Project's effects on human settlement, including displacement of residences and businesses, noise created by construction and operation of the Project, and impacts to aesthetics, cultural values, recreation, and public services.<sup>87</sup>

#### **1. Aesthetics**

67. The visible elements of the facility consist of the BESS enclosures, a fenced area of approximately 5.5 acres, a Project substation expansion, a fence surrounding the facility, new stormwater ponds, and potentially a new operations and maintenance building. Exterior security lighting will be installed at the project substation. Switch and motion activated lights will be located at the entrance gates. Impacts to light-sensitive land uses are not anticipated given the rural project location and the minimal required lighting for operations.<sup>88</sup>

68. The Project is proposed to be in an area that is rural and agricultural consisting of gently rolling terrain, row crops, and rural residences. The Project will convert approximately 28 acres from agricultural use into the BESS facility. Although the

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<sup>86</sup> Minn. R. 7850.4100.

<sup>87</sup> Minn. R. 7850.4100, subp. A.

<sup>88</sup> Ex. PUC-20 at 37 (EA).

change will be noticeable, it is similar in appearance and is significantly smaller than the existing North Star Solar facility.<sup>89</sup>

69. Aesthetic impacts of the Project are anticipated to be minimal for residents outside the Project vicinity and for others with low viewer sensitivity, such as travelers along County Road 14. For these viewers, BESS enclosures would be relatively difficult to see due to the rolling topography and existing vegetation along the highway, and the substation and transmission structures would be indiscernible from those of the adjoining Solar Facility to the east. Residents in the Project 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 10-foot enclosures and surrounding fence.<sup>90</sup>

70. Minimizing aesthetic impacts from energy storage facilities is primarily accomplished by locating the facilities so that they are not immediately adjacent to homes, ensuring that damage to natural landscapes during construction is minimized, and shielding the facilities from view by terrain or vegetation.<sup>91</sup> North Star developed a landscaping plan along the northern property line of the Project.<sup>92</sup> Impacts from facility lighting will be minimized by using shielded and downward facing light fixtures and using lights that minimize blue hue.<sup>93</sup> There are no residences or businesses within the site. The nearest home to the facility is located approximately 200 feet north of the site boundary. An additional 23 residences are located within approximately 1600 feet of the project vicinity.<sup>94</sup>

71. North Star has taken steps to avoid and minimize visual impacts. Further, Sections 4.3.8, 5.1 and 5.2 of the Draft Site Permit address potential visual impacts from the Project.<sup>95</sup>

## **IX. NOISE**

72. 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.<sup>96</sup>

73. 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.

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<sup>89</sup> Ex. PUC-20 at 37 (EA).

<sup>90</sup> Ex. PUC-20 at 37 (EA).

<sup>91</sup> Ex. PUC-20 at 37 (EA).

<sup>92</sup> See Ex. NSS-14 at 2-3 (Site Permit Application Amendment); Ex. NSS-15 at Schedule B (Direct Testimony of Joel Puritz).

<sup>93</sup> Ex. PUC-20 at 37 (EA).

<sup>94</sup> Ex. PUC-20 at 37 (EA).

<sup>95</sup> Ex. PUC-20 at 38 (EA).

<sup>96</sup> Ex. PUC-20 at 39 (EA).

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.<sup>97</sup>

74. Noise standards are expressed as a range of permissible dBA over a one-hour period. L10 may be exceeded ten percent of the time, or six minutes per hour, while L50 may be exceeded 50 percent of the time, or 30 minutes per hour. Standards vary between daytime and nighttime hours. There is no limit to the maximum loudness of a noise.<sup>98</sup>

75. The primary noise receptors are the local residences. The nearest residence is approximately 730 feet from the BESS equipment. An additional 22 residences are located between 1,600 and 3,200 feet of the BESS equipment.<sup>99</sup>

76. Noise receptors could also include individuals working outside in the Project vicinity. Potential noise impacts from the Project are associated with construction noise and operational noise.<sup>100</sup>

77. Noise from construction will be temporary in duration, limited to daytime hours and potentially moderate to significant depending on location. North Star indicates its intent to limit construction noise to daytime hours to the extent practicable. 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. 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.<sup>101</sup>

78. The primary noise sources during facility operation are BESS containers, substation transformer(s), heating ventilation and air conditioning (HVAC) equipment, and auxiliary transformers. BESS facilities can be expected to operate 24 hours a day, resulting in noise levels that may vary throughout the day and night. Noise levels were modeled for the facility using manufacturers' information for the substation transformer, 30 auxiliary transformers, and an HVAC unit at the operation and management (O&M) facility. Because North Star has not selected the BESS equipment, the applicant used "typical" BESS units with integrated inverters and batteries for 120 BESS containers.<sup>102</sup> The proposed Project will not exceed state noise limits at nearby residences during operation of the Project.<sup>103</sup>

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<sup>97</sup> Ex. PUC-20 at 39 (EA).

<sup>98</sup> Ex. PUC-20 at 39 (EA).

<sup>99</sup> Ex. PUC-20 at 39 (EA).

<sup>100</sup> Ex. PUC-20 at 39 (EA).

<sup>101</sup> Ex. PUC-20 at 40 (EA).

<sup>102</sup> Ex. PUC-20 at 40 (EA).

<sup>103</sup> See Ex. NSS-15 at Schedule C – Sound Analyses Results (Direct Testimony of Joel Puritz).

79. North Star will mitigate construction noise impacts by limited construction to daytime hours to the extent practicable, and proposed noise barriers enclosing the BESS in its amended application.<sup>104</sup> North Star will also implement noise mitigations in final design of the Project. Additional mitigation measures to minimize noise during operation include selecting individual BESS units with lower noise levels, installing equipment silencers on BESS enclosures, installation of noise barriers (such as fences or berms), and operational limits.<sup>105</sup>

80. North Star has taken steps to avoid and minimize noise impacts. Further, Section 4.3.7, 5.3 and 5.4 of the Draft Site Permit address noise impacts from the Project.<sup>106</sup>

## **X. DISPLACEMENT**

81. Displacement can occur when residences or other buildings are located within a proposed site or right-of-way. There are no residences, business, or structures such as barns or sheds located within the site, and none will be displaced by the project.<sup>107</sup>

82. Because of the relatively small size of the Project and distance from businesses and recreational resource, impacts to cultural resources from the Project are anticipated to be minimal.<sup>108</sup>

## **XI. PROPERTY VALUES**

83. Potential impacts to property values in the local vicinity could be minimal to moderate and tend to decrease with distance and over time. Effects to property values are uncertain and depend on a complex interplay of parcel-specific factors, market conditions, and perceptions; aesthetic and operational noise impacts could influence values for nearby properties. The BESS facility's relatively low height and existing topographic/vegetative screening from nearby residences suggest that effects will be localized.<sup>109</sup>

84. Impacts to property values can be mitigated by reducing visual impacts and avoiding encumbrances to future land use, as well as individual agreements with neighboring landowners.<sup>110</sup>

## **XII. LAND USE AND ZONING**

85. The Project is sited partially within the jurisdiction of North Branch. The proposed facility is consistent with the types of industrial uses that have already been

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<sup>104</sup> Ex. PUC-20 at 41 (EA) and Ex. NSS-14 at 4 (Site Permit Application Amendment).

<sup>105</sup> Ex. PUC-20 at 41 (EA).

<sup>106</sup> Ex. PUC-20 at 41 (EA).

<sup>107</sup> Ex. PUC-20 at 42 (EA).

<sup>108</sup> Ex. PUC-20 at 82 (EA).

<sup>109</sup> Ex. PUC-20 at 45 (EA).

<sup>110</sup> Ex. PUC-20 at 45 (EA).

built in the same area. North Branch does not have land use regulations that specifically address BESS facilities. However, the Project is consistent with local land use ordinances and the North Branch Comprehensive Plan.<sup>111</sup>

86. The Project will convert approximately 28 acres of cultivated cropland to a BESS.<sup>112</sup> The Project is expected to have a 30-year life span. After the Project's useful life, the land control area could be restored to agricultural or other planned land uses by implementing appropriate restoration measures.<sup>113</sup>

87. North Star has taken steps to avoid and minimize noise impacts. Further, Section 4.3.22, 5.5 and 9.2 of the Draft Site Permit address noise impacts from the Project.<sup>114</sup>

### **XIII. CULTURAL VALUES**

88. Construction and operation of the project is not anticipated to impact or alter the work life and leisure pursuits of residents or visitors in the Project area or affect land use in such a way as to impact the underlying culture or community unity of the area. The Project may alter area character and sense of place for some residents, reflecting broader tensions between renewable energy development and rural character.<sup>115</sup>

89. There are no conditions included in the Draft Site Permit that directly address impacts to cultural values. No mitigation is proposed.<sup>116</sup>

### **XIV. TRANSPORTATION AND PUBLIC SERVICES**

90. Large energy projects can impact public services, such as buried utilities or roads.<sup>117</sup>

91. Construction-related impacts to roads, utilities, and public services are short-term, intermittent, and localized, primarily reflected in worker and delivery traffic and possible minor delays. North Star states that oversized loads are "unlikely." No road impacts are anticipated and operational traffic increases for maintenance are negligible.<sup>118</sup>

92. If an operations and management facility is constructed, North Star may install a well for drinking water and onsite septic for sanitary services.<sup>119</sup>

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<sup>111</sup> Ex. PUC-20 at 43 (EA).

<sup>112</sup> Ex. PUC-20 at 44 (EA).

<sup>113</sup> Ex. PUC-20 at 43 (EA).

<sup>114</sup> Ex. PUC-20 at 44 (EA).

<sup>115</sup> Ex. PUC-20 at 42 (EA).

<sup>116</sup> Ex. PUC-20 at 43 (EA).

<sup>117</sup> Ex. PUC-20 at 47 (EA).

<sup>118</sup> Ex. PUC-20 at 46 (EA).

<sup>119</sup> Ex. PUC-20 at 46 (EA).

93. No impacts to railroads are anticipated. The Project will avoid railroad property and railroad right-of-way (ROW).<sup>120</sup>

94. North Star has taken steps to minimize transportation and public service impacts. Section 4.3.5 and 4.3.19 of the Draft Site Permit address disruptions to public utilities and informing road authorities of roads that will be used during construction and acquire necessary permits and approvals for oversized and overweight loads.<sup>121</sup>

## **XV. SOCIOECONOMICS**

95. Impacts from operation will be long-term, positive, and minimal. The Project will not disrupt local communities or businesses and does not disproportionately impact low-income or minority populations. Adverse impacts are not anticipated.<sup>122</sup>

96. North Star anticipates the Project will create approximately 30-60 jobs during the construction phase, and two long-term personnel during the operations phase. Indirect economic benefits will occur from additional local spending on lodging, goods and services and local sales tax.<sup>123</sup>

97. North Star will work with its main construction contractor to develop a workforce and hiring plan that provides opportunities for the local workforce.<sup>124</sup>

98. Some property taxes are to be paid on the land underlying the facility. The land is currently taxed as agricultural (class 2A). Following construction of the facility, the land classification will likely change to commercial/industrial (class 3a) (commercial/industrial/public utility). The Project will likely have property tax payments which, summed over the life of the Project, amount to \$25,000 to North Branch over the 30-year life of the Project. Unlike solar and wind facilities that pay a production tax based on energy generated, North Star will not pay a production tax because the facility does not generate power, it stores power.<sup>125</sup>

99. North Star has taken steps to avoid and minimize socioeconomic impacts. Adverse impacts associated with the loss of agricultural land and agricultural production will be mitigated through lease payments to landowners.<sup>126</sup> Further, Sections 8.5 and 8.6 of the Draft Site Permit address socioeconomic impacts. No additional mitigation is proposed.<sup>127</sup>

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<sup>120</sup> Ex. PUC-20 at 47 (EA).

<sup>121</sup> Ex. PUC-20 at 47-48 (EA).

<sup>122</sup> Ex. PUC-20 at 49 (EA).

<sup>123</sup> Ex. PUC-20 at 49 (EA).

<sup>124</sup> Ex. PUC-20 at 49-50 (EA).

<sup>125</sup> Ex. PUC-20 at 50 (EA).

<sup>126</sup> Ex. PUC-20 at 50 (EA).

<sup>127</sup> Ex. PUC-20 at 50 (EA).

## **XVI. ENVIRONMENTAL JUSTICE**

100. The project area is not within a census tract which Minnesota deems an environmental justice area; therefore, disproportionate and adverse impacts to these populations are not expected, and mitigation is not proposed.<sup>128</sup>

### **A. Public Health and Safety**

101. Minnesota law requires consideration of the Project's potential effect on health and safety.<sup>129</sup>

102. Construction and operation of the Project are expected to have minimal impacts on the health and safety of the general public,<sup>130</sup>

#### **1. Electric and Magnetic Fields (EMF)**

103. Any electrical device will have electric and magnetic fields (EMF) present. Electric fields arise from the voltage or electrical charges, while magnetic fields arise from the flow of electricity or current that travels along transmission lines, power feeder lines, substation transformers, house wiring, and electrical appliances.<sup>131</sup>

104. Currently, there are no regulations regarding allowable extremely low frequency EMF (ELF-EMF) produced by power lines. However, the Commission has required a maximum electric field limit of 8 kV per meter measured at one meter (3.28 feet) above the ground in other cases.<sup>132</sup>

105. The primary sources of EMF from the Project will be from the buried electrical collection lines and the transformers installed at each inverter. 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.<sup>133</sup>

106. No health impacts from EMF are anticipated. EMF diminishes with distance from a conductor or inverter. The nearest home is approximately 730 feet from the BESS equipment. At this distance both electric and magnetic fields will dissipate to background levels. No additional mitigation is proposed.<sup>134</sup>

#### **2. Public Safety and Emergency Services**

107. Emergency services in the Project area are provided by local law enforcement and emergency response agencies located in nearby communities. Law enforcement in the Project area is provided by the Chisago County Sheriff, and the police

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<sup>128</sup> Ex. PUC-20 at 51 (EA).

<sup>129</sup> Minn. Stat. § 216E.03, subd. 7(b)(1); Minn. R. 7850.4100(B).

<sup>130</sup> Ex. NSS-3 at 38 (Application).

<sup>131</sup> Ex. PUC-20 at 51-52 (EA).

<sup>132</sup> Ex. PUC-20 at 54 (EA).

<sup>133</sup> Ex. PUC-20 at 55 (EA).

<sup>134</sup> Ex. PUC-20 at 55 (EA).

departments of North Branch. Fire service is provided by the North Branch Volunteer Fire Department. Ambulance response is provided by the Lakes Region EMS. The nearest hospitals to the Project are Fairview Lakes Regional Medical Center and Cambridge Medical Center, both within 17 miles of the Project.<sup>135</sup>

108. 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 project were not to be built. 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.<sup>136</sup>

109. The Project will be designed and constructed in compliance with applicable electric codes. Electrical inspections will ensure proper installation of all components, and the Project will undergo routine inspection. Electrical work will be completed by trained technicians.<sup>137</sup>

110. Construction is bound by federal and state Occupational Safety and Health Administration 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 Project. Crews will be trained and briefed on safety issues, reducing the risk of injury. The Project will be fenced to prevent unauthorized access. 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.<sup>138</sup>

111. In addition to the use of the more stable LFP technology, North Star's facility design uses 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.<sup>139</sup>

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<sup>135</sup> Ex. PUC-20 at 55 (EA).

<sup>136</sup> Ex. PUC-20 at 56 (EA).

<sup>137</sup> Ex. PUC-20 at 57 (EA).

<sup>138</sup> Ex. PUC-20 at 57 (EA).

<sup>139</sup> Ex. PUC-20 at 57 (EA).

112. North Star has taken steps to avoid and minimize potential impacts to public safety and emergency services. Further, public safety is addressed in Sections 4.3.27, 8.11, 8.12, and 9.1 of the Draft Site Permit.<sup>140</sup>

## **B. Land-Based Economies**

113. Minnesota law requires consideration of the Project's potential effect on land-based economies – specifically, agriculture, forestry, tourism, and mining.<sup>141</sup>

114. Of the economies listed in Minn. R. 7850.4100(C) (2025), agriculture, tourism, and recreation are present in the area around the Project. Because forestry and mining do not occur within the area, impacts on those activities will not occur.

### **1. Agriculture**

115. The Project's potential impacts to agricultural producers are anticipated to be minimal. A loss of approximately 8.2 acres of farmland in Chisago County will occur for the life of the Project. Potential impacts are minimal.<sup>142</sup>

116. The record demonstrates that North Star has taken steps to avoid and minimize impacts to agriculture. Further, sections 4.3.9, 4.3.10, 4.3.11, 4.3.17, 4.3.18, 4.3.26, and 5.5 of the Draft Site Permit address agricultural mitigation and soil-related impacts.<sup>143</sup>

### **2. Recreation and Tourism**

117. Construction and operation of the project are not anticipated to impact recreation or tourism in the Project Area.<sup>144</sup>

118. Because no impacts are anticipated, no mitigation is proposed.<sup>145</sup>

## **C. Archaeological and Historic Resources**

70. Minnesota Rule 7850.4100(D) (2025) requires consideration of the effects of the Project on historic and archaeological resources.

71. 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.<sup>146</sup>

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<sup>140</sup> Ex. PUC-20 at 58 (EA).

<sup>141</sup> Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100(C).

<sup>142</sup> Ex. PUC-20 at 58 (EA).

<sup>143</sup> Ex. PUC-20 at 59 (EA).

<sup>144</sup> Ex. PUC-20 at 60 (EA).

<sup>145</sup> Ex. PUC-20 at 60 (EA).

<sup>146</sup> Ex. PUC-20 at 60-61 (EA).

119. North Star has contacted the eleven Minnesota Tribal Nations' Historic Preservation officers and the Minnesota Indian Affairs Council for additional information and comments on the Project.<sup>147</sup>

120. In 2014, North Star Energy worked with Westwood to do a Phase 1 Archaeological Investigation with assistance from 10,000 Lakes Archaeology. No archaeological or historic sites were identified in the land control area, but two sites were identified adjacent to the Project. One is a historic farm site adjacent to the Project to the southwest, the other was a historic farm site adjacent to the Project to the northeast. In 2015 the historic farm site to the northeast was deemed not eligible for National Register of Historic Places. It has since been destroyed in the building of the Solar Facility.<sup>148</sup>

121. North Star sent the 2014 results to SHPO in 2024 and SHPO agreed that the 2014 survey was adequate for the Project and additional archaeological surveys are not required.<sup>149</sup>

122. The Project will not cause adverse impacts to archaeological and historic resources. Further, Sections 4.3.20 and 5.6 of the Draft Site Permit address archaeological and historic resources.<sup>150</sup>

#### **D. Natural Environment**

123. Minnesota Rule 7850.4100(E) (2025) requires that the Commission consider the effects of the Project on the natural environment, including effects on air and water quality resources and flora and fauna.<sup>151</sup>

##### **1. Air Quality**

124. Minimal intermittent air emissions are expected during construction of the Project. 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, the BESS will not generate criteria pollutants or carbon dioxide.<sup>152</sup>

125. Motorized equipment will emit exhaust. This includes construction equipment and vehicles travelling to and from the Project. 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.<sup>153</sup>

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<sup>147</sup> Ex. PUC-20 at 61 (EA).

<sup>148</sup> Ex. PUC-20 at 61 (EA).

<sup>149</sup> Ex. PUC-20 at 61 (EA).

<sup>150</sup> Ex. PUC-20 at 61-62 (EA).

<sup>151</sup> Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100(E).

<sup>152</sup> Ex. PUC-20 at 63 (EA).

<sup>153</sup> Ex. PUC-20 at 64 (EA).

126. Applicable BMPs will be used during construction and operation of the Project to minimize dust emissions if wind erosion becomes an issue. These practices include the application of water or other dust control agents on unpaved roads, reducing vehicle speeds on unpaved roads, covering open-bodied haul trucks, containment of excavated materials, protection of exposed soil, soil stabilization and treating stockpiles to control fugitive dust. A stormwater pollution prevention plan (SWPPP) will be developed prior to construction that will include BMPs to minimize the potential for fugitive dust.<sup>154</sup>

127. North Star has taken steps to avoid and minimize impacts to air quality. Several sections of the Draft Site Permit indirectly mitigate impacts to air quality, including sections related to soils, vegetation removal, restoration, and pollution and hazardous wastes.<sup>155</sup>

## **XVII. GEOLOGY AND GROUNDWATER**

128. The Project is located in DNR Groundwater Province 1, which is characterized by buried sand aquifers and relatively extensive surficial sand plains, part of a thick layer of sediment deposited by glaciers overlying the bedrock. The bedrock rests atop the Mt. Simon aquifer. This aquifer has moderate permeability and is approximately 200 feet below ground surface. Groundwater typically flows to the east towards the Sunrise River.<sup>156</sup>

129. Potential impacts to geology and groundwater can occur directly or indirectly. Impacts to geological resources are likely to be minimal, due to the depth to bedrock (150 feet) relative to anticipated depth of any project impacts (8 feet to 14 feet below grade) and the absence of karst features. Impacts on groundwater resources, including wells and aquifers, are not anticipated as water supply needs will be limited, and there are no existing wells on at the site. The facility's water requirements will be satisfied with a single existing domestic-sized water well sited within the existing solar facility. Direct impacts to groundwater associated with construction (e.g. structure foundations that could penetrate shallow water tables or heavy groundwater usage) are not anticipated.<sup>157</sup>

130. Stormwater management is important to 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 of the stormwater runoff and the establishment of multiple stormwater ponds, will address drainage from the newly established impervious areas. Because the project will disturb more than one-acre, North Star must obtain a Construction Stormwater Permit (CSW Permit) from the Pollution Control Agency. The CSW Permit will identify best management practices (BPMs) for erosion prevention and sediment control. As part of

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<sup>154</sup> Ex. PUC-20 at 64 (EA).

<sup>155</sup> Ex. PUC-20 at 64 (EA).

<sup>156</sup> Ex. PUC-20 at 64-65 (EA).

<sup>157</sup> Ex. PUC-20 at 65 (EA).

the CSW Permit, North Star will also develop a Storm Water Pollution Prevention Plan (SWPPP) that describes construction activity, temporary and permanent erosion and sediment controls, BMPs, permanent stormwater management that will be implemented during construction and through the life of the project. 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 facility.<sup>158</sup>

131. North Star proposes to construct two stormwater basins to manage stormwater collection and filtration on-site. In accordance with the CSW Permit, the stormwater basins will be constructed to prevent adverse impacts to groundwater resources.<sup>159</sup>

132. Further geotechnical studies will be performed to confirm the topsoil and subsoil types, and the mechanical properties of the soils. These variables will be used to engineer the foundations for the BESS containers, substation, and transformers.<sup>160</sup>

133. Sections 4.3.11, 4.7.3 and 4.7.4 of the Draft Site Permit provide for a CSW Permit and implement the BMPs for erosion prevention and sediment control. Impacts to groundwater can also be minimized by mitigating impacts to and soils and surface waters.<sup>161</sup>

## **XVIII. SOILS**

134. Soil Survey Geographic database (SSURGO) mapping identifies the following soil types within the land control area: Zimmerman, Isanti, Lino (statewide importance), Sartell, and Kost loamy fine sands, with about 2.3 percent water.<sup>162</sup> Construction will disturb approximately 18.8 acres,<sup>163</sup> shifting land cover from row crops to a mix of crushed rock (about 6.8 acres) and revegetated perennial cover, with some area remaining in agriculture.<sup>164</sup>

135. The impact intensity level is expected to be low to moderate. Primary impacts to soils include compaction from construction equipment, soil profile mixing during grading and pole auguring, rutting from tire traffic, and soil erosion. Impacts to soils are likely to be greatest with the belowground electrical collection system.<sup>165</sup>

136. Mitigation requires topsoil segregation and protection, Pollution Control Agency (PCA) stormwater BMPs through the CSW Permit and SWPPP, and an amended Vegetation Management Plan (VMP) to maintain perennial cover and prevent erosion.

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<sup>158</sup> Ex. PUC-20 at 65 (EA).

<sup>159</sup> Ex. PUC-20 at 65 (EA).

<sup>160</sup> Ex. PUC-20 at 66 (EA).

<sup>161</sup> Ex. PUC-20 at 66 (EA).

<sup>162</sup> Ex. PUC-20 at 67 (EA).

<sup>163</sup> Ex. NSS-14 at fn. 4 (Site Permit Application Amendment).

<sup>164</sup> Ex. PUC-20 at 68 (EA).

<sup>165</sup> Ex. PUC-20 at 67-68 (EA).

These requirements are addressed in Sections 4.3.9, 4.3.11, and 5.5 of the Draft Site Permit.<sup>166</sup>

## **XIX. SURFACE WATER RESOURCES**

137. The Project is located within the Lower St. Croix Watershed (HUC8A: 07030005). This watershed is approximately 915 square miles and there are 60 municipalities and townships located completely or partially within the boundaries of the watershed.<sup>167</sup>

138. No lakes or ponds were identified within the land control area based on USFWS National Wetland Inventory (NWI) data. There is, however, one pond present to the southeast of this Project, and this pond is connected to a wetland complex that enters the southeast corner of the land control area.<sup>168</sup>

139. No rivers or streams are present within the land control area based on DNR Hydrography data and NWI data.<sup>169</sup>

140. There are no waterbodies or watercourses listed on the DNR Public Waters Inventory (PWI) in the land control area. The nearest PWI body of water is Olson Marsh, located approximately 600 feet southwest of the land control area, which also has an unnamed PWI watercourse running through it.<sup>170</sup>

141. There are no waters listed by the PCA as impaired waters within the land control area. The Sunrise River and the North Branch of the Sunrise River are the closest impaired waters to the land control area at 1.3 and 1.8 miles from the land control area, respectively.<sup>171</sup>

142. North Star assessed the potential for wetlands within the land control area through a formal wetland delineation in July of 2025. In addition to the on-site delineation, wetlands data from publicly available sources were considered, including the NWI and Minnesota Hydrology datasets. A total of 10 wetlands were identified in the land control area during the on-site wetland delineation. Wetlands were further identified to determine type and acreage using NWI data. The two forested wetlands identified by the delineation align with wetlands identified by both NWI and DNR Hydrography datasets and are likely regulated by the WCA and will require coordination with the responsible Local Government Unit (Chisago County). Five emergent wetlands were identified by the delineation that were not included in NWI data. These five wetlands are likely non-jurisdictional, meaning they are not regulated by the WCA or Section 404 of the Clean Water Act.<sup>172</sup>

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<sup>166</sup> Ex. PUC-20 at 68 (EA).

<sup>167</sup> Ex. PUC-20 at 68 (EA).

<sup>168</sup> Ex. PUC-20 at 69 (EA).

<sup>169</sup> Ex. PUC-20 at 69 (EA).

<sup>170</sup> Ex. PUC-20 at 69 (EA).

<sup>171</sup> Ex. PUC-20 at 69 (EA).

<sup>172</sup> Ex. PUC-20 at 70 (EA).

143. According to the FEMA website, the Project area is mapped as Zone X, which is an area of minimal flood hazard.<sup>173</sup>

144. The Project is designed to avoid direct impacts to surface waters by avoiding placement of Project components such as access roads, BESS modules, inverters, or temporary workspaces in surface waters. The Project is expected to have minimal impacts on water quality.<sup>174</sup>

145. BMPs to minimize the impact on surface waters will be utilized 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.<sup>175</sup>

146. North Star has taken steps to avoid and minimize impacts to surface water resources. Further, Sections 4.3.11 and 4.3.16 of the Draft Site Permit address impacts to surface waters and stormwater runoff.<sup>176</sup>

## **XX. VEGETATION**

147. The Project is within the Eastern Broadleaf Forest Province comprised of the Minnesota and Northeast Iowa Morainal Section and Anoka Sand Plain Subsection. Prior to European settlement, sandy flat areas in the Minnesota and Northeast Iowa Morainal Section were dominated by prairie, savanna, and oak and aspen woodlands, particularly in the Anoka Sand Plain and sandy terraces along the major rivers.<sup>177</sup>

148. The Project area is composed of predominantly agricultural land (78.1 percent). Deciduous forest consisting of a wooded fence row along the northern and southern margins and a woodlot in the southeastern portion, both of which are part of wetland complexes. The dominant wetland vegetation consists of narrow leaf cattail, reed canary grass, speckled alder, quaking aspen, sensitive fern, and/or yellow nut sedge.<sup>178</sup>

149. Approximately 17.8 acres (including both facility components and a re-vegetated area outside the fence line) will be converted from cropland for the life of the facility. 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.<sup>179</sup>

150. North Star will implement procedures in the SWPPP and use BMP 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

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<sup>173</sup> Ex. PUC-20 at 71 (EA).

<sup>174</sup> Ex. PUC-20 at 71 (EA).

<sup>175</sup> Ex. PUC-20 at 71 (EA).

<sup>176</sup> Ex. PUC-20 at 71 (EA).

<sup>177</sup> Ex. PUC-20 at 72 (EA).

<sup>178</sup> Ex. PUC-20 at 72 (EA).

<sup>179</sup> Ex. PUC-20 at 72 (EA).

sedimentation and promote soil stabilization long term. The Draft Site Permits address vegetation at Sections 4.3.15, 4.3.17, 4.3.18 and 5.5.<sup>180</sup>

## **XXI. WILDLIFE AND HABITAT.**

151. The Project landscape is dominated by agriculture and developed areas (roads, railroads, homes, and farmsteads), but also contains multiple forested and emergent wetlands, both of which provide potential high-quality habitats for wildlife.<sup>181</sup>

152. The Project is located within the Mississippi Flyway, which is a major north-south migration route, and within the North American Bird Conservation Initiative Prairie Hardwood Transition Bird Conservation Region. There are no designated Waterfowl Production Areas within one mile of the site, and the nearest Important Bird Area designated by the National Audubon Society is the Carlos Avery Important Bird Area, approximately 1.4 miles south of the site.<sup>182</sup>

153. There is high quality wetland, forest, and riparian habitat in the Janet Johnson Memorial Wildlife Management Area (WMA), which consists of approximately 800 acres and is just northwest of the land control area. Additionally, an extensive wetland complex habitat and DNR Site of Biodiversity Significance is located southwest of the land control area and is contiguous with the Janet Johnson Memorial WMA. These habitats provide higher-quality cover, food and reproductive value for wildlife than the agricultural-dominated habitat matrix of the land control area.<sup>183</sup>

154. The impact intensity level is expected to be minimal and can be mitigated. However, the Project's fencing does create the potential for wildlife impacts.<sup>184</sup>

155. Within the Project Area, no direct impacts to quality habitat, including emergent wetlands and forested wetlands, are anticipated. The Janet Johnson Memorial WMA is located 0.3 miles northwest of the land control area, and a DNR Site of Biodiversity significance (Branch Wetlands) is located 0.15 miles west of the land control area. No impacts to these areas are anticipated.<sup>185</sup>

156. Following construction, outside of wetlands and permanent Project infrastructure, the land will continue to be used for agricultural purposes. Overall, the Project does not contribute to significant habitat loss or degradation or create new habitat edge effects.<sup>186</sup>

157. North Star has taken steps to avoid and minimize impacts to surface water resources. Further, Sections 5.9, 5.10 and 8.13 of the Draft Site Permit specify measures that will minimize impacts to wildlife. Other potential mitigation measures include checking

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<sup>180</sup> Ex. PUC-20 at 72-73 (EA).

<sup>181</sup> Ex. PUC-20 at 73 (EA).

<sup>182</sup> Ex. PUC-20 at 73 (EA).

<sup>183</sup> Ex. PUC-20 at 74 (EA).

<sup>184</sup> Ex. PUC-20 at 74 (EA).

<sup>185</sup> Ex. PUC-20 at 74 (EA).

<sup>186</sup> Ex. PUC-20 at 75 (EA).

open trenches and removing any wildlife caught in trenches before backfilling and restricting mowing from April 15 to August 15 will improve the potential for ground nesting habitat.<sup>187</sup>

## **XXII. CLIMATE CHANGE.**

158. The Project has 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. The Project's design incorporates design elements that minimize impacts from the increase in extreme weather events such as increase flooding, storms, and heat wave events that are expected to accompany a warming climate.<sup>188</sup>

### **A. Rare and Unique Natural Resources**

159. Minnesota law requires consideration of the Project's potential effects on rare and unique natural resources.<sup>189</sup>

160. North Star 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.<sup>190</sup> One threatened species, the gray wolf (*Canis lupus*) and one experimental population, non-essential species, the whooping crane (*Grus americana*) were listed as potentially occurring near the Project. Additionally, a proposed endangered species, the salamander mussel (*Simpsonia ambigua*), and a proposed threatened species, the monarch butterfly (*Danaus plexippus*), were listed as potentially occurring near the Project.<sup>191</sup>

161. Although there are forested areas along the northern and southern boundaries of the site, the location and the trees are not suitable nesting habitat for bald eagles. There are no bald eagle nests near the land control area. Since the Project will not remove any trees or nests, impacts to the bald eagle are not anticipated.<sup>192</sup>

162. North Star submitted a formal DNR Natural Heritage Information System data request for the Project. The DNR identified Blanding's turtle (*Emydoidea blandingii*) and toothcup (*Rotala ramosior*) as being potentially impacted by the Project. Suitable habitat for the Blanding's turtle is present within the land control area due to the presence of wetlands, including wetlands with adjacent mapped sandy soils, as well as the wetlands' connectivity with large wetlands beyond the land control area. Suitable habitat

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<sup>187</sup> Ex. PUC-20 at 75 (EA).

<sup>188</sup> Ex. PUC-20 at 79 (EA).

<sup>189</sup> Minn. Stat. § 216E.03, subd. 7(b); Minn. R. 7850.4100(F).

<sup>190</sup> Ex. PUC-20 at 75 (EA).

<sup>191</sup> Ex. PUC-20 at 75 (EA).

<sup>192</sup> Ex. PUC-20 at 78 (EA).

for the toothcup is not present within the land control area. Therefore, no impacts to the toothcup are anticipated.<sup>193</sup>

163. Techniques for minimizing impacts to wildlife and vegetation also minimize impacts to rare species. Avoiding identified areas of species occurrence or preferred habitat is the preferred mitigation measure. Blanding's turtles require specific mitigation measures, due to their use of varied habitats and their high rates of dispersal and movement for breeding and foraging. Section 5.10 of the Draft Site Permit describes mitigation measures specific to the potential impacts to Blanding's turtles.<sup>194</sup>

## **B. Application of Various Design Considerations**

164. Minnesota law requires consideration of design options that maximize energy efficiencies, mitigate adverse environmental effects, and could accommodate expansion of transmission or generating capacity.<sup>195</sup>

165. North Star is not required to analyze alternative sites pursuant to Minn. R. 7850.3100 (2025) unless it rejected alternative sites.<sup>196</sup> Since North Star Storage's implementation of the Project is dependent on using Surplus Large Generator Interconnection Agreement rights at the existing Solar Facility, no alternative sites were considered. North Star selected the proposed site based on a variety of factors, including proximity to the Solar Facility and the associated POI, willing landowner participation, minimal environmental impacts, and available capacity on the electrical grid for interconnecting the Project.<sup>197</sup>

166. The design assumptions included in the Application accommodate a variety of battery technologies to allow flexibility during equipment selection at the time of construction.<sup>198</sup> Specific equipment and technology selection will be dependent upon market conditions, equipment availability, battery efficiency, and site impacts at the time of construction.<sup>199</sup>

167. North Star will maximize energy efficiency while mitigating adverse environmental effects. The Project's final layout will optimize electrical storage and efficiency, while avoiding and minimizing impacts to human settlement, the environment, cultural resources, and infrastructure.<sup>200</sup>

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<sup>193</sup> Ex. PUC-20 at 78 (EA).

<sup>194</sup> Ex. PUC-20 at 7 (EA).

<sup>195</sup> Minn. R. 7850.4100(G).

<sup>196</sup> Ex. NSS-3 at 17 (Application).

<sup>197</sup> Ex. NSS-3 at 17 (Application).

<sup>198</sup> Ex. NSS-3 at 19 (Site Permit Application).

<sup>199</sup> Ex. NSS-3 at 18-20 (Site Permit Application).

<sup>200</sup> Ex. NSS-3 at 18-23 (Site Permit Application).

### **C. Use of Existing Large Electric Power Generations**

168. Minnesota law requires consideration of whether the Project uses existing large electric power generating plant sites.<sup>201</sup>

169. Because the BESS facility is proposed to be built adjacent to, and in conjunction with, a solar power generating plant, the impacts of the Project are consistent with this siting factor.<sup>202</sup>

### **D. Use of Existing Rights-of-Way**

170. Minnesota law requires the Commission to consider whether the Project uses or parallels existing ROWs, survey lines, natural division lines, and agricultural field boundaries.<sup>203</sup>

171. The Project will use the existing Solar Facility collector substation to interconnect to the Chisago County Substation via the existing 115 kilovolt overhead gen-tie line of approximately 0.6 mile. The Chisago County Substation, which is owned and operated by Xcel Energy, is the POI for the Solar Facility and will be the POI for the Project. The Project will connect to the Solar Facility collector substation via buried 34.5 kilovolt collection lines that are capable of bi-directional flow, which will allow the BESS units to collect power from and release power back to the POI. No new gen-tie line is required for the Project.<sup>204</sup>

172. Existing transmission interconnection feasibility was a factor in determining the Project's location. North Star Storage designed the Project to take advantage of the available interconnection capacity associated with the existing Solar Facility, and better leverage renewable energy resources across Minnesota's transmission system.<sup>205</sup>

173. Project siting focused on suitable areas that would allow efficient interconnection with the Point of Interconnection by way of the Solar Facility collector substation. The Project was placed as close to the Solar Facility's existing collector substation as possible to minimize line losses when charging and discharging the BESS.<sup>206</sup>

174. The Project's Surplus Large Generator Interconnection Agreement will result in the interconnection to Xcel Energy's system at a low cost and without significant upgrades to the existing transmission system.<sup>207</sup>

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<sup>201</sup> Minn. R. 7850.4100(I).

<sup>202</sup> Ex. PUC-20 at 13 (EA).

<sup>203</sup> Minn. R. 7850.4100(H) and (J).

<sup>204</sup> Ex. NSS-3 at 2, 20 (Application).

<sup>205</sup> Ex. NSS-3 at 16 (Application).

<sup>206</sup> Ex. NSS-3 at 16 (Application).

<sup>207</sup> Ex. NSS-3 at 16 (Application).

## **E. Electrical System Reliability**

175. Minnesota law requires consideration of electrical system reliability.<sup>208</sup>

176. Because the BESS facility is designed to improve electric reliability in conjunction with the solar power generating plant, the impacts of the Project are consistent with this siting factor.<sup>209</sup>

## **F. Costs of Constructing, Operating, and Maintaining the Facility**

177. Minnesota law requires consideration of the costs of constructing, operating, and maintaining a facility, which are dependent on design and route.<sup>210</sup>

178. The total installed capital cost to construct the Project to be approximately \$172 million. Actual costs will depend on final material and labor costs.<sup>211</sup>

179. The Project's annual operations and maintenance costs would total approximately \$1.5 million. Maintenance costs include labor, materials, and lease payments.<sup>212</sup>

180. North Star will be responsible for all costs to decommission the Project and associated facilities. Decommissioning of the Project is estimated at approximately \$5.6 million and estimated salvage/scrap value is approximately \$16.3 million, for a net decommissioning revenue of approximately \$10.7 million.<sup>213</sup> North Star anticipates establishing either an escrow account or surety bond equal to the net costs with North Branch as a beneficiary of the financial assurance.<sup>214</sup>

181. North Star selected the most cost-effective option for siting the Project, including selecting a location that is proximate to existing electricity and transportation infrastructure, and has outlined estimated costs for construction, operation, and maintenance for the Project that are reasonable.<sup>215</sup>

## **G. Adverse Impacts that Cannot be Avoided**

182. Minnesota law requires consideration of adverse human and natural environmental effects which cannot be avoided.<sup>216</sup>

183. The primary unavoidable impacts that will resolve following construction include the following:

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<sup>208</sup> Minn. R. 7850.4100(K).

<sup>209</sup> Ex. PUC-20 at 13 (EA).

<sup>210</sup> Minn. Stat. § 216E.03, subd. 7(b)(6); Minn. R. 7850.4100(M).

<sup>211</sup> Ex. PUC-20 at 23 (EA).

<sup>212</sup> Ex. PUC-20 at 23 (EA).

<sup>213</sup> Ex. PUC-20 at 22 (EA).

<sup>214</sup> Ex. NSS-3 at 14 (Application).

<sup>215</sup> Ex. NSS-3 at 14 (Application).

<sup>216</sup> Minn. R. 7850.4100(M).

- Fugitive dust.
- Construction noise disturbance to nearby residents and recreationalists.
- Visual disturbance to nearby residents and 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.
- Possible traffic delays.<sup>217</sup>

184. Unavoidable adverse impacts associated with the operation will last the life of the Project, and include:

- Visual impacts of the Project.
- Noise disturbance to nearby residents.
- Loss of land for agricultural purposes.
- Injury or death of birds and mammals from fencing.<sup>218</sup>

185. North Star will mitigate these impacts to the extent possible. To the extent complete mitigation is not possible, the unavoidable impacts are consistent with similar projects, and the Project will include permit conditions typical for similar projects.

#### **H. Irreversible and Irretrievable Commitments of Resources**

186. Minnesota law requires consideration of the irreversible and irretrievable commitments of resources necessary for the Project.<sup>219</sup>

187. 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

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<sup>217</sup> Ex. PUC-20 at 81 (EA).

<sup>218</sup> Ex. PUC-20 at 81 (EA).

<sup>219</sup> Minn. R. 7850.4100(N).

the end of useful life. The commitment of labor and fiscal resources to develop, construct, and operate the project is considered irretrievable.<sup>220</sup>

188. The Project will involve irreversible and irretrievable commitments of resources. Construction will consume water, aggregate, steel, concrete, hydrocarbons, and other materials, while fossil fuel use represents an irretrievable resource loss. Labor and financial resources dedicated to development, construction, and operation are also irretrievable. Although some materials, such as metals, may be recycled during decommissioning, battery components and other consumables will largely remain irretrievable. These commitments are inherent to the nature of large-scale energy infrastructure projects and cannot be fully mitigated.<sup>221</sup>

### **XXIII. SITE PERMIT CONDITIONS**

189. The Commission's Energy Storage System Sample Site Permit (Sample Site Permit) includes 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.<sup>222</sup>

190. The EA and Draft Site Permit prepared by EIP include various recommendations and potential site permit conditions specific to the Project.<sup>223</sup> North Star responded to EIP's recommendations and proposed permit conditions in the Direct Testimony of Joel Puritz,<sup>224</sup> as well as in its written response.<sup>225</sup>

191. With the above-referenced response to the Draft Site Permit, the record in this matter supports the inclusion of the conditions identified in North Star's direct testimony and written response to public hearing comments, as detailed in the paragraphs that follow.

192. North Star proposed that Section 5.12 of the Draft Site Permit be amended to allow the Applicant four years, instead of two, to advise the Commission of the reason for not having an executed Offtake Agreement.<sup>226</sup> EIP supports the proposed revisions.<sup>227</sup> The language is as follows:

#### **5.12 Offtake Agreement**

In the event the Permittee does not have an offtake agreement, or some other enforceable mechanism for sale of energy capacity provided by the Project at the time this site permit is issued, the Permittee shall provide

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<sup>220</sup> Ex. PUC-20 at 82 (EA).

<sup>221</sup> Ex. PUC-20 at 81-82 (EA).

<sup>222</sup> Ex. PUC-3 (Sample Site Permit).

<sup>223</sup> Ex. PUC-20 (EA – Appendix C).

<sup>224</sup> Ex. NSS-15 (Direct Testimony of Joel Puritz).

<sup>225</sup> See North Star Storage Reply Comments.

<sup>226</sup> Ex. NSS-15 at 13-14 (Direct Testimony of Joel Puritz).

<sup>227</sup> EIP Response to Hearing Comments and Applicant's Proposed Findings of Fact at 2.

notice to the Commission when it obtains a commitment for the energy capacity. This site permit does not authorize construction of the Project until the Permittee has obtained an offtake agreement, or some other enforceable mechanism for energy capacity provided by the Project. In the event the Permittee does not obtain an offtake agreement or some other enforceable mechanism for the energy capacity provided by the Project within four years of the issuance of this site permit, the Permittee must advise the Commission of the reason for not having such commitment. In such event, the Commission may determine whether this site permit should be amended or revoked. No amendment or revocation of this site permit may be undertaken except in accordance with Minn. Stat. § 216I.09 or Minn. Stat. § 216I.14.<sup>228</sup>

193. North Star proposed that Section 8.11 of the Draft Site Permit be amended to ensure local responders have appropriate equipment to provide the specialized response to emergencies at the Project site.<sup>229</sup> EIP supports the proposed revisions.<sup>230</sup> The language is as follows:

#### 8.11 Emergency Response

The Permittee shall prepare an Emergency Response Plan (ERP) in consultation with the emergency responders having jurisdiction over the Project prior to construction. The plan developed shall have a process for (1) identifying any specialized equipment gaps for responding to emergencies at the BESS; (2) acquiring the equipment; and (3) providing any training for the specialized equipment at the Permittee's expense. The plan shall also indicate that the annual training of emergency service personnel with site operators must be done at the Permittee's expense. The Permittee shall file the ERP, along with any comments from emergency responders to the Commission at least 14 days prior to the pre-construction meeting and a revised ERP, if any, at least 14 days prior to the pre-operation meeting. At least 14 days prior to the pre-operation meeting, the Permittee shall file with the Commission an affidavit of the distribution of the ERP to emergency responders and Public Safety Answering Points (PSAP) with jurisdiction over the Project. The Permittee shall obtain and register the Project address or other location indicators acceptable to the emergency responders and PSAP having jurisdiction over the Project.<sup>231</sup>

194. The record supports the inclusion of EIP's proposed addition of Section 5.12 of the Draft Site Permit as revised by North Star.<sup>232</sup>

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<sup>228</sup> Ex. NSS-15 at 14 (Direct Testimony of Joel Puritz).

<sup>229</sup> North Star Storage Response to Public Hearing Comments, at 3-4.

<sup>230</sup> EIP Response to Hearing Comments and Applicant's Proposed Findings of Fact at 3.

<sup>231</sup> North Star Storage Response to Public Hearing Comments, at 4.

<sup>232</sup> Ex. NSS-15 at 14 (Direct Testimony of Joel Puritz).

195. North Star Storage’s proposed revisions to Section 8.11 are appropriate and the Judge recommends including them.<sup>233</sup>

#### **XXIV. NOTICE**

196. Minnesota statutes and rules require an applicant to provide certain notice to the public and local governments before and during the site application process.<sup>234</sup> North Star Storage provided notice to the public and local governments in satisfaction of Minnesota statutory and rule requirements.<sup>235</sup>

197. Minnesota statutes and rules also require the Commission and EIP to provide certain notice to the public throughout the site permit processes.<sup>236</sup> The Commission, EERA, and EIP provided the notice in satisfaction of Minnesota statutes and rules.<sup>237</sup>

#### **XXV. COMPLETENESS OF EA**

198. The EA process is the alternative environmental review approved by the EQB for large electric power generating plants.<sup>238</sup> 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.<sup>239</sup>

199. 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.<sup>240</sup> Further, Minnesota statutes provided that the commissioner of the Department of Commerce “shall prepare for the [C]ommission an [EA],” and such EA “shall be the only 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.<sup>241</sup>

200. 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.

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<sup>233</sup> North Star Storage Response to Public Hearing Comments, at 4.

<sup>234</sup> Minn. Stat. § 216E.03, subd. 3a and 4; Minn. R. 7850.2100, subp. 2 and 4.

<sup>235</sup> See Ex. NSS-1 (Notice of Intent to Submit a Site Permit Application); Ex. NSS-2 (Project Notice Under 7850.2100) (Feb. 28, 2025), eDocket No. 20252-215915-10); see *also* Ex. NSS-13 (Confirmation of Notice Compliance Filing).

<sup>236</sup> Minn. Stat. § 216E.03, subd. 6; Minn. R. 7850.2300, subp. 2; Minn. R. 7850.3700, subp. 2, 3, and 6.

<sup>237</sup> See Ex. PUC-1 (Notice of Comment Period on Application Completeness); Ex. PUC-5 (Notice of Public Information and EA Scoping Meetings); Ex. PUC-6 (Notice of Public Information and EA Scoping Meetings, EQB Monitor); Ex. PUC-7 (Affidavit of Publication of Notice of Public Information and Scoping Meetings); and Ex. PUC-17 (Notice of EA Scoping Decision) (July 17, 2025) (eDocket No. 20257-221113-01).

<sup>238</sup> Minn. R. 4410.4400, subp. 3; Minn. R. 7850.3900, subp. 2.

<sup>239</sup> Minn. R. 7850.3900, subp. 2.

<sup>240</sup> Minnesota Session Law 2023, chapter 60, article 12, section 67(b).

<sup>241</sup> Minn. Stat. § 216E.04 subd. 5.

201. Any conclusion of law more properly considered to be a finding of fact is adopted as such.

Based on the foregoing findings of fact and the record in this proceeding, the Judge recommends that the Commission make the following:

### **CONCLUSIONS OF LAW**

1. The Commission and the Judge have jurisdiction over the Application pursuant to Minn. Stat. § 216E.03, 04.

2. North Star and the Commission provided all required notices for the site permit.

3. The Commission has the authority under Minn. Stat. § 216E.03, subd. 10, to place conditions on site permits.

4. The Draft Site Permit, with the permit conditions revised as set forth above, contains a number of important mitigation measures, other reasonable conditions, and sample special conditions, permissible under Minn. R. 7850.4000 and related laws.

5. The record in this proceeding demonstrates that North Star satisfied the criteria for the issuance of a site permit for a BESS facility at the proposed location, as set forth in Minn. Stat. § 216E.03 and Minn. R. 7850.4000, and all other applicable legal requirements.

6. The Project does not present a potential for significant adverse environmental effects pursuant to the Minnesota Environmental Rights Act or the Minnesota Environmental Policy Act.

7. Any finding of fact more properly considered to be a conclusion of law is incorporated herein.

Based on the findings of fact and conclusions of law contained herein and the entire record of this proceeding, the Judge hereby makes the following:

### **RECOMMENDATION**

The Judge recommends that the Commission issue a Site Permit to North Star Storage to construct and operate the Project and associated facilities in Chisago County, Minnesota, and that the permit include the draft permit conditions amended as set forth above.

Date: January 20, 2026



JIM MORTENSON  
Administrative Law Judge

## **NOTICE**

Exceptions to this Report, if any, by any party adversely affected must be filed by February 4, 2026, as set forth in the Amended Prehearing Order of October 2, 2025, unless otherwise directed by the Commission. Exceptions should be specific and stated and numbered separately. Oral argument before the Commission will be permitted pursuant to Minn. R. 7829.2700, subp. 3. The Commission will make the final determination of the matter after the expiration of the period for filing exceptions, or after oral argument, if an oral argument is held.

The Commission may, at its own discretion, accept, modify, or reject the Judge's recommendations. The recommendations of the Judge have no legal effect unless expressly adopted by the Commission as its final order.

January 20, 2026

See Attached Service List

**Re: *In the Matter of the Application of North Star Energy Storage, LLC for an up to 80-megawatt Battery Energy Storage System Site Permit for the North Star Storage Project in Chisago County***

**CAH 5-2500-40938  
MPUC IP-7155/ESS-25-123**

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](mailto: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**

In the Matter of the Application of North Star Energy Storage, LLC for an up to 80-megawatt Battery Energy Storage System Site Permit for the North Star Storage Project in Chisago County	CAH Docket No.: 5-2500-40938 MPUC IP-7155/ESS-25-123
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On January 20, 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	25-123 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	25-123 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	25-123 Official CC Service List
4	Ryan	Cox	rcox@fredlaw.com	Fredrikson & Byron, P.A.		60 S Sixth St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	25-123 Official CC Service List
5	Monika	Davis	monika.davis@merjent.com			1 Main Street Suite 300 Minneapolis MN, 55414 United States	Electronic Service		No	25-123 Official CC Service List
6	Martin	Donovan	martin.donovan@state.mn.us		Department of Natural Resources	500 Lafayette Road St Paul MN, 55155 United States	Electronic Service		No	25-123 Official CC Service List
7	Jeremy	Duehr	jduehr@fredlaw.com	Fredrikson & Byron, P.A.		60 S Sixth St Ste 1500 Minneapolis MN, 55402-4400 United States	Electronic Service		No	25-123 Official CC Service List
8	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	25-123 Official CC Service List
9	Breann	Jurek	bjurek@fredlaw.com	Fredrikson & Byron PA		60 S Sixth St Ste 1500 Minneapolis MN, 55402 United States	Electronic Service		No	25-123 Official CC Service List
10	James	Mortenson	james.mortenson@state.mn.us		Office of Administrative Hearings	PO BOX 64620 St. Paul MN, 55164-0620 United States	Electronic Service		Yes	25-123 Official CC Service List
11	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	25-123 Official CC Service List
12	William	Risse	wrisse@nationalgridrenewables.com	National Grid Renewables Development, LLC		8400 Normandale Blvd Ste 1200 Bloomington MN, 55437 United States	Electronic Service		No	25-123 Official CC Service List
13	Nathaniel	Runke	nrunke@local49.org			611 28th St. NW Rochester MN, 55901 United States	Electronic Service		No	25-123 Official CC Service List

#	First Name	Last Name	Email	Organization	Agency	Address	Delivery Method	Alternate Delivery Method	View Trade Secret	Service List Name
14	Janet	Shaddix Elling	jshaddix@janetshaddix.com	Shaddix & Associates		7400 Lyndale Avenue South Suite 190 Richfield MN, 55423 United States	Electronic Service		Yes	25-123 Official CC Service List
15	Sam	Weaver	sam.weaver@state.mn.us		Department of Commerce		Electronic Service		No	25-123 Official CC Service List